The prevalence and impact of severe hot flushes among women aged 45-60 living with HIV in England

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Background

- Women with HIV are increasingly surviving into midlife, and thus reaching menopausal age[1]
- Women with HIV report a high prevalence of menopausal symptoms when compared to the general population, particularly hot flushes[2]
- Little is known about the impact of hot flushes on the health, well-being and engagement in HIV-care amongst women with HIV
- **Objective:** Using data from **Positive TRansItions through the Menopause (PRIME)** study, we explore the impact of hot flushes on a range of outcomes:
  - *(i) psychological distress*
  - *(ii) insomnia*
  - *(iii) suboptimal ART adherence and*
  - *(iv) Missed clinic appointments*

METHODS

- The cross-sectional PRIME study recruited 869 women living with HIV through NHS HIV clinics across England in 2017-2018[3]
- Information was collected through a questionnaire on demographic characteristics, history of comorbid conditions (Hepatitis B/C, hypertension, diabetes, CVD, stroke, osteoporosis, breast cancer), menstrual pattern, and menopausal symptoms, and supplemented with clinic data where available
- This analysis includes the 779 women who completed the **Hot Flash Related Daily Interference Scale (HFRDIS)[4],** a validated measure of hot flash severity
- Hot flush interference was categorised as mild (0-30), moderate (31-60) or severe (61-100)
- Outcomes were assessed using logistic regression, and were defined as follows:
  - (i) psychological distress: Patient Health Questionnaire-4 score≥6
  - (ii) self-reported insomnia
  - (iii) sub-optimal ART adherence: <100% adherence in last 7 days
  - (iv) missed HIV clinic appointment: one within the last 12 months
- Models were adjusted for age, ethnicity, employment, relationship and educational status, enough money for basic needs, smoking/alcohol consumption, number of medical conditions, years since HIV diagnosis, last available CD4+ T-cell count and HIV viral load

RESULTS

- Of the 779/868 PRIME participants included, median age was 49 [interquartile range (IQR): 47-52], 71.8% were Black African (table)
- Nearly all women (97.9%) were currently on ART, 88.3% of whom had an undetectable HIV viral load
- The median HFRDIS score was 14 [IQR: 0-43]; 65.5%, 19.4% and 15.1% of women experienced mild, moderate, and severe hot flush interference, respectively
- 24.9% (175/704) of women reported psychological distress, 22.7% (174/768) insomnia, 10.1% (75/745) suboptimal ART adherence and 21.1% (162/767) a missed HIV clinic appointment
- In adjusted models (figure), hot flush interference severity was associated with:
  - Psychological distress (adjusted odds ratio (aOR) moderate interference: 2.09 [95% confidence interval (CI): 1.16-3.75]; severe interference aOR: 5.31 [95% CI: 2.73-10.33])
  - Insomnia (moderate aOR: 3.94 [95% CI: 2.24-6.92]; severe aOR: 5.32 [95% CI: 2.92-9.67])
- There was no association between severity of hot flush interference and suboptimal ART adherence (moderate aOR: 1.58 [95% CI: 0.78-3.18]; severe aOR: 0.63 [95% CI: 0.25-1.57]) or missed HIV clinic appointments (moderate aOR: 1.21 [95% CI: 0.62-2.05]; severe aOR: 1.38 [95% CI: 0.72-2.64])

