Inequalities in Trajectories of Functioning in dwelling-living older adults in two developing countries: Brazil and Chile

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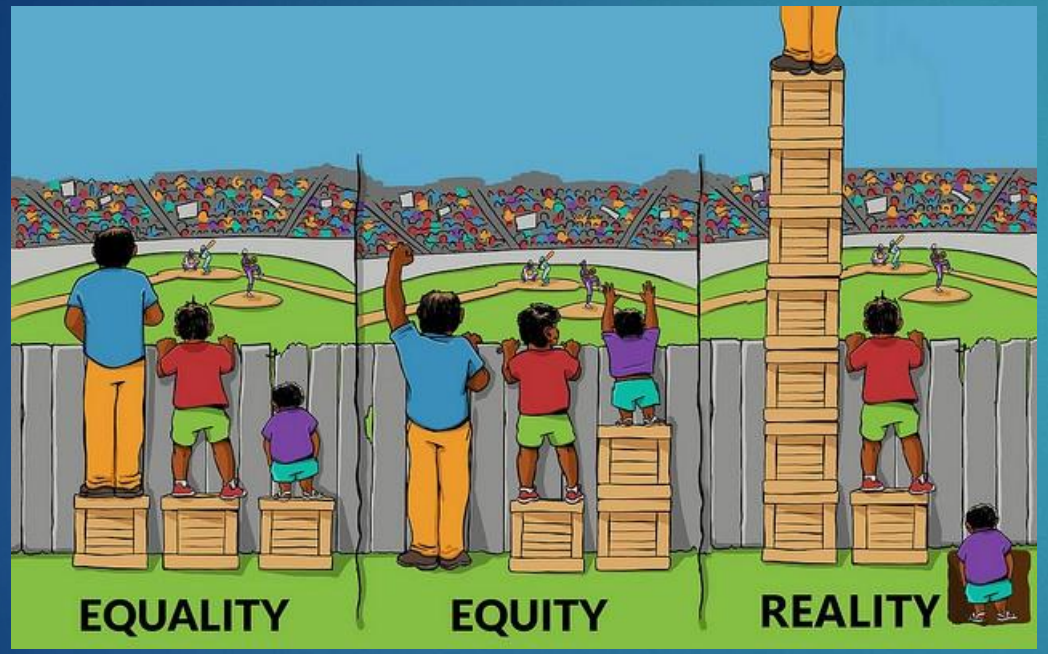
CONTENT

- HIGHLIGHTS
- BACKGROUND
- METHOD
- RESULTS AND DISCUSSION
- LIMITATIONS
- CONCLUSIONS

HIGHLIGHTS

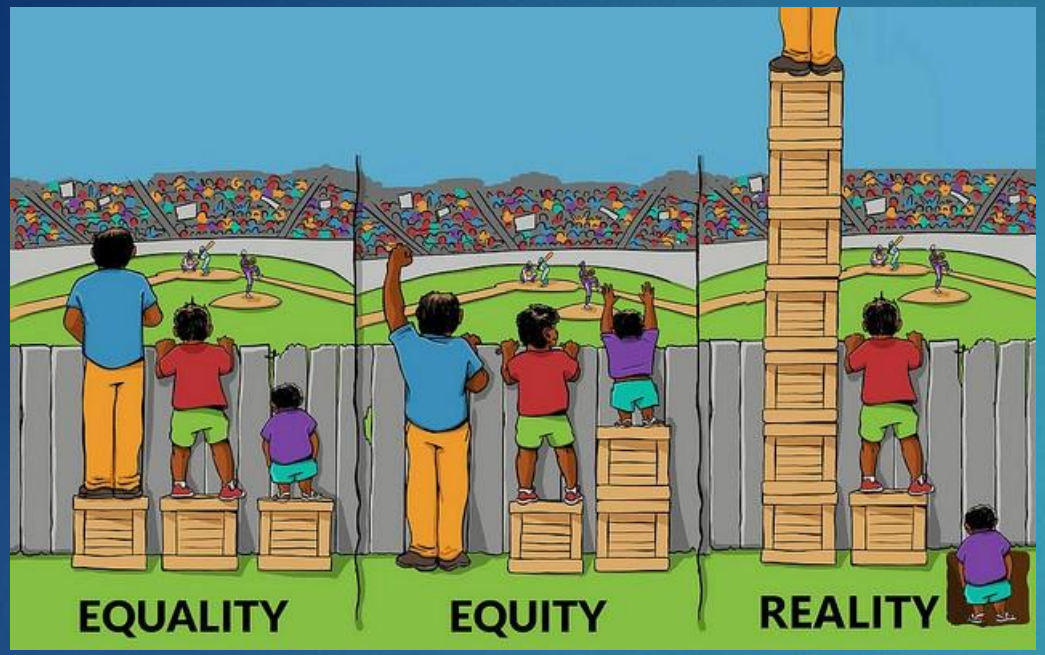
- ✓ Middle-Income Countries may present distinct characteristics of aging;
- ✓ Education is a strong predictor of Functional Trajectory;
- ✓ Public policies formulation should consider lifelong vulnerabilities.

