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# Central and East European migrant men who have sex with men: an exploration of sexual risk in the UK

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## **ABSTRACT**

**Background:** Since May 2004, ten Central and East European (CEE) countries have joined the European Union. While HIV rates remain low among men who have sex with men (MSM) in CEE countries, there is no research on the sexual behaviour of CEE MSM in the UK.

**Methods:** CEE MSM living in the UK (n=691) were recruited for an online questionnaire via two popular MSM websites.

**Results:** The majority of men had arrived in the UK since May 2004. A previous STI diagnosis was reported by 30.7% and 4.8% reported being HIV-positive, the majority diagnosed in the UK. Unprotected anal intercourse with a casual partner of unknown or discordant HIV status was reported by 22.8%. Men who had been in the UK for longer (>5 years vs <1 year) reported more partners in the past five years (67.2% vs 50.4% had >10 partners,  $p<0.001$ ) and were less likely to report their most recent partner was from their home country (14.9% vs 33.6%,  $p<0.001$ ). Among migrant CEE MSM living in London, 15.4% had been paid for sex in the UK and 41.5% had taken recreational drugs in the past year.

**Conclusion:** CEE MSM in the UK are at risk for acquisition and transmission of STIs and HIV through UAI with non-concordant casual partners. Sexual mixing with men from other countries, commercial sex and increased partner numbers may introduce additional risk. This has important implications for cross-border transmission of infections between the UK and CEE countries.

## INTRODUCTION

On 1<sup>st</sup> May 2004, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia (the Accession 8 or A8) joined the European Union (EU), followed by Romania and Bulgaria (A2) on 1<sup>st</sup> January 2007. The accession of these ten Central and Eastern European (CEE) countries resulted in a large influx of predominantly young economic migrants to the UK.

[1]

The levels of syphilis reported across the CEE region are varied. In 2007, new syphilis diagnoses (per 100,000) were 22.7 in Romania, compared to 6.2 in the UK and 2.2 in Poland. However, new diagnoses of HIV (per 100,000) were higher in the UK (12.0) than all CEE countries with the exception of Estonia (40.7) and Latvia (15.8),[2] where the HIV epidemic is largely driven by injecting drug use.[3] Within the population of men who have sex with men (MSM), the number of new HIV diagnoses in all ten CEE countries has remained lower than in Europe as a whole (with rates of HIV diagnoses per million men aged 15-64 ranging from 1.1 in Romania to 35.1 in Slovenia). The UK has the highest rate of newly diagnosed cases of HIV infection among MSM in Europe (130.1 per million men).[4]

Although homosexuality is no longer a criminal offence in CEE countries, stigmatization and discrimination are widely reported in the region.[5,6] This may impact upon the sexual knowledge and behaviours of CEE MSM, as well as their willingness to access sexual health services. Furthermore, migrants are characterized as risk-takers, with the risks that they take in moving from one country to another filtering through to other areas of their lives.[7] The extent to which sexual risk behaviours are practised by CEE migrant MSM in the UK therefore requires investigation.

As part of the SALLEE project (sexual attitudes and lifestyles of London's Eastern Europeans), this study set out to examine the risk for HIV and STIs, and use of sexual health services among migrant CEE MSM in the UK.

## **METHODS**

### **Participants and procedure**

The SALLEE project was based on a cross-sectional survey and semi-structured in-depth interviews with CEE men and women living in London. The methods are described in detail elsewhere.[8] The analysis presented here is based on the cross-sectional survey and used a specific strategy for recruiting CEE MSM from across the UK, as described below.

### **Data source**

We conducted an anonymous, online questionnaire in twelve languages (the ten official languages of the CEE countries plus English and Russian) which took about ten minutes to complete. No financial incentive to take part was offered. After respondents ticked a box to indicate consent, they were asked questions on background information, including socio-demographic characteristics and use of general practitioner (GP) services; sexual health, including sexual practices, numbers of partnerships, use of condoms, paying for sex, STIs and HIV, and use of sexual health services; and questions on injecting and recreational drug use. Where possible, questions from previously validated questionnaires were used in order to maximize their reliability and validity.

