

PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOR TRENDS AMONG BRAZILIAN ADULTS, 2009-2012

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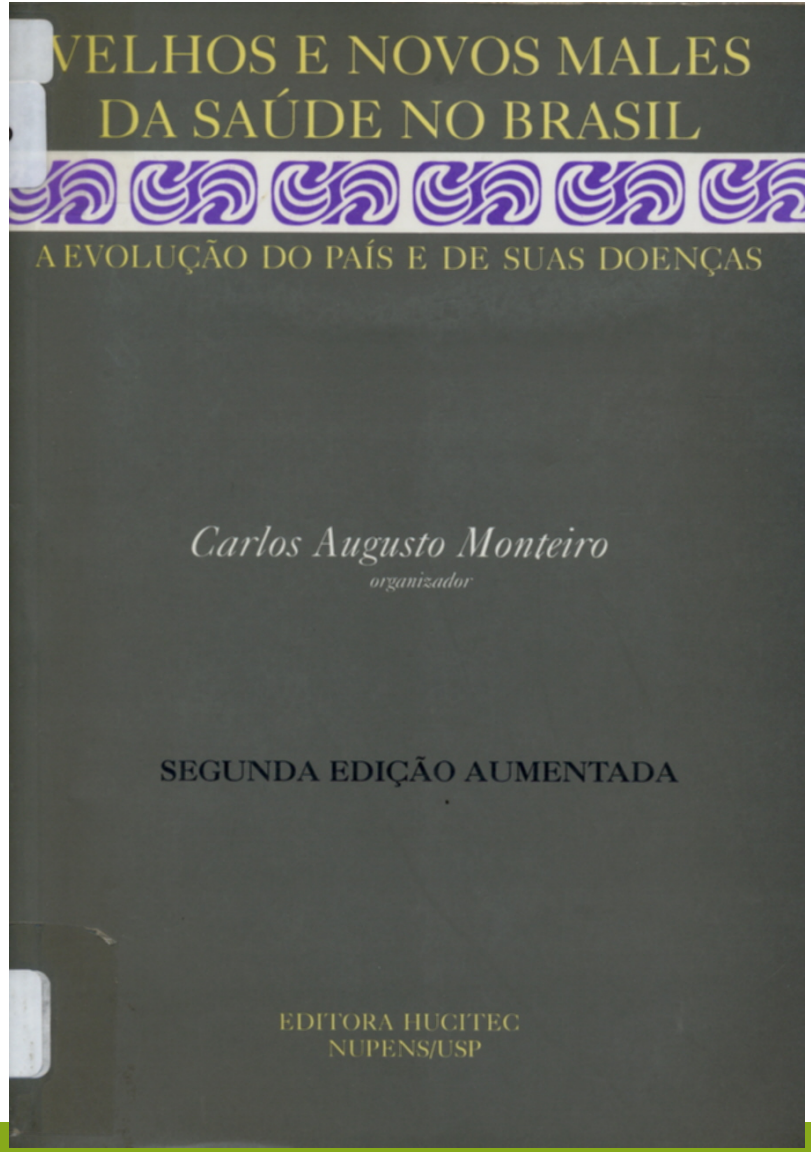
Chapter for the new edition of the book “Old and New Health Problems in Brazil”



OBJECTIVE

- **To analyze time trends in physical activity levels and sedentary behavior in Brazilian adults from 2009 to 2012.**

- **To describe the frequency and distribution of leisure-time physical activity, active transportation, physical inactivity and sedentary behavior in Brazilian adults in 2012.**

METHOD

- **Cross-sectional data from the Brazilian Surveillance System of Risk and Protective Factors for Non-Communicable Chronic Diseases (Vigitel), representative of the 26 Brazilian State capitals plus the Federal District.**

- **Sample: 54 thousand adults (>18 y) every year (two thousand telephone interviews per capital).**

METHOD

- **Four indicators:**
- **(I) active in leisure time (weekly practice of at least 150 minutes of moderate physical activity or 75 minutes of vigorous physical activity during leisure time)**
- **(II) active in transportation to work or school (usual roundtrip of at least 30 minutes to work or school using bicycle or walking)**
- **(III) physically inactive (absence of any physical activity in leisure time in the last three months; of physical exertion at work; of commuting to work or school by walking or cycling and of performing heavy house cleaning)**
- **(IV) time watching television of three or more hours a day (proxy of sedentary behavior).**

