

Life course trajectories of body mass index in rural South India: Andhra Pradesh Children and Parents Study (APCAPS) 2003-2023

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25 Sep 2024

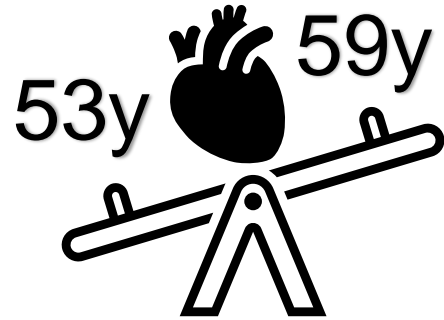
This research was supported by Australian Government Research Training Program (RTP) Scholarship



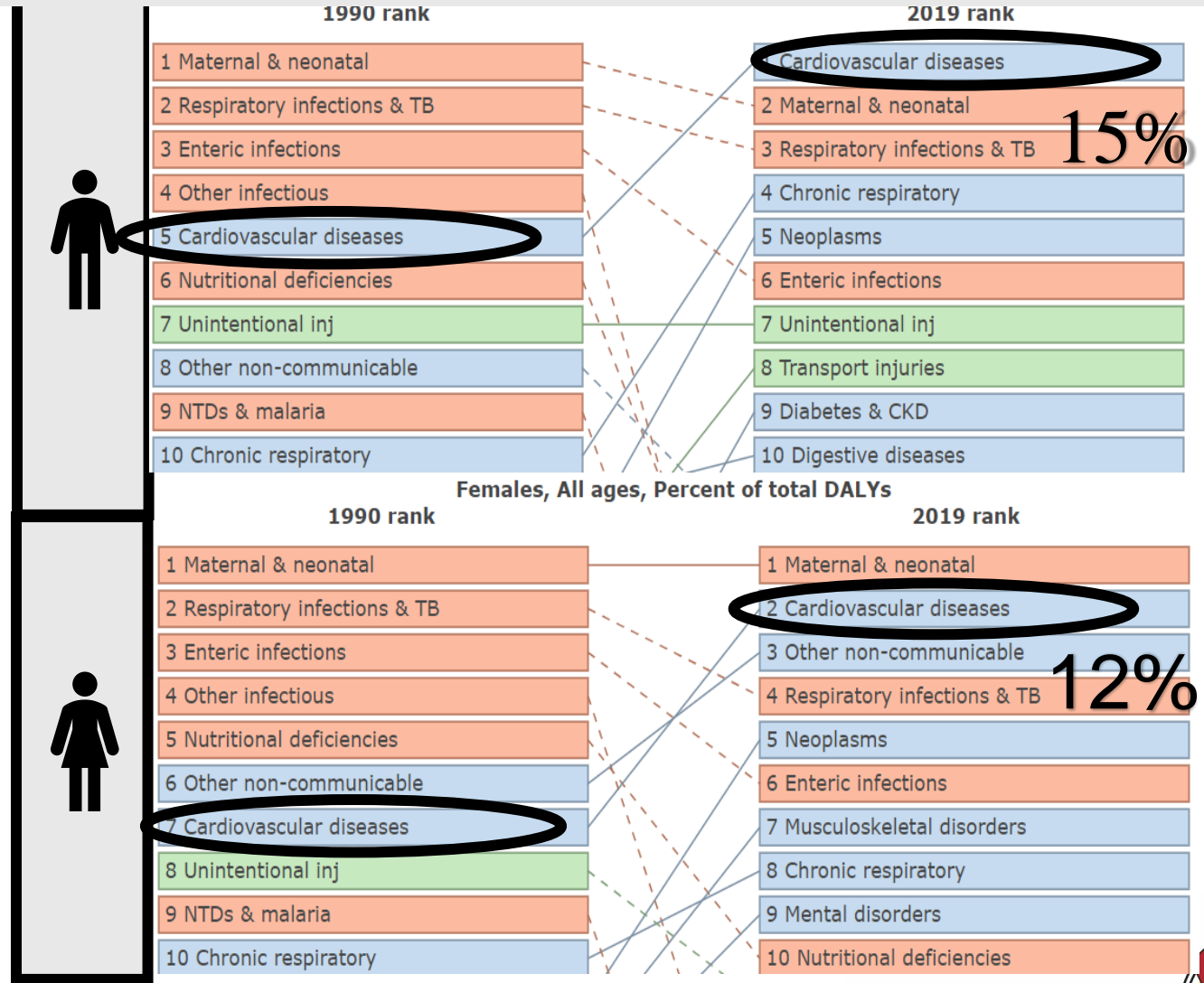
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1. Introduction: South Asia