Eligible respondents were literate men aged 18 years and over who self-identified as migrants from one of the ten CEE countries. The men in the present study were recruited via two popular dating websites for gay men in the UK. The questionnaire was posted online and a link to it was

placed on banners which appeared when men were browsing the personal profiles of London men in Gaydar ([www.gaydar.co.uk](http://www.gaydar.co.uk)) for 6 weeks (March to April 2009). A link was also placed on the homepage of GayRomeo ([www.gayromeo.com](http://www.gayromeo.com)) for 4 weeks (April to May 2009). While the SALLEE project was primarily interested in CEE migrants in London, the online invitation in Gaydar and GayRomeo was extended to respondents throughout the UK.

### **Statistical analysis**

Standard statistical tests including chi-square, Student's t-test and Mann-Whitney U test were used to examine associations between place of residence and background characteristics, risk behaviour and health service use. Linear-by-linear associations were examined to assess the effect of length of time in the UK on risk behavior and health service use, by grouping respondents' length of stay into yearly intervals up to five years (eg up to one year, 1 to 2 years), then over five years. Logistic regression modelling was used to obtain odds ratios (OR) and adjusted odds ratios (aOR) to examine the association between unprotected anal intercourse (UAI) with a casual partner and background characteristics, commercial sex, recreational drug use and HIV status (which are associated with UAI in other MSM populations). Analysis was performed using SPSS12.0 (SPSS Inc, Chicago, Illinois, USA).

The study was granted approval from the Camden & Islington Community Research Ethics Committee (07/H0722/110).

## **RESULTS**

### **Background characteristics**

Over the course of the recruitment via Gaydar and GayRomeo, a total of 691 online responses were submitted by men who were eligible for the study. Eligibility was restricted to men

reporting one or more male sexual partners in the past five years, so that only men who were homosexually active were included in the analysis. More men were recruited from GayRomeo (65%, n=449) than Gaydar (35%). Men living outside London were more likely to be recruited from GayRomeo than men living in London (80.1% vs 58.6%,  $p<0.001$ ) (table 1).

**Table 1: Background characteristics, by place of residence**

	All men		London men		Non-London men		p value <sup>1</sup>
	n = 691		n = 485		n = 206		
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
Age (mean; sd)	29.0 (6.9)		29.21 (7.16)		28.45 (6.36)		0.186
Working	552	80.0	387	80.0	165	80.1	0.937
Completed higher education	378	54.8	275	56.8	103	50.0	0.100
Born in A8 country	586	88.0	408	87.7	178	88.6	0.766
Completed questionnaire in native language	557	80.6	390	80.4	167	81.1	0.842
More than one year in UK	556	81.9	397	83.2	159	78.7	0.163
Had heterosexual sex (past year)	45	6.5	36	7.4	9	4.4	0.137
Recruited via GayRomeo	449	65.0	284	58.6	165	80.1	<0.001

<sup>1</sup> London men compared to non-London men

The majority of men (70.2%) lived in London and the rest (n=206) were distributed throughout the UK: 42.2% in the South of England, 18.0% in the Midlands, 18.0% in the North of England, 15.5% in Scotland, 3.9% in Northern Ireland and 2.4% in Wales. The mean age of all men was 29 years old (s.d.=6.9 years). The majority were working, educated to degree level, came from one of the A8 countries rather than Bulgaria or Romania, completed the questionnaire in their

native language and had been in the UK for more than one year. Most men had arrived in the UK since May 2004 (73.0%). Sex with women in the past year was reported by 6.5% of men. There were no significant differences between London men and those who were living outside London on any of these variables (table 1).

Men who had been in the UK for longer were more likely to live in London: 65.0% of men who had been in the UK for up to one year compared to 80.3% of men who had been in the UK for more than five years (p=0.008).