CONCLUSION

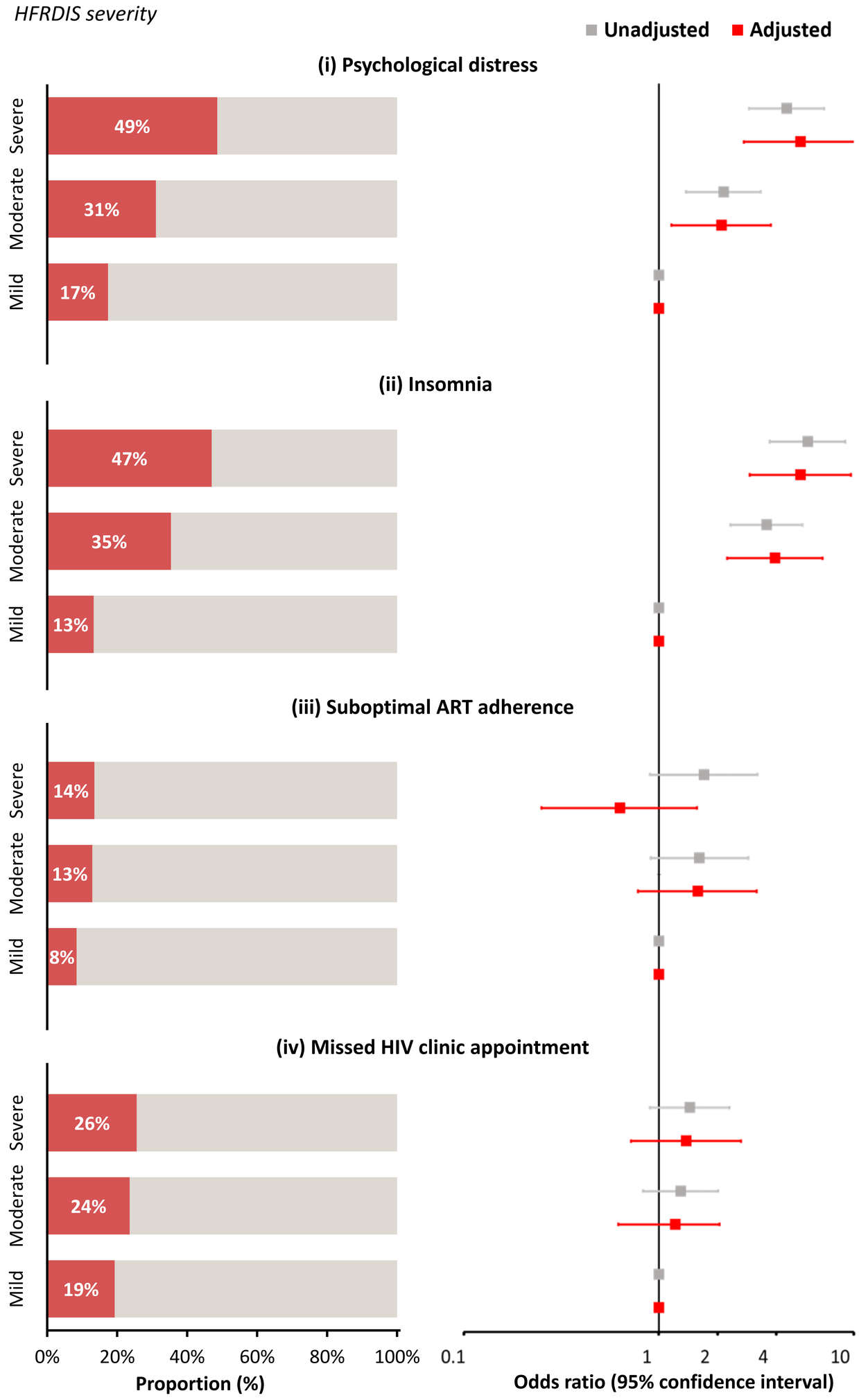
- Almost one in three mid-life women living HIV experienced moderate or severe daily interference of hot flushes
- HFRDIS was associated with increased psychological distress and insomnia
- It is important to note that this cross-sectional analysis does not allow us to determine whether insomnia or psychological distress are a result of moderate/severe hot flush interference
- Appropriate management of menopausal symptoms is important to optimise health and well-being in this population

Table: *Characteristics of women included in analyses*

		All (n=779)
Age (years, median [IQR])		49 [47, 52]
Ethnicity (%)		
	White British	93 (12.3)
	Black African	542 (71.3)
	Black Other	72 (9.5)
	Other	48 (6.4)
Not born in UK (%)		651 (85.0)
In a relationship (%)		396 (53.7)
Employed (%)		506 (67.5)
Enough money to cover basic needs (%)		492 (63.7)
Current smoker (%)		62 (8.2)
Risky alcohol use (%)		111 (14.3)
Number of medical conditions apart from HIV (median [IQR])		0 [0, 1]
Time since HIV diagnosis (y, median [IQR])		14 [9, 18]
Last CD4+ T-cell count <200 cells/mm^3 (%)		42 (6.1)
Undetectable HIV viral load (%)		649 (88.3)

Y: years; IQR: interquartile range; VL: viral load; %: percentage.

Figure: *Proportion of individuals experiencing each outcome stratified by mild, moderate or severe HFRDIS score. Unadjusted and adjusted odds ratios exploring association with HFRDIS severity*



Models adjusted for: age, ethnicity, employment, relationship and educational status, enough money for basic needs, smoking/alcohol consumption, number of medical conditions, years since HIV diagnosis, last available CD4+ T-cell count and HIV viral lo

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