BACKGROUND


EQUALITY
EQUITY
REALITY


México
Cuba
República Dominicana
Jamaica
Haití
Puerto Rico
Guatemala
Honduras
El Salvador
Nicaragua
Costa Rica
Panamá
Venezuela
Colombia
Ecuador
Brasil
Perú
Bolivia
Paraguay
Chile
Argentina
Uruguay

BACKGROUND



Low and Middle-income countries present Social Differences

Health Inequities.

WHO, 2013
Ataguba et al., 2015
WHO, 2016

BACKGROUND

INEQUITIES DURING THE COURSE OF LIFE

FUNCTIONAL TRAJECTORIES OF OLDER ADULTS LIVING IN MIDDLE-INCOME COUNTRIES

What are the differences and the similarities?

METHOD

DATABASE

Health, Well-being and Aging Survey
(SABE Study)

SABE

60+

2000
2005
2010

São Paulo (Brazil) & Santiago (Chile)

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FUNCTIONAL TRAJECTORY ASSESSMENT

Basic ADL (Katz, 1963)	Instrumental ADL (Lawton, 1969)	MOBILITY

Self-report questions ➡ baseline & follow-up.

Adjusted by cognitive status (Mini-Mental and Pfefer).

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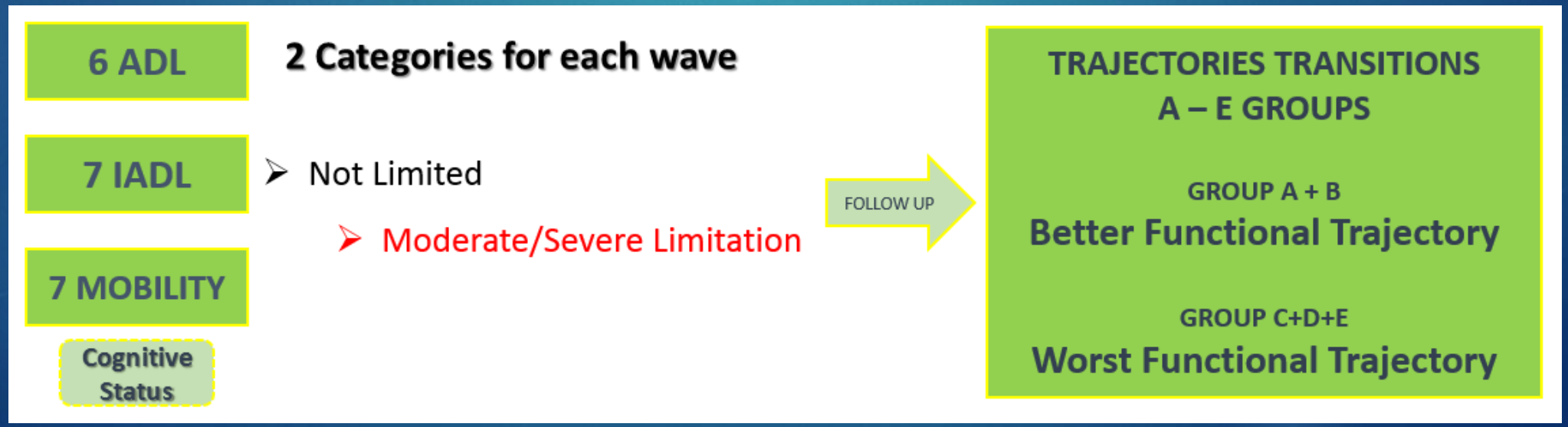
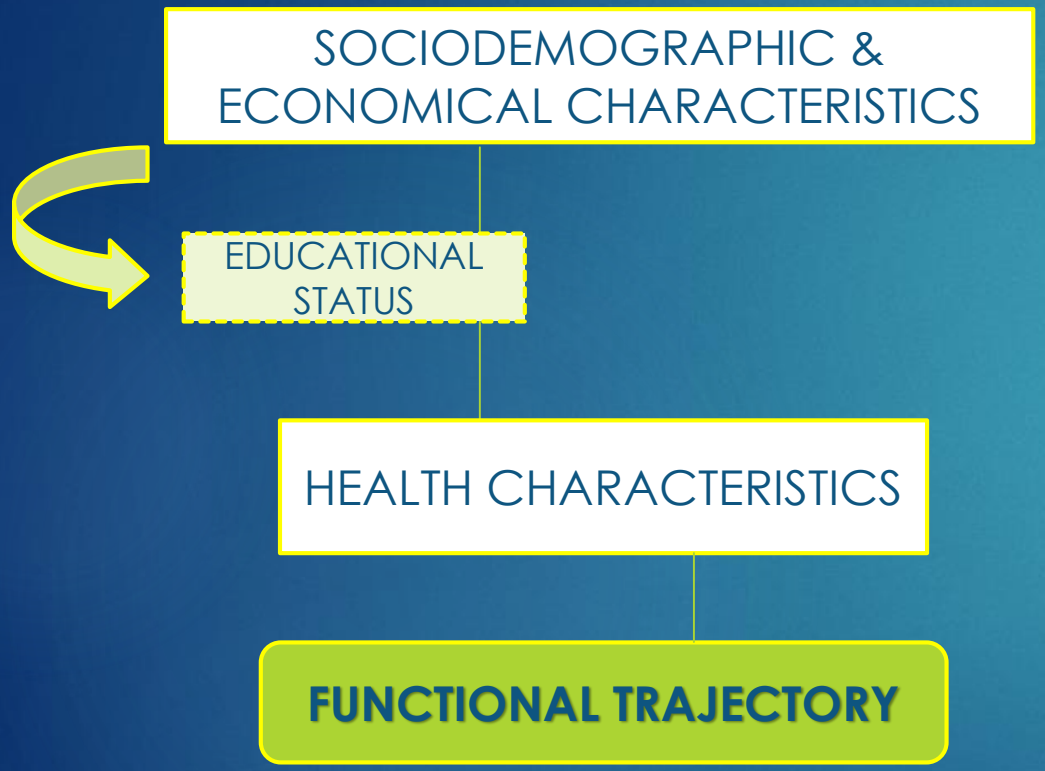


Fuentes-García(2012)

METHOD

COVARIABLES*



*Baseline information (2000).