**Table 2: Risk behaviour and health service use, by place of residence**

	All men n = 691		London men n = 485		Non-London men n = 206		p value <sup>1</sup>
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
<b>Commercial sex</b>							
Ever been paid for sex	147	21.5	111	23.2	36	17.5	0.096
Been paid for sex in UK	88	12.8	74	15.4	14	6.8	0.005
Ever paid for sex with man	92	13.5	72	15.0	20	9.8	0.068
Paid for sex with man in UK	43	6.3	36	7.5	7	3.4	0.112
<b>Use of recreational drugs</b>							
Taken recreational drugs (past year)	250	36.7	199	41.5	51	25.2	<0.001
Ever injected drugs	32	4.7	23	4.8	9	4.4	0.832
<b>Sexually transmitted infection</b>							
Ever diagnosed with STI	210	30.7	164	34.1	46	22.5	0.003
<b>Sexual partnerships and practices</b>							
More than 10 male partners (past 5 years)	428	61.9	323	66.6	105	51.0	<0.001



Most recent male partner from home country	145	21.8	86	18.6	59	29.1	0.003
AI with man (past year) <sup>2</sup>	632	91.6	447	92.4	185	89.8	0.269
New AI partners (past year) (median)	681	3	477	3	204	2	<0.001
UAI with casual partner (past year)	195	28.3	143	29.5	52	25.2	0.344
Non-concordant UAI with casual partner (past year)	157	22.8	116	24.0	41	19.9	0.525
Non-concordant UAI with main partner (past year)	116	17.1	78	16.4	38	18.7	0.430
<b>Health service use</b>							
Ever attended sexual health clinic in UK	332	48.3	257	53.2	75	36.6	<0.001
Obtained condoms from UK health services (past year)	184	29.2	145	32.6	39	21.1	0.004
Ever HIV tested	531	78.7	395	83.0	136	68.3	<0.001
Last HIV test in UK <sup>3</sup>	337	63.6	257	65.1	80	59.3	0.244
Registered with GP	510	74.3	349	72.3	161	79.3	0.053
Attended GP for sexual health (past year)	123	18.0	88	18.3	35	17.2	0.722

<sup>1</sup> London men compared to non-London men; <sup>2</sup> AI = anal intercourse; <sup>3</sup> among men who had been tested for HIV

## Risk behaviour

Compared to men living outside London, London men were significantly more likely to report that they had been paid for sex in the UK (15.4% vs 6.8%, p=0.005), ever been diagnosed with an STI (34.1% vs 22.5%, p=0.003) and taken recreational drugs in the past year (41.5% vs 25.2%, p<0.001) (table 2). They were more likely to have ever paid for sex with a man (15.0% vs 9.8%, p=0.068). They were also less likely to report assortative sexual mixing (whereby their last

partner was from their home country) (18.6% vs 29.1%,  $p=0.003$ ). Almost half the men reported that their most recent partner was from the UK (47.6%) and a further 15.4% of most recent partners were from another European country.

The majority of men living in London and elsewhere in the UK reported anal intercourse (AI) with a man in the past year (92.4% and 89.8%  $p=0.269$ ). London men reported more AI partners in the past year than men living elsewhere (median=5 vs 3,  $p<0.001$ ).

### **Health service use in the UK**

Compared to men living elsewhere, London men were more likely to have attended a sexual health clinic in the UK (53.2% vs 36.6%,  $p<0.001$ ), to have obtained condoms from health services in the UK in the past year (32.6% vs 21.1%,  $p=0.004$ ) and to have tested for HIV (83.0% vs 68.3%,  $p<0.001$ ) (table 2). A somewhat larger proportion of men living outside London were registered with a GP (79.3% vs 72.3%,  $p=0.053$ ) but they were not more likely to have attended the GP for reasons related to sexual health in the past year (18.3% vs 17.2%,  $p=0.722$ ).

