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## AIM

To show evidence of education misstatement by evaluating education reporting by adults in Brazil between 1991 and 2000.

## BACKGROUND

- Education is an important variable in demographic analysis, thus it is essential to measure it properly <sup>1,2,3</sup>
- Studies in the US and Europe have already documented errors in education reporting. <sup>4,5</sup>
- Education misstatement can bias the educational gradient in mortality <sup>6,7</sup>
- In Brazil, little attention has been paid to content errors in education data
- Most of analysis on content errors has been limited to age misreporting, showing a high degree of inaccuracy in the reported age <sup>8,9</sup>

## HYPOTHESES

- The reported education is inaccurate in Brazil.
- Education misstatement gets worse during periods of accelerated expansion of schooling.
- If better educated individuals tend to report their own characteristics more accurately, particularly when information is retrospective, errors will be larger among older cohorts.
- The expansion of education may have changed people's perception about their relative social position.
- The expansion of schooling has been followed by changes in the education system, affecting the comparability of responses over time.

## DATA AND METHODS

### Data

- We draw data for men and women aged 40-89 years from the Brazilian census (IPUMS-I 2015).
- We measure educational attainment according to the highest grade completed within the most advanced level attended in the education system

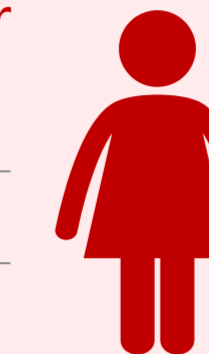
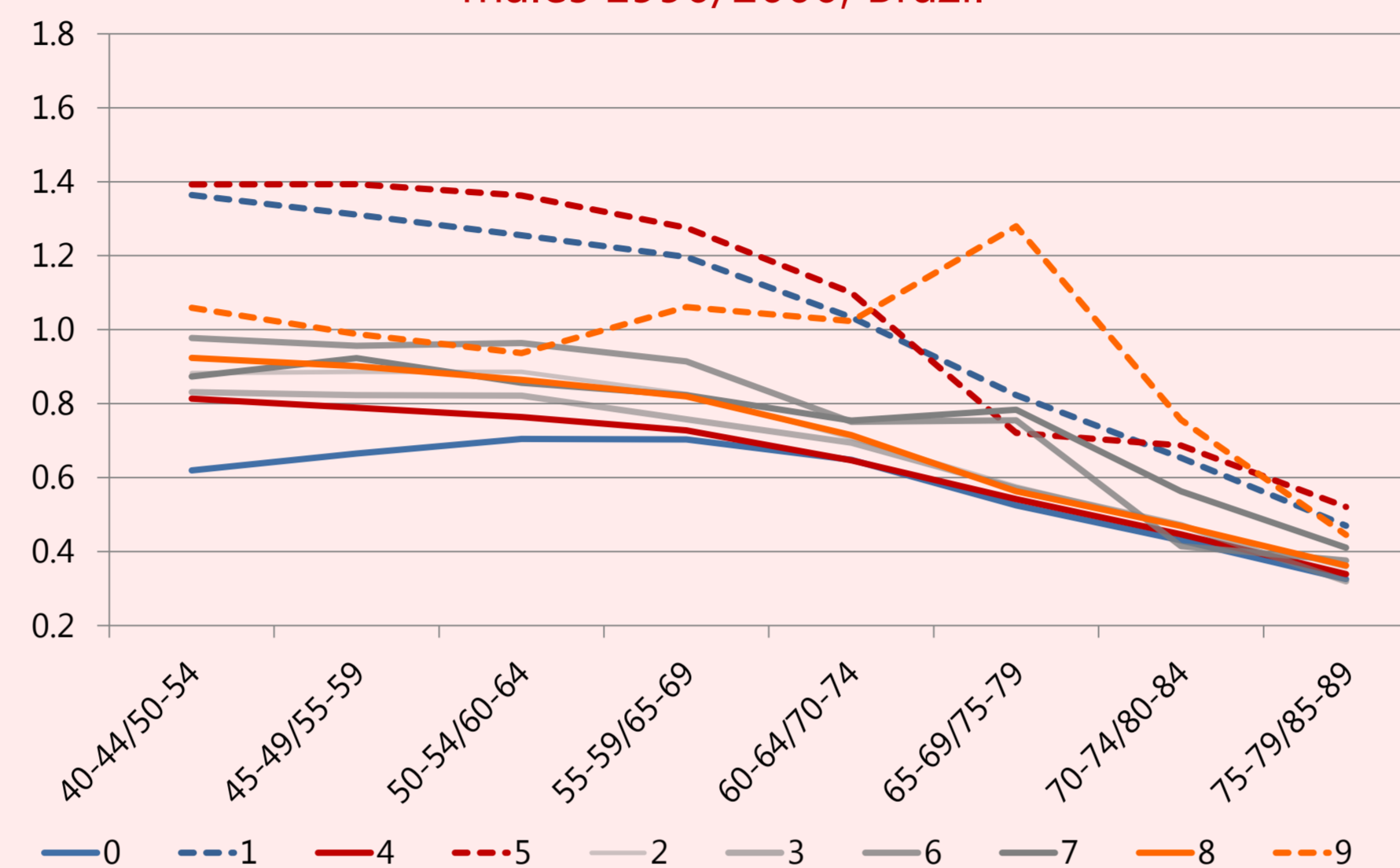
### Methods

