

and whether these have implications for mental and sexual wellbeing.

We aimed to identify different clusters of adverse outcomes, to investigate associated socio-demographic and lifestyle factors, and to compare risk of depression and low sexual wellbeing (dissatisfaction and distress with sex life) between groups.

Methods We used data from the British National Surveys of Sexual Attitudes and Lifestyles (NATSAL 3, 2010–2012; men $n=5113$; women $n=7019$; ages 16–74). Latent Class Analysis (Mplus, version 8) used 16 variables relating to sexually transmitted infections (and associated sexual risk behaviours and attitudes), sexual coercion and sexual function problems, with men and women analysed separately. Multinomial logistic regression (Stata/SE14.2) assessed factors associated with class membership.

Results We found four groups for men, and six for women. Male groups were: *low risk/problems* (81%), *sexual function problems* (9%), *worried risk-takers* (5%) and *unworried risk-takers* (5%). Female groups were: *low risk/problems* (60%), *sexual function problems* (7%), *worried risk-takers* (3%), *unworried risk-takers* (8%), *sex-avoiding* (20%) and *high vulnerability* (2%). *Unworried risk-takers* did not perceive themselves as being at risk, whereas *worried risk-takers* did. *Unworried* were more likely than *worried risk-takers* to be older (men: OR 2.2; 95% CI 1.1 to 4.2), or smokers (women: OR 1.7, 95% CI 1.1 to 2.6). The *high vulnerability* group (found in women only) reported sexual risk, sexual function problems and coercion, and was characterised by drug and alcohol use (compared to *low risk/problems* group, OR 3.5, CI 1.5–8.3). Compared to *low risk/problems* groups, other groups were more likely to be depressed, distressed and dissatisfied with their sex life, with odds ratios (all $p<0.05$) for different groups ranged as follows: depression: men 2.1–3.5, women 2.9–8.4; distressed: men 1.5–4.9, women 3.2–13.9; dissatisfied: men 2.6 (only sexual function problems group $p<0.05$), women 2.1–11.9. The highest odds occurred among women in the *high vulnerability* and *sexual function problems* groups.

Conclusion Identification of different sexual risk/problem groups, all at risk of depression and low sexual well-being, is helpful for planning sexual health policies and services. Of particular interest are two distinct groups of risk-takers (worried and unworried), and a group of women (but not men) who are vulnerable to a range of adverse sexual health outcomes and warrant particular public health attention.

RF6 INEQUALITIES IN NON-INITIATION OF HPV VACCINE: CROSS-SECTIONAL FINDINGS FROM A UK COHORT

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Background HPV vaccination (HPVv) was introduced in the UK in 2008; currently 87%–93% of teenage girls receive at least one dose in school. Uptake is lower in more deprived areas, and, small regional studies report, among Black and minority ethnic groups. Associations with parental and household factors, and school attendance are less clear. Using data

from a UK prospective cohort we tested the hypothesis that HPVv initiation is lower among those with parents from Black and minority ethnic groups, living in low income households, and not attending school.

Methods We estimated the percentage of 5690 14 year-old girls participating in the Millennium Cohort Study whose parent reported HPVv initiation. We used logistic regression to calculate crude and adjusted odds ratios (OR) of HPVv initiation and examined associations with parental ethnic group (baseline White), school type (non-fee-paying (baseline)/fee-paying/no school), history of school exclusion (baseline no exclusions), and household income (OECD quintile (baseline highest quintile)). Analyses were weighted for survey design (Stata: Release 15; StataCorp LP).

Results 5265 girls (weighted percentage: 92.3w%; 95% CI 91.3, 93.2) received at least one dose of HPVv; 399 (7.2w%; 6.4, 8.1) no doses; 26 (0.5w%; 0.3, 0.9) not known. Parents from Bangladeshi (86.1w%; 80.3, 90.4), Black African (84.9w%; 75.7, 91.0) and ‘other’ ethnic groups (81.0w%; 70.4, 88.4) were less likely to report HPVv initiation compared to those of White ethnicity (93.6w%; 92.5, 94.5). HPVv initiation was lower in girls not attending school (61.1w%; 32.5, 83.7) and those previously excluded from school (85.2w%; 78.9, 89.9). After adjusting for age, ethnicity, school type, exclusions and household income, girls with parents from Bangladeshi (OR: 0.57; 0.35, 0.93), Black African (OR: 0.43; 0.23, 0.80) or ‘other’ ethnic groups (OR: 0.30; 0.16, 0.58), those not attending school (OR: 0.11; 0.04, 0.34), with a history of school exclusion (OR: 0.48; 0.30, 0.78), or living in low income households (lowest two OECD quintiles OR: 0.46; 0.31, 0.67 and OR: 0.51; 0.34, 0.76), were less likely to initiate HPVv.

Conclusion In the UK, there are marked inequalities in HPVv initiation, with lower uptake among children from poorer households, with parents from Bangladeshi, Black African or other ethnic groups, and those previously excluded or not currently in school. This is the first report of HPVv initiation using a nationally representative cohort. Further work is needed to evaluate interventions for HPVv catch-up in the groups we have identified, who may also be at greater risk of missing cervical screening. Understanding reasons for non-initiation and developing interventions to engage parents from these groups is central to reducing inequalities in HPVv uptake.

RF7 PREVALENCE OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) IN GREATER GLASGOW AND CLYDE: AN ECOLOGICAL STUDY BY AGE, SEX, SOCIOECONOMIC AND SMOKING STATUS

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Background Previously it was estimated that Greater Glasgow and Clyde (GGC) had a COPD prevalence of 2.4%. COPD has traditionally been associated with males and those from deprived areas. Socioeconomic inequalities in COPD have been largely linked to socioeconomic inequalities in smoking, the most important risk factor for COPD in high income countries. This study aims to calculate the prevalence of COPD in GGC by age, sex, and SES adjusting for smoking status.