

# Age and sex disparities in temporal trends in stroke incidence in Latin America: a systematic review and meta-analysis



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## FINANCIAL DISCLOSURES

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## BACKGROUND

Age-specific divergence in temporal trends in stroke incidence in high-income countries showed less favorable incidence in younger compared to older people. Data are unavailable for Latin American (LATAM) region.

## OBJECTIVE

To estimate temporal trends in stroke incidence disaggregated by age and sex in LATAM.

## METHODS

A systematic review reported in accordance with MOOSE and PRISMA guidelines. A modified Cochrane stroke-based search strategy of MEDLINE, WOS and LILACS databases from 1997 to 2021 were used to identify prospective observational studies with age and sex-disaggregated data of first-ever stroke (FES) incidence in people of LATAM. The Joanna Briggs Institute's guide was applied for risk of bias assessment. Incidence rate (IR), incidence rate ratio (IRR), overall relative temporal trend ratio (RTTR) of stroke incidence comparing period  $\geq 2010$  with  $< 2010$  were calculated. The pooled RTTR considered only studies with 2 time periods in the same population.

# Do not forget young people, especially young women, when we talk about stroke in LATAM.



## RESULTS

Six LATAM population-based studies were selected from 9,242 records. A total of 4,483 FES (48.65% women) among 4,101,084 persons were considered.

$IR_{(FES < 55 \text{ years})} = 25.49 \times 100,000 \text{ people}$	$IR_{(FES \geq 55 \text{ years})} = 538.03 \times 100,000 \text{ people}$
$IRR_{(FES < 55 \text{ years})} = \frac{29.17 \times 100,000 \text{ people} \geq 2010}{21.26 \times 100,000 \text{ people} < 2010} = 1.37$	$IRR_{(FES \geq 55 \text{ years})} = \frac{503.69 \times 100,000 \text{ people} \geq 2010}{605.21 \times 100,000 \text{ people} < 2010} = 0.83$
<b>Overall RTTR = <math>\frac{1.37 (95\%CI 1.23-1.50)}{0.83 (95\%CI 0.76-0.89)} = 1.65 (95\%CI 1.50-1.80)</math> (Fig.1)</b>	
<b>Pooled RTTR = 1.77 (95%CI 1.59-1.95) (Fig.2)</b>	
<i>P for heterogeneity = 0.59</i>	

Fig.2 Pooled RTTR of stroke incidence in <55 versus  $\geq 55$  age-groups by sex, comparing  $\geq 2010$  period versus  $< 2010$  in LATAM

