

Introduction

- Globally an estimated 13.4 million babies were born preterm in 2020¹.
- There are significant ethnic disparities in preterm birth (PTB) rates, with Black and South Asian women having a 65% and 26% increased rate of PTB respectively compared to White women².
- Spontaneous preterm birth (sPTB) is multifactorial. Research has shown that adverse vaginal microbial composition can be a risk factor for sPTB. Women of African descent have greater tendency for high species diversity and reduced presence of *Lactobacillus crispatus* compared to women of European descent³⁻⁵.
- Women from ethnic minorities are often underrepresented in maternity research studies, with a paucity of studies investigating barriers to participation⁶⁻⁷.
- There is an urgent need to drive equity in preterm birth prevention research.

Objective

- To report on rates of PTB by ethnicity at the Imperial College Healthcare NHS Trust (ICHT).
- To determine if there was equity in PTB prevention study recruitment by ethnicity.
- To use patient and public involvement (PPI) to explore challenges in recruitment.

Methods

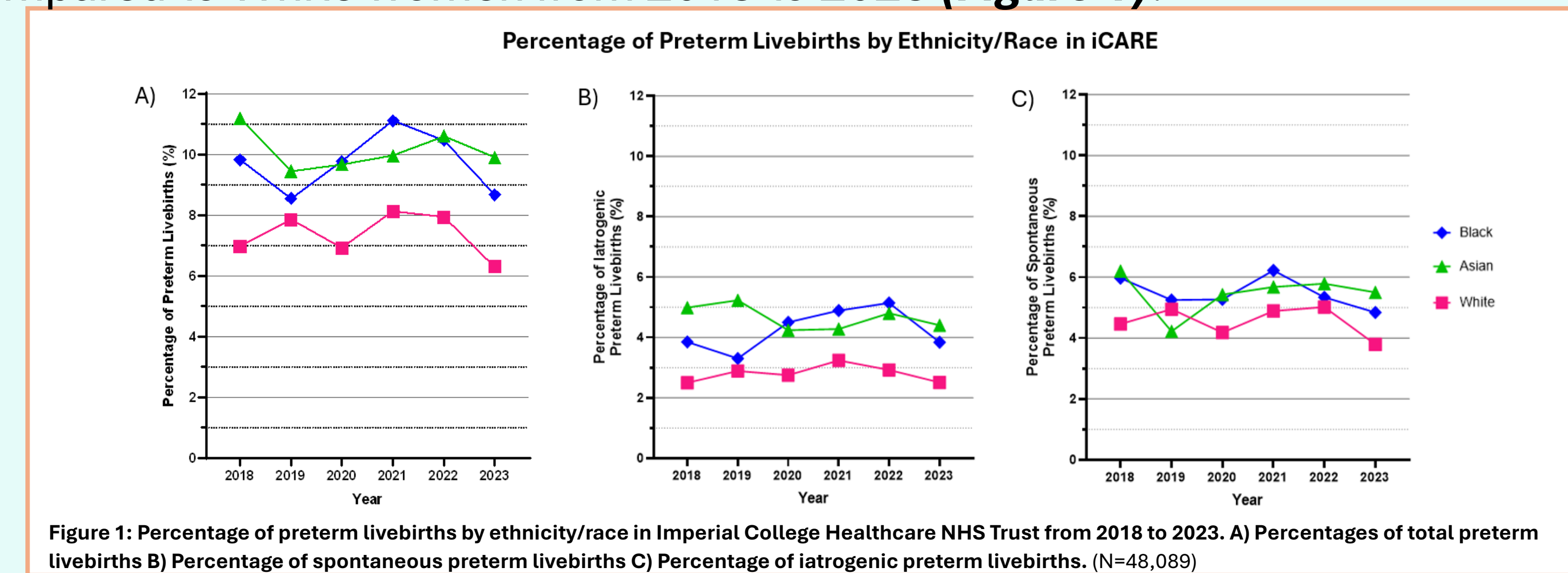
- PTB rates from the general ICHT population were determined using routinely recorded data from ICHT Secure data environment Imperial Clinical Analytics Research and Evaluation (ICARE) between 2018 to 2023 (n=48,098).
- PTB rates of women defined as 'high risk' were reported from the ICHT PTB prevention clinics at St Mary's and Queen Charlotte's and Chelsea hospitals during 2022 (n=552).
- Ethnicity distributions between the general maternity, the PTB prevention clinic and the Vaginal Microbiome and Metabonome in pregnancy (VMET2) study populations were compared.
- Using PPI activities, including focus groups and a service evaluation questionnaire, we investigated barriers to PTB prevention study participation for women of ethnic minorities.