METHOD

- **Confidence intervals (95%) used to identify differences according to sociodemographic characteristics.**

- **Poisson regression used to identify trends, having the year as the independent variable ($p < 0.05$).**

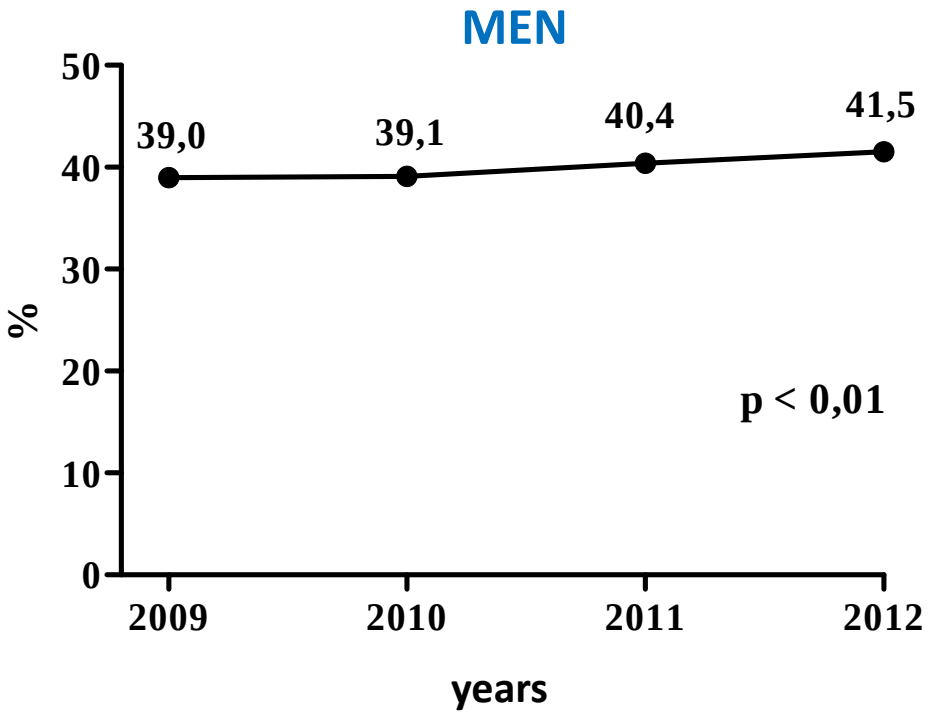
- **Sampling strategy taken into account in the analysis (weighting factors).**

Table 1 – Frequency and distribution of leisure-time physical activity, active transportation, physical inactivity and sedentary behavior in Brazilian adults according to sex, age and education. Vigitel, 2012.

	Actives at leisure		Actives at transportation		Physically inactives		TV (≥ 3 hours/day)	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Sex								
Men	41.5	40.1 – 43.0	13.8	12.8 – 14.9	15.2	14.1 – 16.3	26.5	25.2 – 27.9
Women	26.5	25.5 – 27.5	14.5	13.6 – 15.4	14.6	13.8 – 15.4	26.3	25.3 – 27.3
Age (years)								
18 to 24	47.6	45.1 – 50.1	16.5	14.6 – 18.4	12.6	10.9 – 14.3	28.7	26.4 – 31.0
25 to 34	39.1	37.1 – 41.1	16.5	14.9 – 18.0	10.6	9.3 – 11.8	26.7	24.9 – 28.6
35 to 44	31.0	29.2 – 32.8	15.6	14.1 – 17.0	11.8	10.3 – 13.3	23.6	21.8 – 25.4
45 to 54	25.8	24.1 – 27.5	15.0	13.5 – 16.5	12.8	11.3 – 14.3	23.6	21.7 – 25.4
55 to 64	25.2	23.3 – 27.0	11.3	9.8 – 12.7	16.9	15.2 – 18.7	28.3	26.2 – 30.4
Over 65	23.6	21.7 – 25.5	4.2	3.3 – 5.2	35.8	33.5 – 38.2	30.0	27.8 – 32.2
Education (years)								
0 to 8	21.6	20.3 – 23.0	14.5	13.3 – 15.7	18.5	17.2 – 19.8	27.8	26.2 – 29.3
9 to 11	37.1	35.7 – 38.4	15.2	14.2 – 16.3	11.8	11.0 – 12.7	28.7	27.4 – 30.0
Over 12	45.4	43.7 – 47.2	12.1	10.9 – 13.3	14.2	12.9 – 15.4	20.8	19.4 – 22.3
Total	33.5	32.6 – 34.3	14.2	13.5 – 14.9	14.9	14.2 – 15.5	26.4	25.6 – 27.2

Vigitel: Vigilância de Fatores de Risco e Proteção para Doenças Crônicas por Inquérito Telefônico; 95% CI: 95% Confidence Interval.