- To evaluate the quality of education data, and provide indirect evidence of education misstatement, we calculate the implicit mortality measures by education from intercensal survivorship ratios.

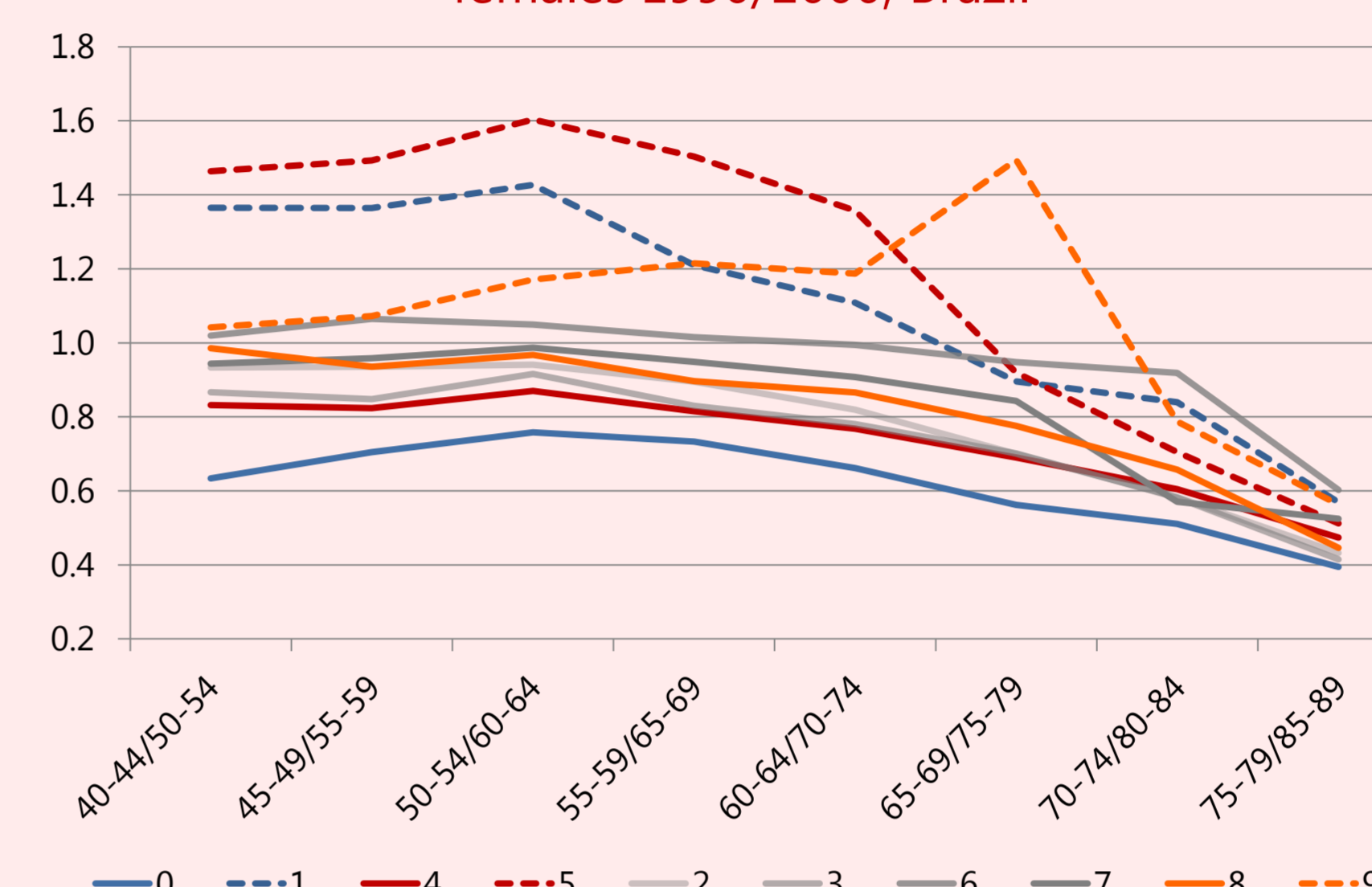
## How accurate is self-reported education in Brazil?