### **Migration and integration**

The longer men had been in the UK, the less likely they were to report assortative sexual mixing (33.6% to 14.9%,  $p<0.001$ ) and the more likely they were to report recreational drug use in the past year (31.4% to 41.4%,  $p=0.005$ ). (fig 1). Figure 1 also illustrates how men who had been in the UK for longer reported more partners and more new partners. Men who had been in the UK for over two years reported more than 10 male partners in the last five years more frequently than men who had been in the UK for less time (67.6% vs 48.6%,  $p<0.001$ ). Men who had been in the UK for over two years also reported a median of 3 new AI partners in the past year compared to a median of 2 among men who had been in the UK for less time ( $p=0.002$ ).

Most of the other risk behaviours listed in table 2 were not associated with time in the UK: there were no significant associations between length of time in the UK and being paid for sex, injecting drugs, anal intercourse in the past year, UAI with a casual partner, non-concordant UAI with a casual partner and non-concordant UAI with a main partner. However, the data suggested that ever being diagnosed with an STI increased the longer men had been in the UK, rising from 27.6% of men who had been in the UK for up to one year to 37.2% of men who had been in the UK for at least five years ( $p=0.035$ ); and men who had been in the UK for longer were also somewhat more likely to report ever paying for sex (12.4% to 18.1%,  $p=0.026$ ).

GP registration increased the longer men had been in the UK (44.3% to 87.9%,  $p<0.001$ ). Men who had been in the UK for longer were also more likely to have attended a sexual health clinic in the UK (24.6% to 67.2%,  $p<0.001$ ) and to report ever having an HIV test (68.1% to 86.7%,  $p=0.001$ ). Men were less likely to return to their home country two or more times during their first year in the UK compared to men who had been in the UK for a year or more (39.3% vs 63.1% made at least two trips home in the previous year,  $p<0.001$ ).

**Table 3: Sexually transmitted infections reported by CEE MSM and diagnosis in the UK**

	Ever diagnosed		Diagnosed in the UK	
	<i>n</i>	%	<i>n</i> <sup>1</sup>	%
Chlamydia	72	10.5	56	77.8
Gonorrhoea	76	11.1	43	56.6
Genital herpes	30	4.4	12	40.0
Genital warts	50	7.3	27	54.0
Non-specific urethritis	47	6.9	34	72.3
Syphilis	50	7.3	34	68.0

Trichomonas	8	1.2	2	25.0
HIV	32	4.8	25	78.1

<sup>1</sup> among men who have ever been diagnosed with an STI

### STI and HIV diagnosis

Almost one third of men (30.7%) reported that they had ever been diagnosed with an STI. Gonorrhoea was most commonly reported (11.1% of all respondents), followed by Chlamydia (10.5%) and Syphilis (7.3%) (table 3). The majority of men reported that their STIs had been diagnosed in the UK (77.8% of those reporting Chlamydia, 68.0% of those reporting Syphilis and 56.6% of Gonorrhoea). Just under 5% of men reported being HIV positive (n=32) and London men were more likely to report that they were HIV positive (5.6% vs 3.1%, p<0.001). Most HIV positive men reported being diagnosed in the UK (78.1%). Men were asked the year of their HIV diagnosis. The majority had been diagnosed since 2004 (80.6%) and 12.9% were diagnosed in 2009 (the year of the study).

**Table 4: Factors associated with unprotected anal intercourse with a casual partner**

	Odds ratio (95% CI)	P	Adjusted odds ratio <sup>1</sup> (95% CI) n = 616	P
Age	1.01 (0.98, 1.03)	0.598	1.04 (0.98, 1.04)	0.582
Working	0.84 (0.56, 1.26)	0.405	0.71 (0.45, 1.15)	0.163
Completed higher education	0.95 (0.68, 1.33)	0.773	1.02 (0.69, 1.51)	0.921
From Bulgaria or Romania	1.27 (0.77, 2.09)	0.354	1.82 (1.02, 3.23)	0.041