TIME TRENDS OF INDIVIDUALS ACTIVE AT LEISURE-TIME AMONG BRAZILIAN ADULTS. BRAZIL, 2009-2012



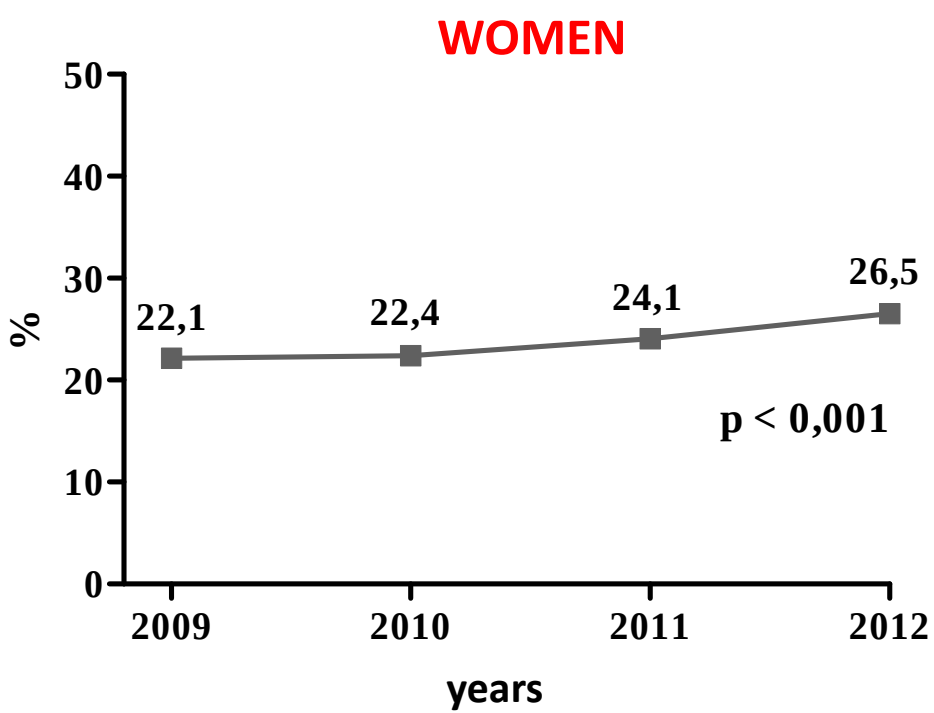


Table 1. Distribution of active adults in the studied sample according to the main type of leisure-time physical activity (LTPA). Brazil, 2011.

Main type of LTPA	Total				Men				Women			
	%	CI 95%			%	CI 95%			%	CI 95%		
Walking*	15.9	15.2	16.6	2º	13.2	12.2	14.1	1º	18.3	17.3	19.3	
Soccer	9.4	8.6	10.2	1º	19.6	18.1	21.2		0.7	0.3	1.1	
Strengh training / Gymnastics	9.3	8.8	9.9	3º	9.5	8.6	10.5	2º	9.1	8.4	9.8	
Running	2.7	2.3	3.1	4º	4.4	3.6	5.2	3º	1.2	1.0	1.4	
Bicycling*	1.8	1.5	2.1	5º	2.9	2.3	3.4	5º	0.9	0.7	1.1	
Water aerobics	0.9	0.8	1.1		0.3	0.1	0.4	3º	1.5	1.2	1.7	
Swimming	0.7	0.6	0.9		1.0	0.7	1.3		0.5	0.3	0.6	
Others	3.8	3.6	4.4		3.9	3.6	5.0		3.4	3.2	4.2	
Do not practice LTPA	56.5	55.4	57.6		45.8	44.1	47.5		65.7	64.4	67.0	