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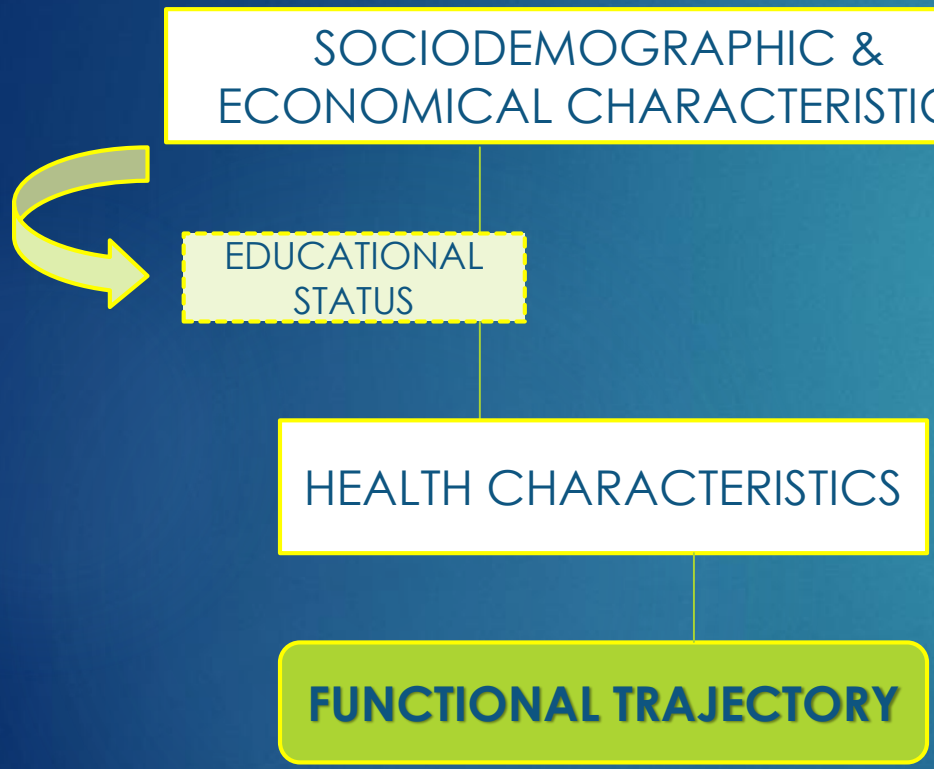

STATISTICAL ANALYSIS

- ✓ Descriptive analysis
- ✓ Unadjusted and adjusted logistic regression models
- ✓ All analyses were performed using Stata, considering sampling weights and the structured.

All ethical considerations were respected in both studies.

*Baseline information (2000).

R&D

Follow-up
2000 - 2010

Sao Paulo (Brazil)
Female: 451
Male: 234
Total: 685

Santiago (Chile)
Female: 190
Male: 94
Total: 284

RESULTS & DISCUSSION

Table 1. Definition of trajectory groups and description of final trajectories groups of the study. Sao Paulo (Brazil)-Santiago (Chile), 2000-2010.

Group	Trajectory of Functioning*	Characteristic	Brazil	Chile
Group A	No-No-No	Active aging	-	25.3
Group B	No-No-Yes	Slow limitation process	23.1	33.8
Group C	No-Yes-Yes	Fast limitation process	35.3	8.1
Group D	Yes-status change	Atypical Process	7.5	16.3
Group E	Yes-Yes-Yes	Vulnerable aging	34.1	16.5
Final Groups				
Better trajectory group		Groups A and B	23.1	59.1
Worst trajectory group		Groups C, D and E	76.9	40.9

*Yes= with limitation, No=without limitation.

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X

Even with Latin America presenting higher than expected population aging rates, we observed great differences in the functional trajectories among citizens of the largest cities in Chile and Brazil.

United Nations, 2015

R&D

Table 2. Description (%) of sociodemographic and economic characteristics and health condition of dwelling older adults from Sao Paulo and Santiago. Brazil - Chile, 2000.