Completed questionnaire in native language	0.99 (0.65, 1.51)	0.978	1.27 (0.75, 2.14)	0.377
<b>Time in the UK</b>				
Up to one year	1.00		1.00	
One to two years	0.90 (0.48, 1.66)	0.728	1.26 (0.62, 2.57)	0.523
Two to three years	1.16 (0.66, 2.07)	0.605	1.79 (0.92, 3.48)	0.087
Three to four years	0.90 (0.48, 1.66)	0.728	1.26 (0.62, 2.57)	0.519
Four to five years	0.97 (0.51, 1.84)	0.927	1.12 (0.52, 2.39)	0.772
More than five years	1.28 (0.77, 2.12)	0.346	1.42 (0.74, 2.73)	0.297
Living in London	1.24 (0.86, 1.80)	0.251	1.02 (0.66, 1.59)	0.918
Recruited via GayRomeo	0.81 (0.57, 1.14)	0.222	0.80 (0.53, 1.20)	0.278
<b>HIV status</b>				
HIV positive	1.00		1.00	
HIV negative	0.15 (0.07, 0.33)	<0.001	0.16 (0.07, 0.38)	<0.001
Untested	0.17 (0.08, 0.40)	<0.001	0.23 (0.09, 0.56)	0.001
Ever injected drugs	2.33 (1.14, 4.76)	0.021	2.11 (0.91, 4.88)	0.081
Taken recreational drugs (past year)	2.23 (1.58, 3.13)	<0.001	2.07 (1.40, 3.06)	<0.001
Been paid for sex in UK	2.69 (1.70, 4.25)	<0.001	2.20 (1.29, 3.77)	0.004

<sup>1</sup> adjusted for all other factors included in this table

### Unprotected anal intercourse

Unprotected anal intercourse (UAI) with a casual partner was reported by 28.3% of all men in the past year, 22.8% reported UAI with a casual partner of unknown or discordant HIV status and 17.1% reported UAI with a main partner of non-concordant HIV status (no significant differences by place of residence). UAI with a casual partner of discordant or unknown HIV status was more common in men known to be HIV positive (46.9%) than HIV negative or untested men (18.8% or 27.7% respectively,  $p < 0.001$ ). In a multivariate model (table 4), UAI with a casual partner was associated with being HIV positive (vs HIV negative: aOR=0.16,  $p < 0.001$ ; untested: aOR=0.23,

p=0.001), taking recreational drugs in the past year (aOR=2.07, p<0.001) and being paid for sex in the UK (aOR=2.20, p=0.004).

## **DISCUSSION**

CEE MSM in the UK are at significant risk for acquisition and transmission of STIs and HIV through UAI with non-concordant casual partners, sexual mixing and commercial sex. They were more likely to report STI diagnoses when they had been in the UK for longer and a high proportion of STIs and HIV were reported as diagnosed in the UK. These findings suggest that CEE MSM are at greater risk following migration to the UK.

The self-reported HIV prevalence among CEE MSM was relatively low, with under six percent of CEE London men reporting that they were HIV positive compared to eleven percent of men in a similarly recruited web sample of London gay men [9] and twelve percent in a community survey of London gay men conducted at the same time (personal communication D Mercey 2010). However, a substantially larger proportion of new HIV diagnoses among CEE men in the UK result from sex between men compared to diagnoses among men across the CEE region.[3]

We found that assortative sexual mixing decreased the longer men stayed in the UK and partner numbers increased after a period of two years in the UK. The low prevalence of new HIV diagnoses among CEE MSM in their countries of origin [4] means that assortative sexual mixing between CEE MSM is likely to be protective against STI and HIV infections. Barriers to HIV testing in CEE countries [10,11] may mean that HIV is more likely to remain undiagnosed among MSM in CEE countries compared to the UK but the high prevalence of HIV among MSM in the UK is likely to increase exposure to infection when CEE men have partnerships with men who

are not from their home country. By comparison, the majority of heterosexual CEE migrants report that their most recent partner was from their home country.[12] It is possible that CEE MSM seek out partners from other countries in response to the homophobia in their home countries. Whatever the mechanisms, sexual mixing requires continued monitoring to clarify its role in the acquisition and transmission of HIV and STIs.