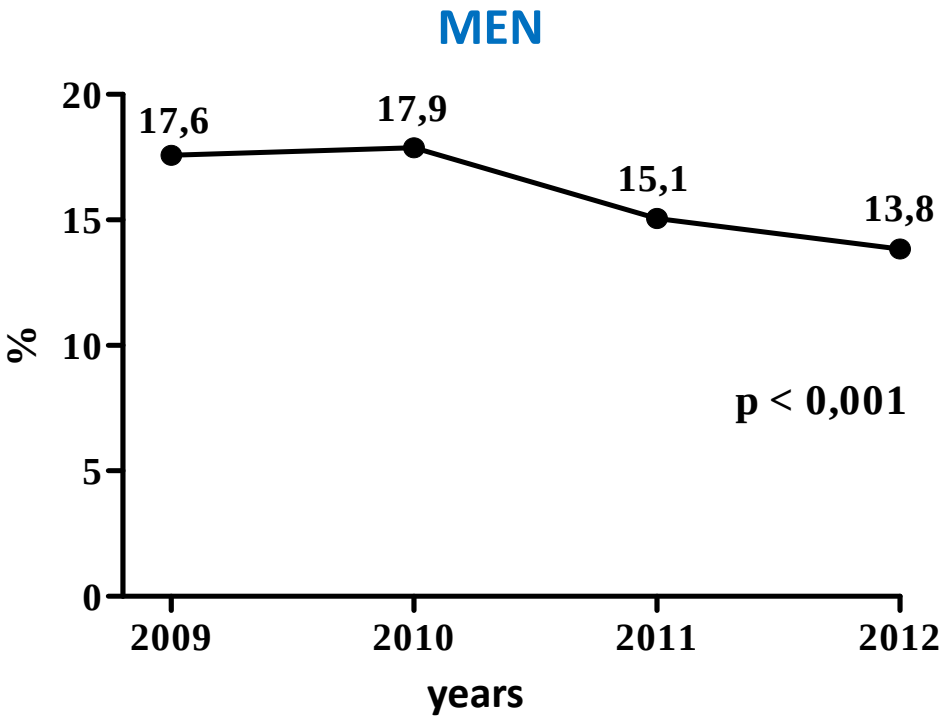
* Not considering walking and bicycling for transportation purposes.