Disease groups ranked by DALYs^a 1990-2019



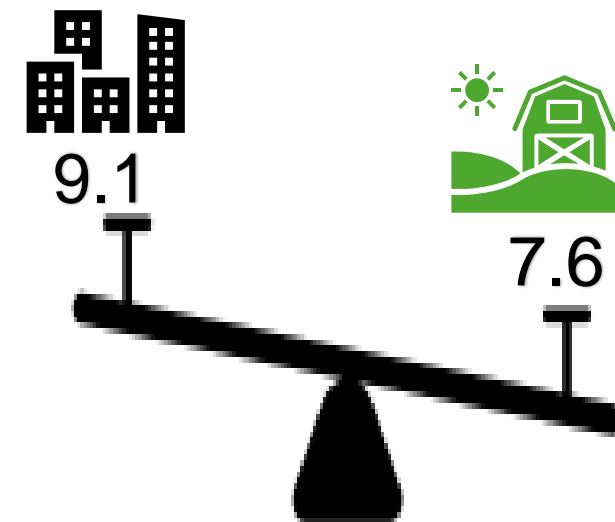
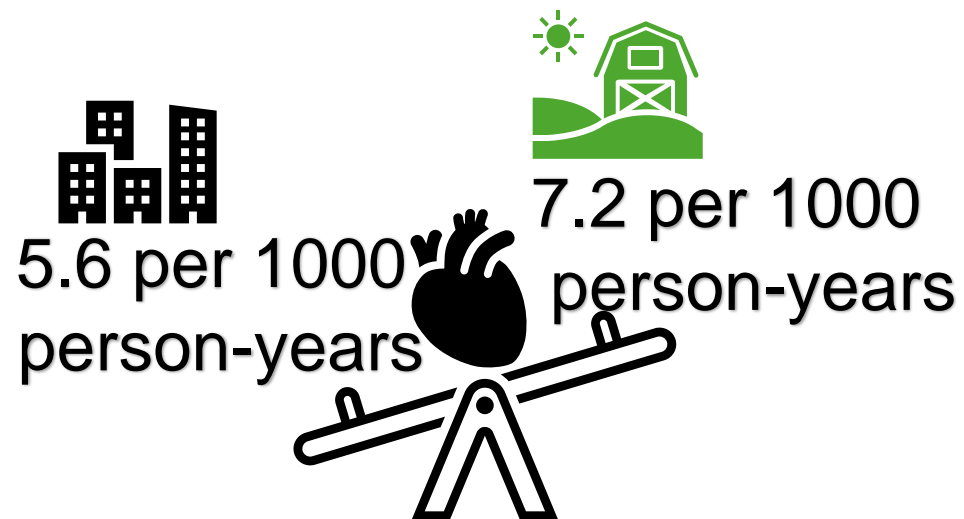
15%