Our findings suggest that CEE MSM report comparable levels of risk to those in the general MSM population in London and the UK. Nearly one third of CEE MSM in London reported UAI with a casual partner in the past year compared to one quarter of gay men in a community sample in London (personal communication D Mercey 2010). CEE MSM throughout the UK reported similar amounts of UAI with a casual partner of unknown or discordant HIV status to non-concordant UAI reported in another UK sample of MSM (23% vs 26%).[13]

We found that the likelihood of practising non-concordant UAI with a casual partner did not change with time in the UK or place of residence. Limited data from CEE countries suggest that UAI is practiced among a substantial proportion of MSM [11,14,15] and condom use may not alter following migration to the UK. Data are needed to explore the extent to which individuals practice UAI before and after migration.

UAI with a casual partner was more likely among men who were HIV positive, had taken recreational drugs in the past year and been paid for sex in the UK. Previous work shows that HIV positive London men were more likely to report non-concordant UAI with casual partners than men who were of negative or unknown HIV status;[16] and recreational drug use is also associated with UAI.[17] The association with sex work is of particular concern, given that 15% of CEE MSM in London reported that they had been paid for sex in the UK. It is possible that recruiting men through gay dating websites might have increased the number of sex workers in

our sample. However, the proportion of East European men attending a clinic for male sex workers in London increased from less than 1% in the mid-nineteen nineties to 8% over the following six to seven years [18] and numbers likely to have increased further following EU accession. Further research is needed to understand when and how CEE MSM take up commercial sex work and the risks involved.

The primary limitation of the study is that it recruited MSM via gay websites and such samples are more likely to include men with higher levels of sexual risk behaviour than found in the general population of MSM.[19] This method of recruitment, however, has become increasingly common in behavioural surveillance among gay men and data collected in this way therefore benefit from comparability. CEE migrants come from ten different countries across an area of wide regional variation. The relatively small sample size of our study did not provide sufficient statistical power to analyse data at the country level. In addition, we cannot be sure that our sample represents the distribution of CEE nationalities among MSM in the UK. Not only are data on the nationality of CEE migrants to the UK incomplete but they may not reflect the distribution of MSM from CEE countries. Finally, although a reassuringly high number of men reported that they had been tested for HIV, the study is limited by its reliance on self-report and the absence of biological samples. This should be considered in future studies.

Our findings indicate that CEE MSM are at significant risk for acquisition and transmission of STIs and HIV in the UK. This may have important implications for cross-border transmission of infections, given the fluidity of the movement among CEE MSM between their home countries and the UK. CEE MSM regularly returned to their home countries which creates the opportunity for transmission of infections between countries. Access to sexual health services in the UK is therefore an important factor in managing sexual health among CEE MSM both in the UK and



their countries of origin. These findings are furthermore relevant to sexual health services throughout the UK, given that men living in London and elsewhere in the UK were as likely to practise UAI with a non-concordant casual partner. Interventions aimed at MSM should be accessible to CEE MSM with information available in CEE languages if possible and alternative strategies for health promotion and HIV/STI prevention may be important among new arrivals. In addition, culturally sensitive prevention programmes may benefit men who do not identify as gay or bisexual. The UK has a duty of care to ensure that MSM from CEE countries are aware of sexual health services in the UK and able to access them.

Word count: 3,048

**Key messages**

- HIV prevalence among MSM in Central and East European (CEE) countries is much lower than among MSM in the UK.
- Following migration to the UK, CEE MSM report more sexually transmitted infections and HIV diagnosed in the UK than diagnosed elsewhere.
- CEE MSM in the UK report high levels of risk behaviour including commercial sex and recreational drug use.
- CEE MSM return regularly to their home countries and these findings have important implications for cross-border transmission of infections.

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**Contributors:** FB, CM, CG, RM, JI, GH participated in the design of this study. AE, VP and FB were responsible for study coordination and data collection. AE conducted the statistical analysis and was the lead writer of this paper. All authors have contributed to the drafting of the manuscript and have seen and approved the final version.