Intercensal Survivorship Ratio by educational attainment for males 1990/2000, Brazil



Intercensal Survivorship Ratio by educational attainment for females 1990/2000, Brazil



Intercensal Survivorship Ratio by educational groups and decennial age groups, both sexes, 1990/2000, Brazil

Age in		0-3		4-7		8-11		12 +	
1990	2000	Survival Ratio	Implied West* Level	Survival Ratio	Implied West* Level	Survival Ratio	Implied West* Level	Survival Ratio	Implied West* Level
<b>MALE</b>									
40-49	50-59	0.791	7.88	0.855	12.75	0.938	20.69	0.916	19.44
50-59	60-69	0.797	11.83	0.785	13.23	0.863	20.93	0.857	20.09
60-69	70-79	0.638	16.50	0.626	14.03	0.697	21.21	0.758	23.66
70-79	80-89	0.411	21.76	0.415	22.01	0.449	23.82	0.478	24.03
<b>FEMALE</b>									
40-49	50-59	0.812	5.91	0.888	8.34	0.969	20.17	0.957	19.59
50-59	60-69	0.840	12.46	0.887	18.18	0.958	23.42	0.938	22.92
60-69	70-79	0.679	13.02	0.761	19.79	0.857	24.56	0.848	24.30
70-79	80-89	0.488	21.89	0.560	24.36	0.612	> 25	0.646	> 25

Imputed data in 2000 \*\*:

- 8% of the information about the highest course attend was imputed for the whole population
- The proportion of imputed data decreases with age (individuals aged 40-89)
- Higher proportion of imputed information among those whose reported their educational level according to the current terminology (implemented between censuses, in 1996).

Notes: \* Model West from the Coale and Demeny regional model life tables  
\*\* It is not possible to identify the imputed cases in 1991

## CONCLUSIONS

- Education Census information is not accurate in Brazil.
- Self-reported education is not consistent between censuses.
- Changes in education terminology between 1991 and 2000 may affect the consistence of education data over time.
- Categorization of education attainment can mitigate the effects of education misstatement on the Survival Ratio.
- This study is an important step to gain a better understanding of education data quality in Brazil.
- The magnitude of various types of errors on education data and the relevance of these issues to bias population analyses it remains unknown.

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