References

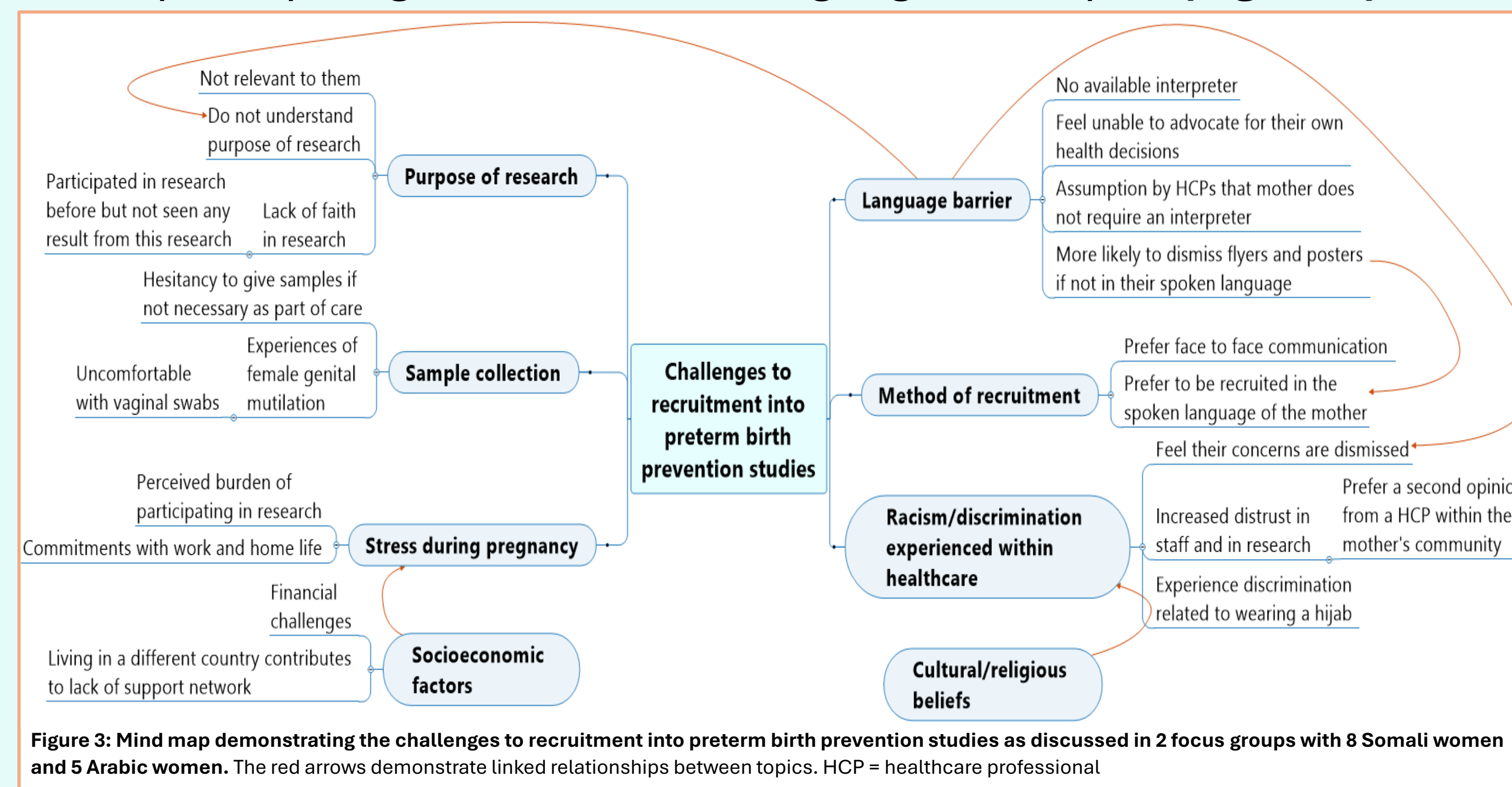
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Results