12%

a. DALYs-Disability-adjusted life years

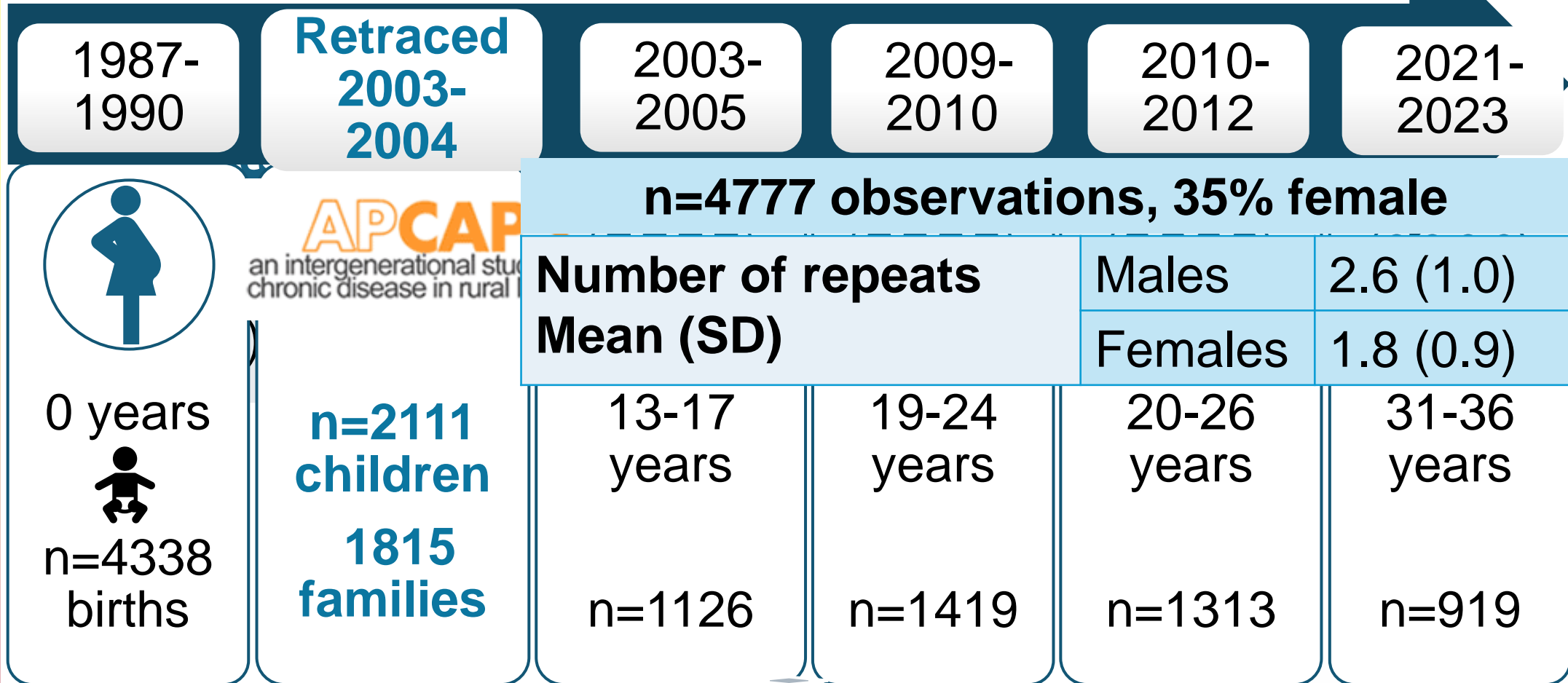
2. Introduction: Rural South Asia

- Home to 1.2 billion of the 8 billion people in the world
- South Asia is largely rural and expected to remain so to 2050
- Poorest billion: 1/5th of DALYs^a for above 40 years