	Sao Paulo	Santiago
Gender		
Male	36.9	32.6
Female	63.1	67.4
Years (mean/SD)	66.8(0.33)	68.7(6.0)
Age group		
60-64	46.0	28.1
65-69	24.7	30.5
70-74	19.0	23.5
75 year and over	10.3	17.9
Years of formal education		
0-3 years	47.7	25.6
4-7 years	35.3	40.7
8 years and over	17.0	33.7
Educational Status		
Attended school	82.9	86.3
Never attended school	17.1	13.7
Living alone		
No	89.1	89.3
Yes	10.9	10.7
Perception of income sufficiency		
Yes	32.6	61.9
No	67.4	38.1
Self-rated Health		
Excellent/very good/Good	51.3	42.2
Regular/Poor	48.7	57.8
Functional limitation at baseline		
No	58.4	67.0
Yes	41.7	33.0
Number of non-communicable diseases		
None	33.9	-
One	33.0	1.9
Two or more	33.1	98.1
Depressive symptoms		
No	78.2	70.1
Yes	21.8	29.9
Falls in the last year		
No	74.4	62.8
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Influenced by the age structure and Schooling.

R&D

We observed differences between gender.

Older groups have higher odds to be part of worse functional trajectories.

Education was an important social determinant of health that impacted functioning in a life course.

Lynch, 2008
Zimmer, 2015

Table 2. Risk factors for Brazilian and Chilean older adults to be part of a trajectory group with worst functioning accessed by non-adjusted logistic regression model. Brazil-Chile, 2000-2010.

		Brazil		Chile	
		OR	p value	OR	p value
Gender	Male	1		1	
	Female	0.57	0.015	2.64	0.001
Age group	60-64	1		1	
	65-69	1.17	0.486	1.99	0.05
	70-74	2.02	0.011	2.07	0.05
	75-79	2.62	0.021	5.82	<0.001
	80 years and over	38.8	<0.001	7.41	<0.001
Educational level	0-3 years	1.37	0.38	3.58	<0.001
	4-7 years	0.66	0.143	1.34	0.353
	8 years and over	1		1	
Educational Status	Attended school	1		1	
	Never attended school	2.77	0.002	3.86	<0.001
Perception of income suficiency	Yes	1		1	
	No	0.96	0.829	0.93	0.768
Self-rated Health	Excellent/v. good/Good	1		1	
	Regular/Poor	2.4	<0.001	5.22	<0.001
Number of non-cummunicable diseases	None	1		-	
	One	1.17	0.507	1	
	Two or more	2.32	0.002	0.97	0.286
Depressive symptoms	No	1		1	
	Yes	1.59	0.137	3.74	<0.001
Falls in the last year	No	1		1	
	Yes	0.93	0.759	2.01	0.006

R&D

Table 3. Risk factors for Brazilian and Chilean older adults to be part of a trajectory group with worst functioning accessed by adjusted logistic regression model. Brazil-Chile, 2000-2010.

		SAO PAULO		SANTIAGO	
		OR	p value	OR	p value
Gender	Male	1		1	
	Female	0.48	0.007	2.72	0.018
Age group	60-64	1		1	
	65-69	1.03	0.893	4.31	0.008
	70-74	1.99	0.017	4	0.015
	75-79	2.19	0.072	7.37	0.002
	80 years and over	39.11	<0.001	19.73	0.001
Educational level	0-3 years	0.85	0.676	3.91	0.007
	4-7 years	0.65	0.179	1.15	0.741
	8 years and over	1		1	
Educational Status	Attended school	1			
	Never attended school	1.95	0.037		
Self-rated Health	Excellent/v. good/Good	1		1	
	Regular/Poor	2.05	0.006	6.69	<0.001
Number of non-cummunicable diseases	None	1			
	One	0.95	0.838		
	Two or more	1.78	0.041		
Depressive symptoms	No			1	
	Yes			4.61	0.001

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R&D

Education

- Healthy attitudes
- Family income
- Lifelong decisions
- Access of medical assistance