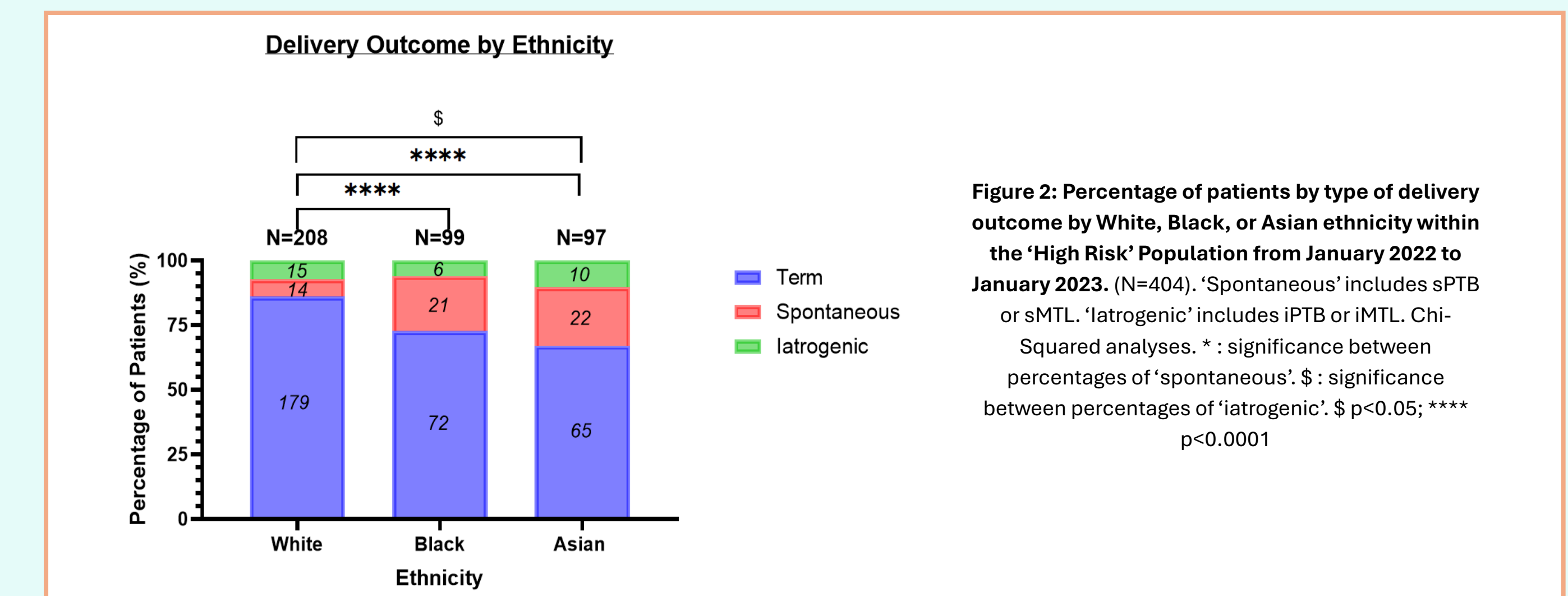
- Black and Asian women had increased PTB rates in the local Trust population compared to White women from 2018 to 2023 (**Figure 1**).