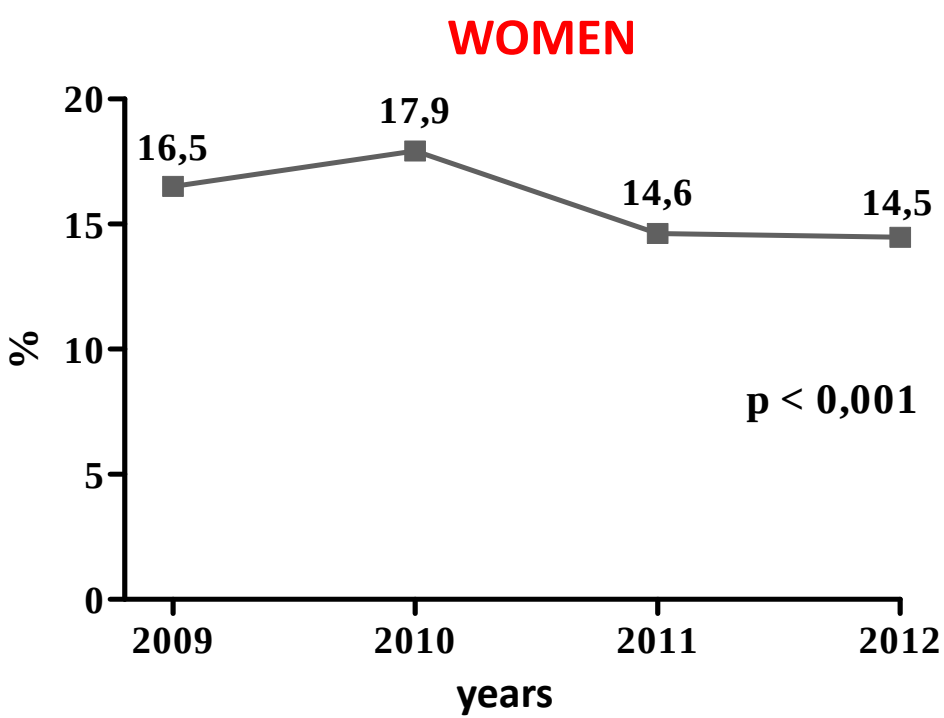
Academia da Saúde

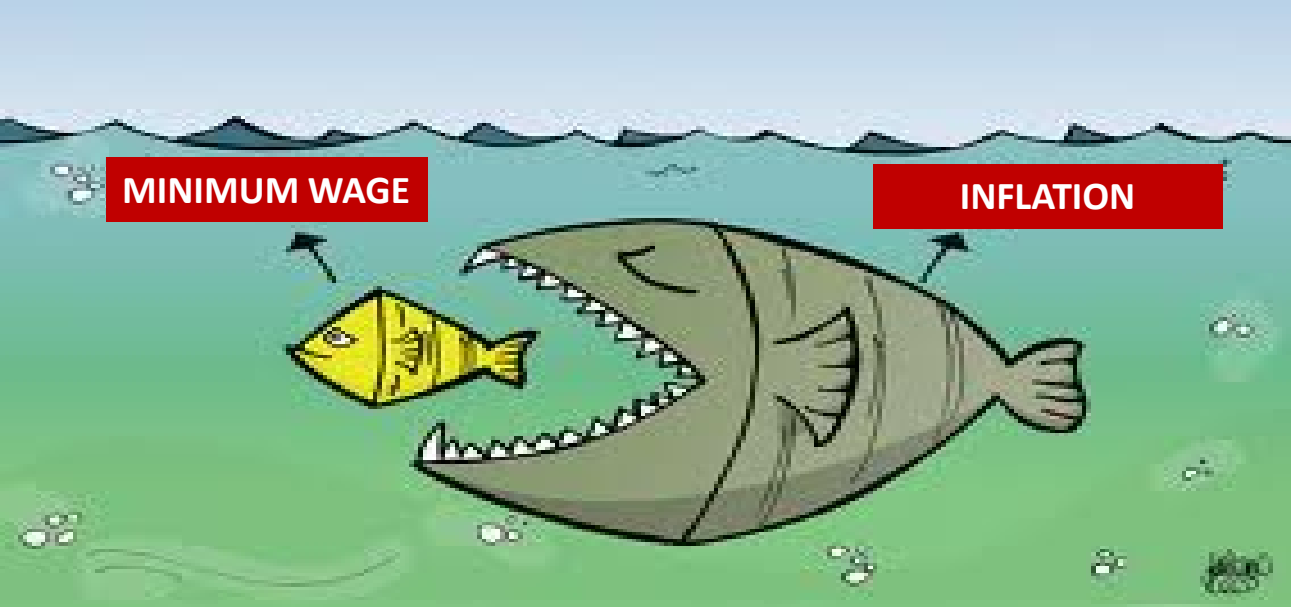
- Academia da Saúde / Academia da Cidade: important initiatives implemented in recent years by the health sector.

- Major sports events: lost opportunity to reduce inequalities in LTPA and to increase LTPA diversity and number of practitioners.