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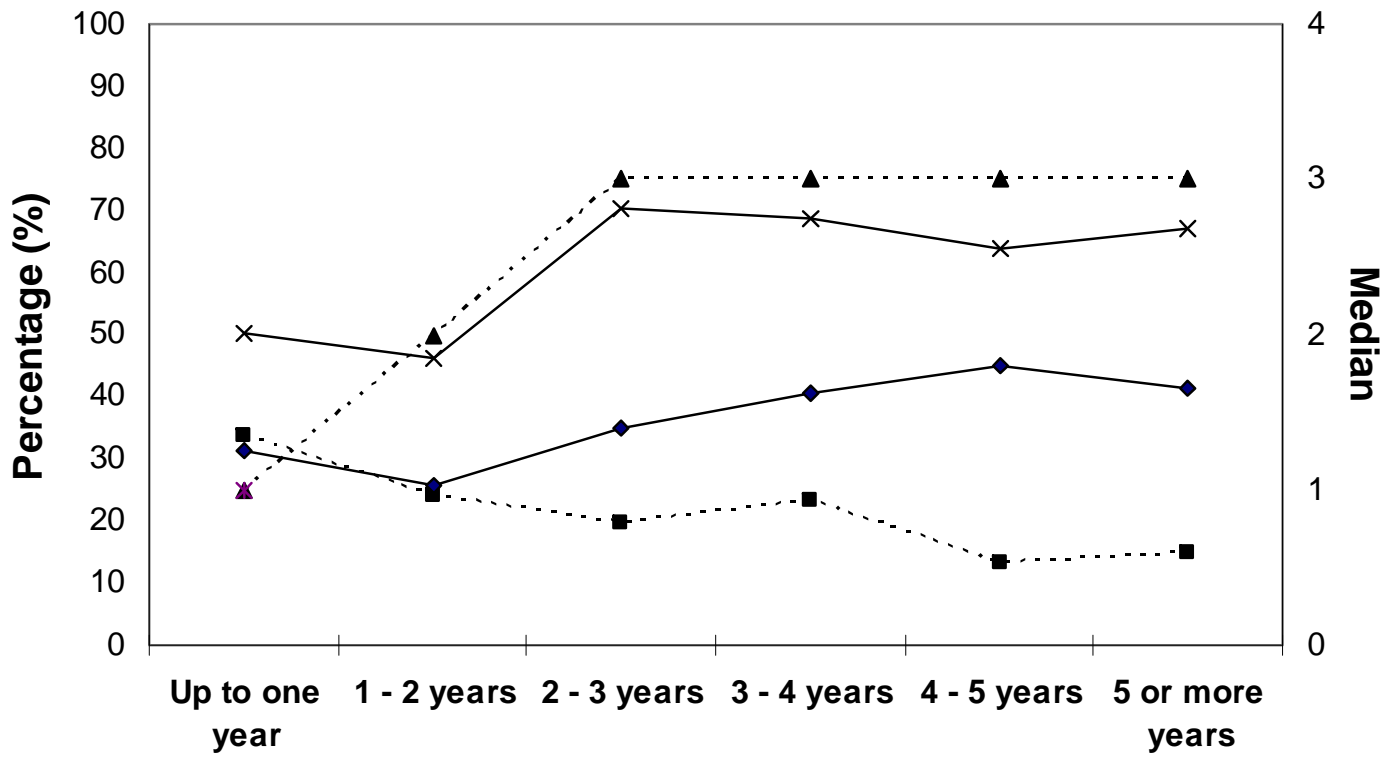
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**Figure 1: Change in assortative sexual mixing, use of recreational drugs and number of male partners over time in the UK**



- Percentage of men whose most recent male partner was from home country
- ◆— Percentage of men using recreational drugs in past year
- ×— Percentage of men who had more than 10 male partners in past five years
- ▲--- Median number of new AI partners in past year