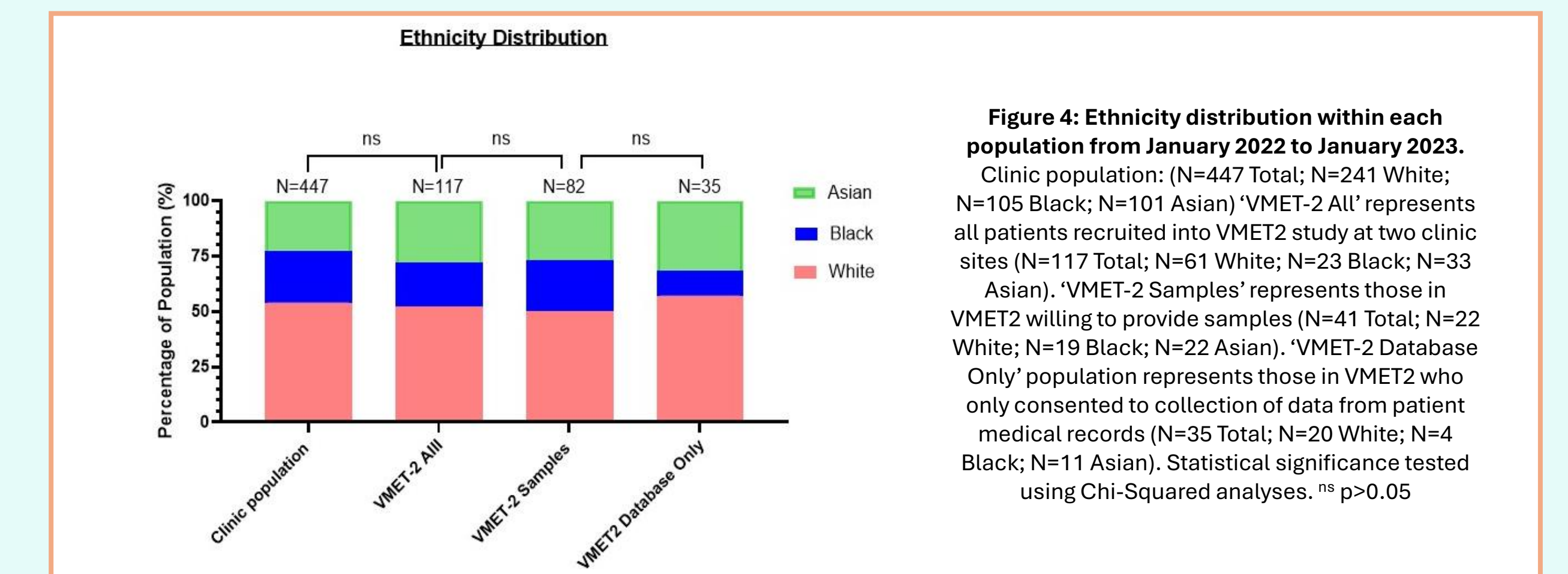
- PPI activities identified distrust in research, language barriers, stress during pregnancy and experiences of discrimination and racism as participation barriers. Female genital mutilation concerns also presented a barrier for women participating in research involving vaginal samples (**Figure 3**).



- Within the 'high risk' PTB prevention clinic population, sPTB rates were higher in Black and Asian women compared with White women (19.19% vs 5.77%, p=0.0001 and 18.56% vs 5.77%, p<0.0001 respectively).
- Asian women had greater proportions of iatrogenic PTB (iPTB) compared to White women (10.31% vs 5.77%, p=0.0302) (**Figure 2**).



- The ethnicity of women recruited to the VMET2 study were representative of the PTB clinic population.
- No difference was seen in the proportions of women of each ethnicity recruited into VMET2 who consented to sample collection versus women who consented to data collection from medical records only (**Figure 4**).



Key Findings

- There is pronounced disparity in the rates of PTB, with Black and Asian women having greater PTB rates within the general ICHT and the 'high risk' PTB prevention clinic populations.
- PPI activities conducted highlighted language barrier, stress during pregnancy, racism and female genital mutilation concerns as the main barriers to participation in PTB prevention studies. The VMET2 study participants are representative of the diverse ethnic population of women at risk of spontaneous PTB.
- The use of PPI should be embedded into all studies to ensure equity and representation of all ethnicities in active research studies.