TIME TRENDS OF INDIVIDUALS ACTIVE AT TRANSPORTATION AMONG BRAZILIAN ADULTS. BRAZIL, 2009-2012



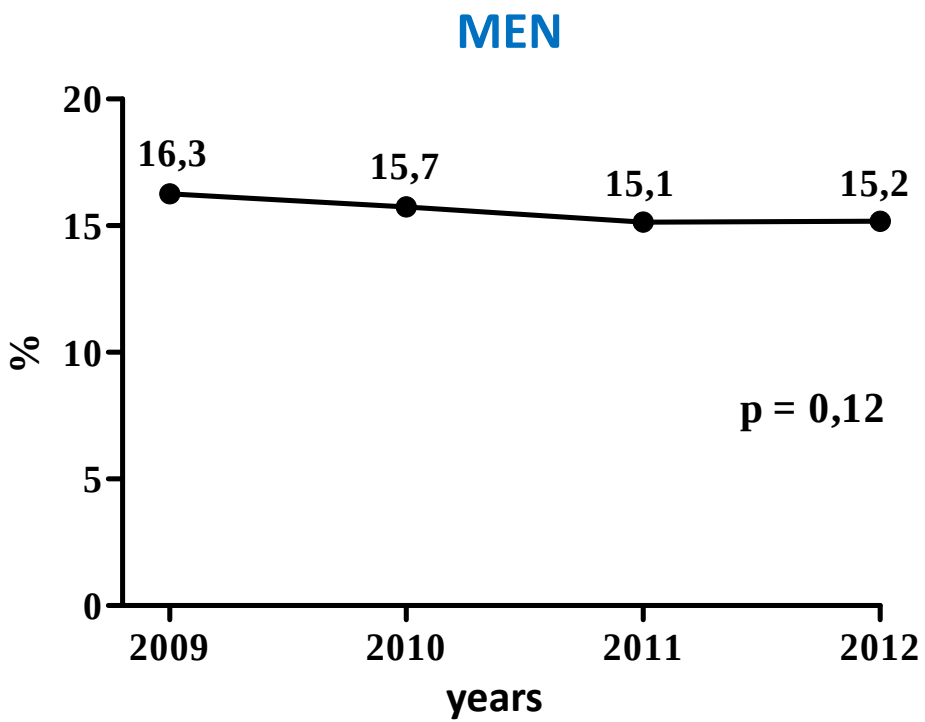


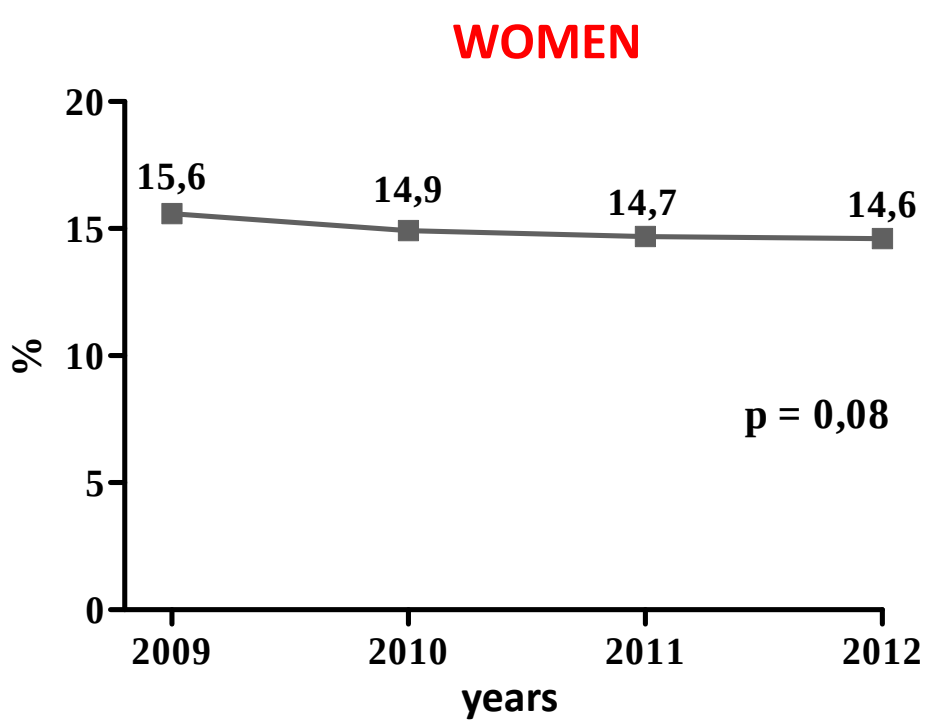


Non-choice model (Olga)