Accumulated Damages → **Different panoramas of aging**

Culminating in worse or better trajectories

Ferraro & Shippee, 2009

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R&D

Accumulated Damages → **Different panoramas of aging**

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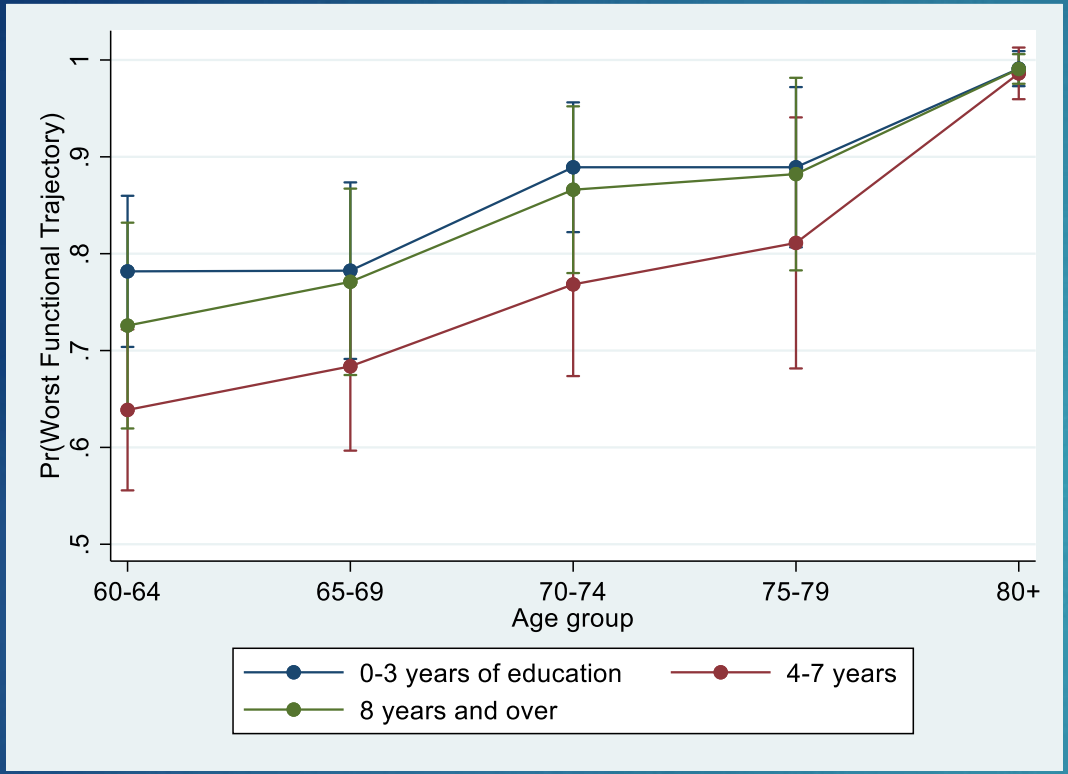
Education (older adults) ↓ ↑ **Aging Process**

What is the impact? #Middle-income countries

WHO, 2018; WHO, 2017.