a. DALYs-Disability-adjusted life years

3. Methods : APCAPS timeline

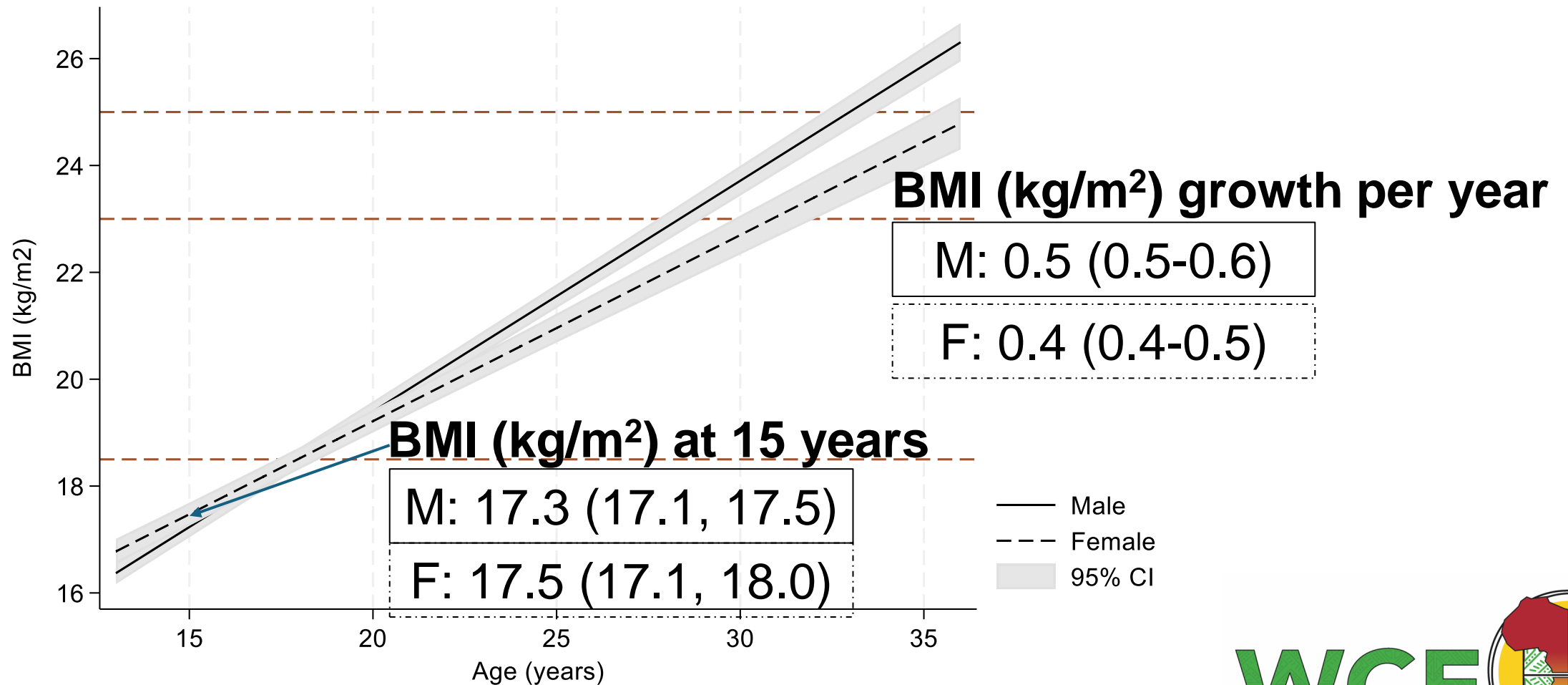


4. Methods

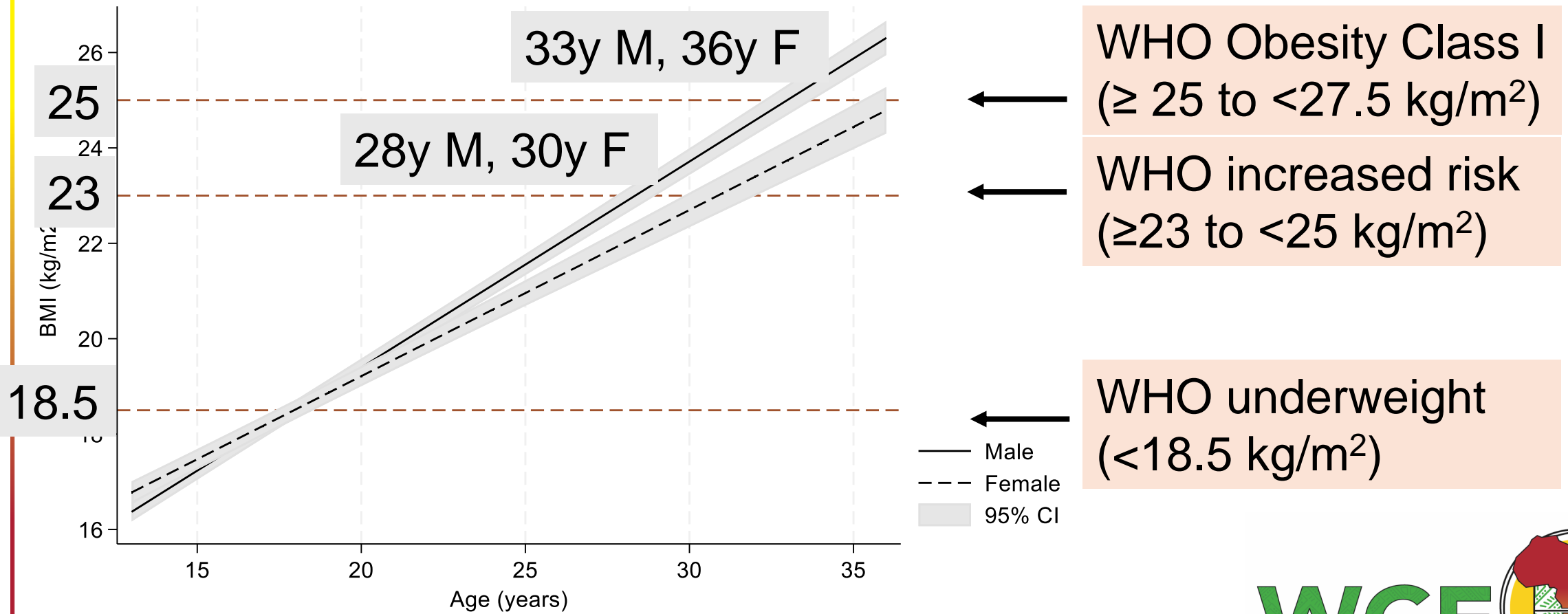
- BMI: objectively measured weight and stature
- Multi-level linear random slope model
 - Clustering at village, household and individual
 - Restricted maximum likelihood estimation (REML) and Kenward-Roger degrees of freedom
 - Missing at random (MAR)
- Sensitivity analysis: participants at ≥ 3 follow-ups



5. Results: Average predicted BMI trajectory by sex, APCAPS (n=4777)



6. Results: Average predicted BMI trajectory by sex, APCAPS (n=4777)



7. Discussion:

Similar findings: Average BMI in the overweight category by early to mid-30s



Study	Birth year	Sex
APCAPS (India)	1987-1990	males and females
Pelotas Birth Cohort (Brazil)	1982	males and females
British Cohort Study (UK)	1970	males
NHANES ^a survey 1976-1980 (USA)	1940s	males

a. National Health and Nutrition Examination Survey

8. Discussion

Mechanisms: structural determinants

- Mechanization of all domains
- Commercialization of food systems
- Occupation shift

Future research: Life course and inclusive

- All life stages, multiple birth cohorts
- All population sub-groups
- Assess South Asian phenotype



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