

HIV and Non-Communicable Disease Multimorbidity: Results from the Ndlovu Cohort Study, South Africa.

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BACKGROUND

- In 2020, 60% of daily new human immunodeficiency virus (HIV) infections were in sub-Saharan Africa (SSA)¹
- Greater number of people aging with HIV, putting them at an increased risk for developing non-communicable diseases (NCDs)
- The estimated prevalence of NCDs in LMICs is approximately 36%²

AIM

To investigate whether the prevalence and patterns of NCD multimorbidity differs between people living with HIV (PLHIV) and those living without HIV in the Ndlovu Cohort Study (NCS).

METHODS

- Cross-sectional study design using baseline data from the NCS³
- Determinants considered were HIV and anti-retroviral therapy (ART) status, socioeconomic status and sociodemographic and lifestyle factors
- Outcome: NCD multimorbidity (y/n)
- Complete-case uni- & multi-variate logistic regression (OR [95% CI]) was carried out

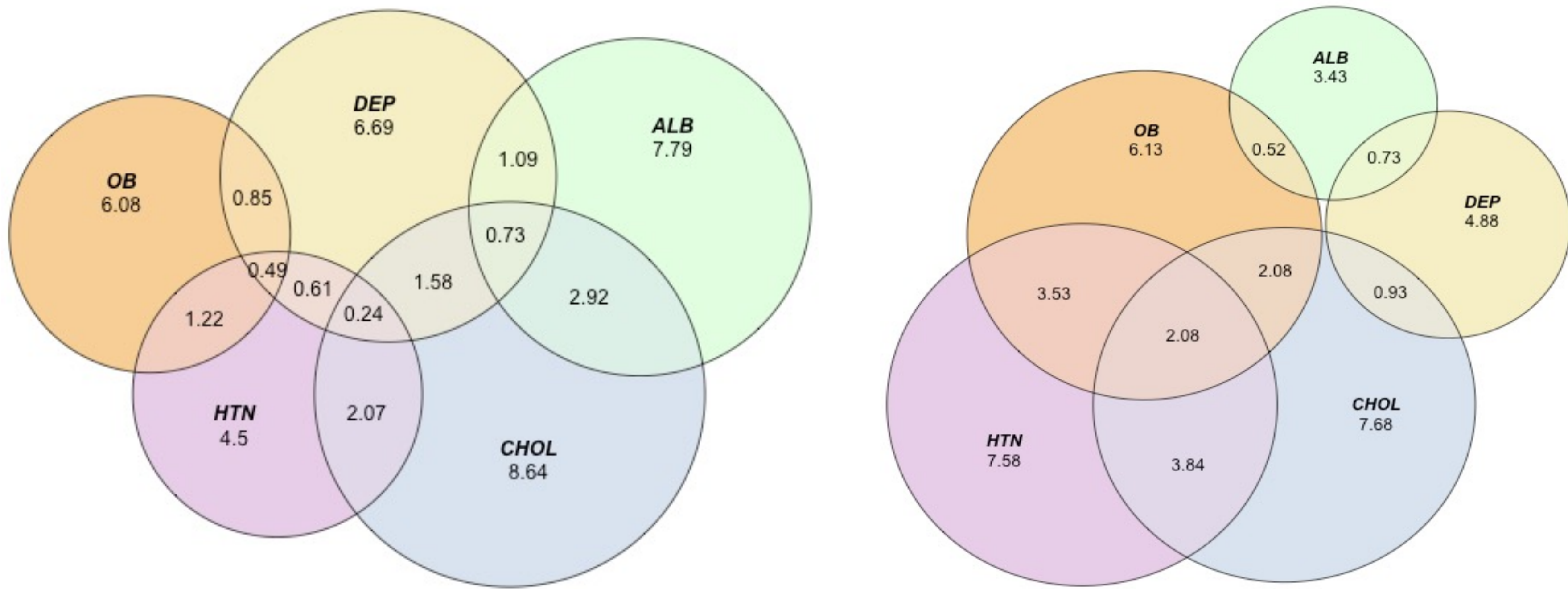
RESULTS

- 1785 participants included in the study of which 46% were PLHIV and 44% were male
- The median age among PLHIV was 41 (34.0 – 48.0) and 31 (24.0 – 48.0) among participants without HIV
- 62.8% of participants were living below the poverty line
- Lower likelihood of multimorbidity in PLHIV on ART compared to HIV- participants (OR = 0.52, 95% CI 0.39-0.68)
- No significant relationship with socioeconomic status proxy variables
- Multimorbidity prevalence was greater among HIV- participants: 24% vs. 21%
- Among HIV+ participants, hypercholesterolemia, albuminuria and depressive symptoms were the most commonly prevalent NCDs
- Among HIV- participants, hypercholesterolemia, hypertension and obesity were the most commonly prevalent NCDs

DISCUSSION

- Multimorbidity prevalence in line with previous literature²
- Previous studies showed: HIV- individuals less likely to experience multimorbidity compared to HIV+ individuals⁴
- Differences in NCDs between groups may be attributed to HIV infection⁵, treatment and stigma⁶

	Baseline Characteristics	OR [95% CI]
HIV status		
Negative	963	REF
Positive (ART naïve)	185	0.60 [0.38 – 0.92]
Positive (cART)	637	0.52 [0.39 – 0.68]
Age	38 (27 – 48)	1.09 [1.07 – 1.10]
Male sex	776	0.51 [0.38 – 0.69]
Highest level of education		
None	74	REF
Primary	339	0.60 [0.34 – 1.06]
Secondary & matric	1224	0.74 [0.42 – 1.30]
College & university	148	0.66 [0.32 – 1.36]
Employment status		
Unemployed	1224	REF
Employed	353	1.12 [0.80 – 1.55]
Other	208	0.82 [0.51 – 1.30]
Income		
<648 ZAR	1121	REF
648-992 ZAR	138	1.54 [0.97 – 2.40]
>992 ZAR	526	1.17 [0.86 – 1.59]
Currently smoking	490	0.52 [0.37 – 0.74]



Figures 1(a)(b): Euler diagrams showing the NCD clusters in (a) the HIV+ and (b) HIV- populations

CONCLUSION

- Similar prevalence of multimorbidity in both populations
- Differences in NCD patterns between HIV+ and HIV- participants
- Insignificant relationship between socioeconomic status and likelihood of NCD multimorbidity
- These results highlight the importance of regular NCD screening among all individuals
- Future research should be longitudinal to determine causality of these associations

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¹ UNAIDS Data 2021
³ Vos et al., 2017
⁵ Waters et al., 2019
² Asogwa et al., 2022
⁴ Wong et al., 2018
⁶ van Heerden et al., 2017