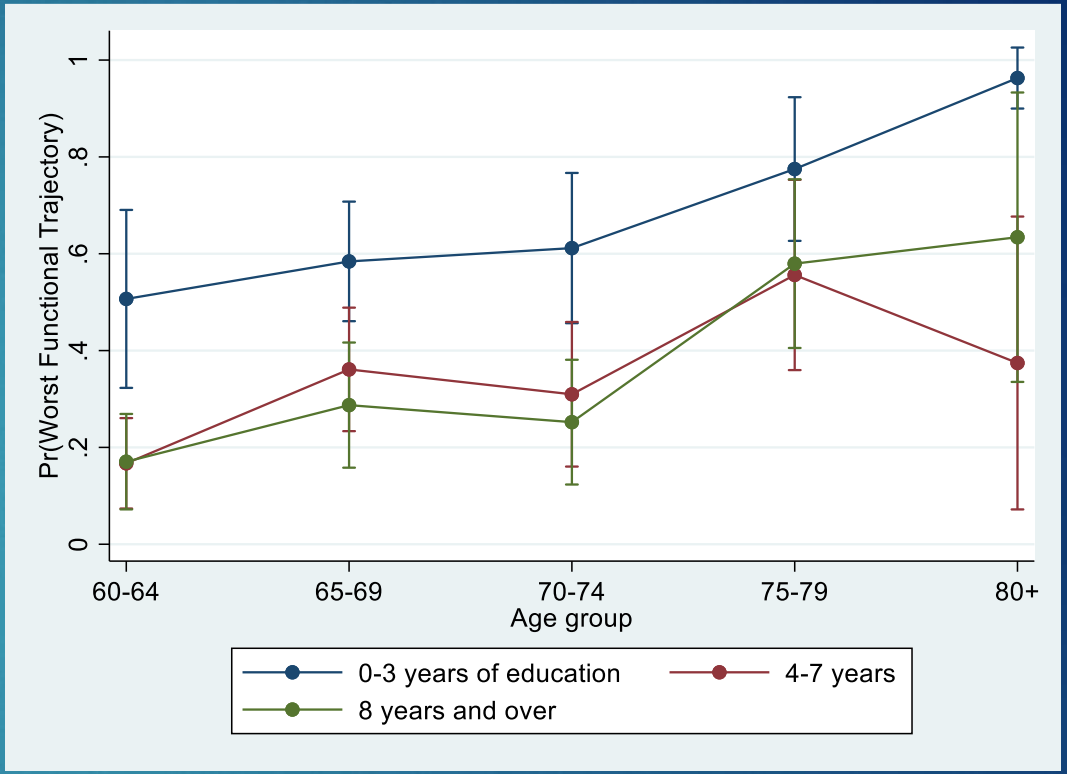
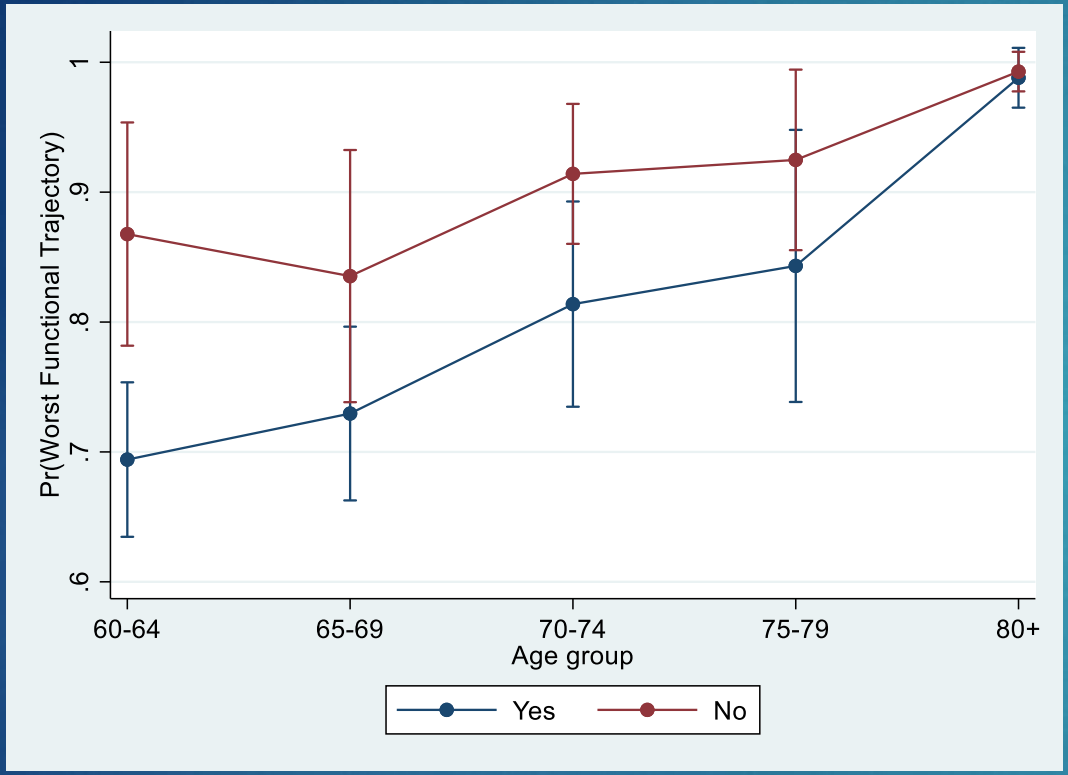


Figure 1. Probabilities of being part of the Worst Functional Trajectory according to age and years of education. Sao Paulo – Santiago, 2000-2010.