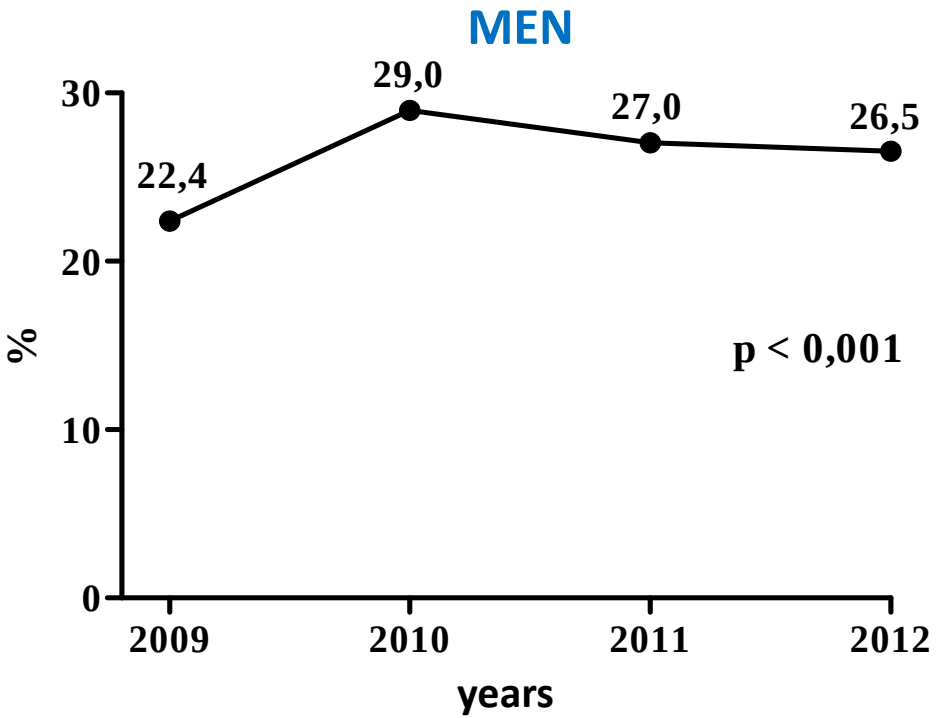

CASAS BAHIA
Mooca
ACENDA
NESTA
TAXI

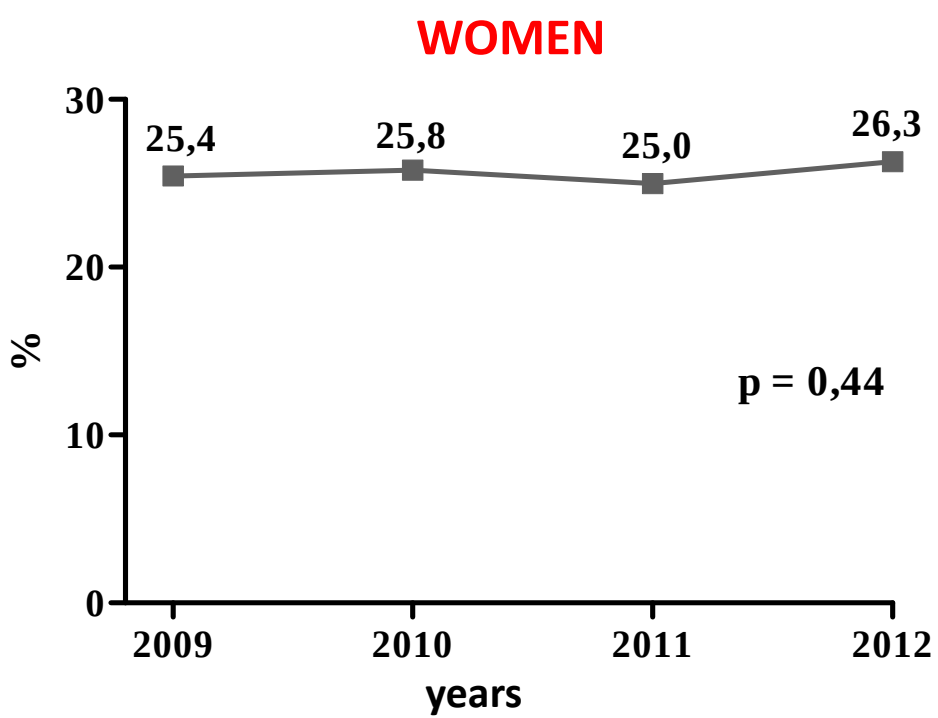
TIME TRENDS OF INDIVIDUALS PHYSICALLY INACTIVE AMONG BRAZILIAN ADULTS. BRAZIL, 2009-2012





TIME TRENDS OF INDIVIDUALS WATCHING TV FOR 3 HOURS OR MORE AMONG BRAZILIAN ADULTS. BRAZIL, 2009-2012





DISCUSSION

- Worrying scenario: stagnation in high levels of physical inactivity, reduction of active transportation and increase of TV watching among men.
- Some limitations:

1) Low landline phone coverage in some cities (corrected by post-stratification weights)
2) Active transportation combining walking and cycling
3) No other screen times

- Inequalities against women and older people
- Leisure time physical activity ‘monotony’ (79.5% of LTPA comes from three types)

THANK YOU!

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