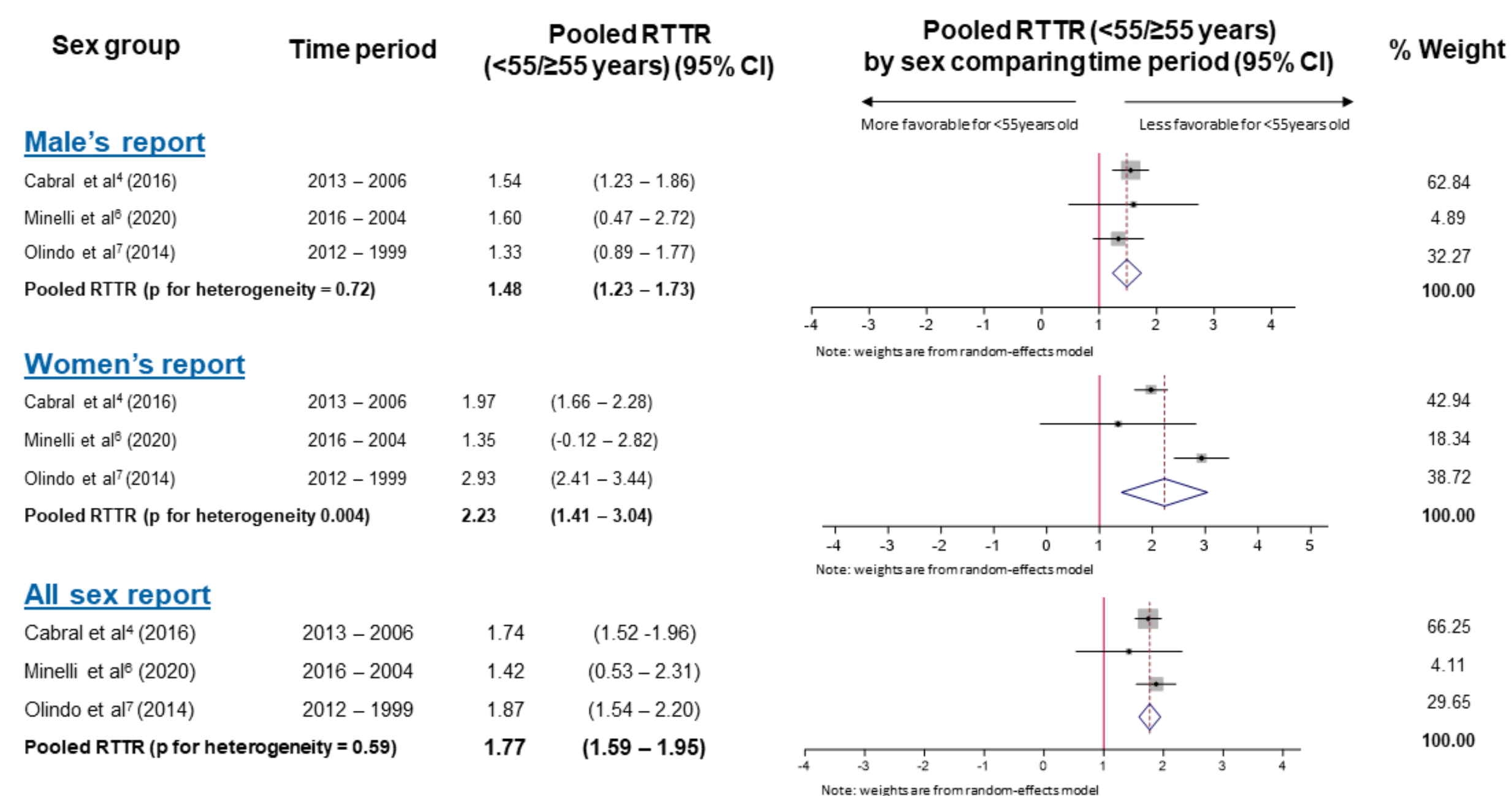
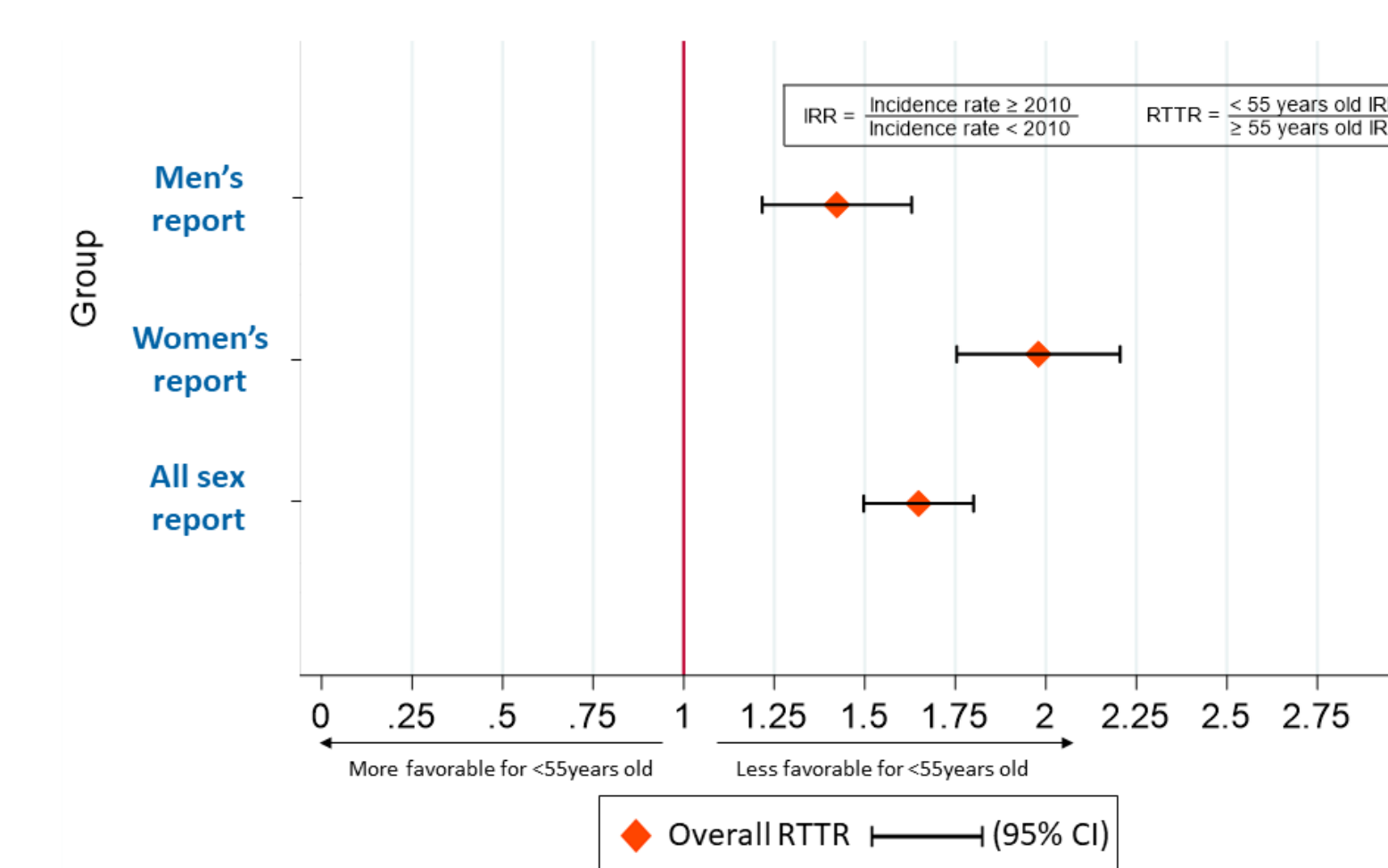


Fig. 1. Overall RTTR of stroke incidence in <55 versus  $\geq 55$  age-groups by sex, comparing  $\geq 2010$  period versus  $< 2010$  in LATAM



## CONCLUSION

Our findings show less favorable temporal trends in stroke incidence in younger compared to older people in LATAM in the last decade, with women at greatest disadvantage.