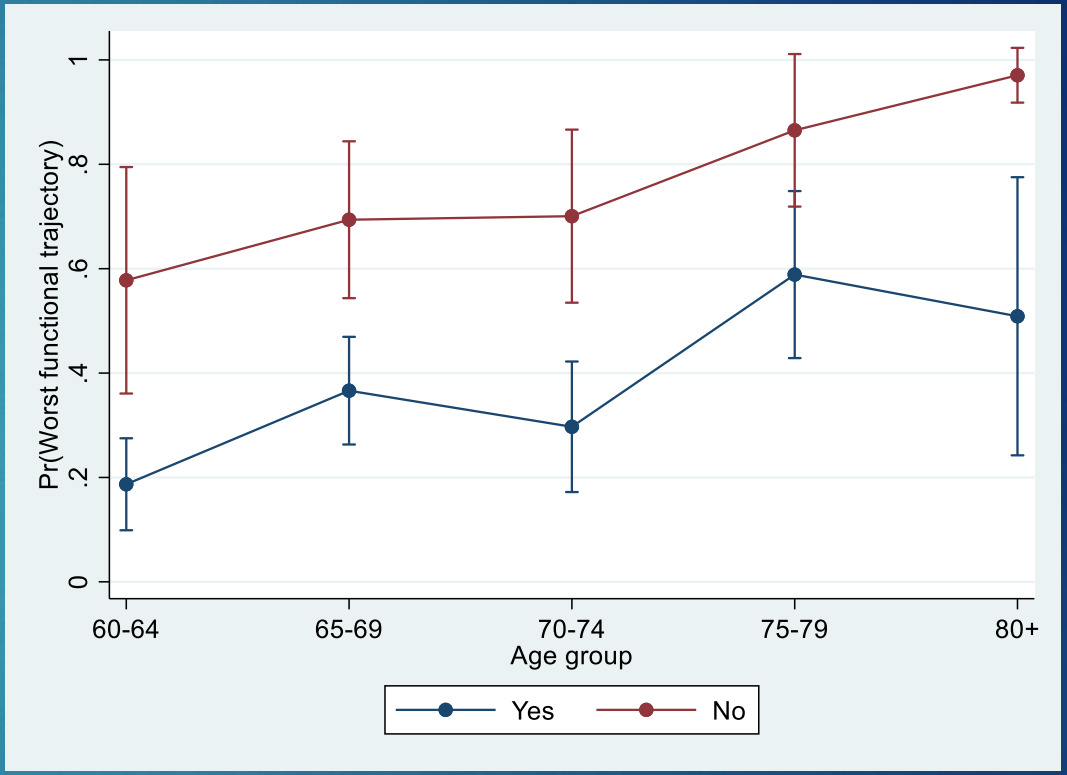


Figure 1. Probabilities of being part of the Worst Functional Trajectory according to age and educational status. Sao Paulo – Santiago, 2000-2010.

LIMITATIONS

Our analyzes considered only survivors.

There are differences in the racial composition of the two countries, but these characteristics were not evaluated.

Health information and functional coding were self-reported.

CONCLUSIONS

Education may act as predictor of cumulative damage during the lifelong course, reflecting in the functional trajectory of older adults.

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Education may act as predictor of cumulative damage during the lifecourse, reflecting in the functional trajectory of older adults.

Social and health policies should be attentive to vulnerable groups.

#Early prevention

#Proper and holistic healthcare

#Equity during the life course

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