XVI CURSO ALMA PARA DOCENTES UNIVERSITARIOS DE GERIATRÍA
"LA PERSONA MAYOR CON CONDICIONES CRÓNICAS MÚLTIPLES"
LA HABANA, CUBA.

Qué datos epidemiológicos claves existen de Las Personas Mayores con Condiciones Crónicas Múltiples (CCM)

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Objetivos

- Examen los datos epidemiológicos claves existen de Las Personas Mayores con Condiciones Crónicas Múltiples

- Relación entre Envejecimiento y multimorbilidad,

- Reflexionar qué representan para América Latina

Objetivo y Cuestiones metodológicas

- Definición operacional (2 o 3 Condiciones)
- Quais condiciones?
- Diferencias en el número de condiciones elegibles que van desde 5 a 335
- auto informado o por el equipo de salud
- Condiciones neuropsiquiatricas (demencia y depresión), fragilidad y síndromes geriátricos

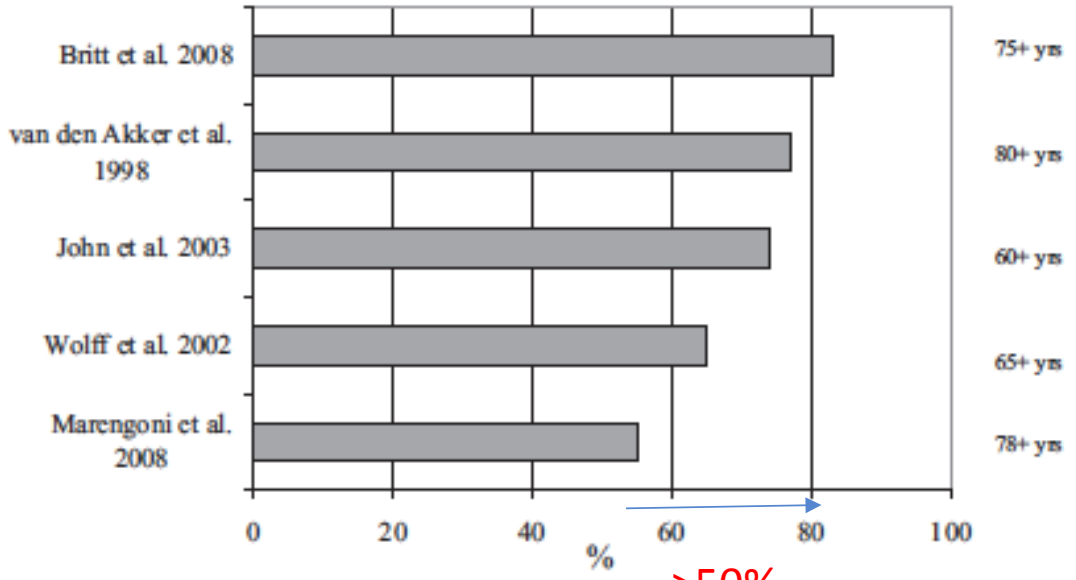
Lancet 2012; 380: 37–43

Maturitas 95 (2017) 31–35

ESTUDIOS DE PREVALENCIA: ADULTOS MAYORES

van den Akker et al. (1998)	Dutch general population *N*= 60,857 (all ages)	General practitioners records Multimorbidity defined as 2+ co-existing chronic diseases	74% in men and 80% in women aged 80+ years Female gender, older age, lower education, public health insurance and living in a home for elderly
Wolff et al. (2002)	US Medicare fee-for-service *N*= 1,217,103 (65+ years)	Administrative database Multimorbidity defined as 2+ co-existing chronic diseases	65%
John et al. (2003)	American Indian rural community residents *N*= 1039 (60+ years)	Self-report Multimorbidity defined as 2+ co-existing chronic diseases	73.8%
Sharkey (2003)	US homebound women *N*= 279 (60+ years)	Self-report Multimorbidity defined as number of chronic diseases	Food insufficiency was associated with having 3+ diseases
Fortin et al. (2005)	Canada residential *N*= 980 (18+ years)	General practitioner records Multimorbidity defined as 2+ co-existing chronic diseases	98% in 65+ years
Walker (2007)	Australian general population *N*= 17,450 (20+ years)	Self-report Multimorbidity defined as 3+ co-existing diseases	85% in 70+ years Older age, obesity, female gender, low socioeconomic status and living alone
Schram et al. (2008)	Dutch general population, institutionalized and hospitalized people *N*= 2693/599/2895/5610/1.058.234 (55+ years)	Self-report, clinical examination, general practitioner records Multimorbidity defined as 2+ co-existing chronic diseases	82% in nursing homes, 56–72% in the general population and GP registers, and 22% in hospital setting
Marengoni et al. (2008)	Swedish living in community and institutions *N*= 1099 (78+ years)	Medical examination, blood samples, inpatient register Multimorbidity defined as 2+ co-existing chronic diseases	55% Older age, female gender, lower education
Uijen and van de Lisdonk (2008)	Dutch general population *N*= 13584 (all ages)	General practitioners records Multimorbidity defined as increasing number of diseases; prevalence refers to people with 4+ co-occurring conditions	30% in 65–74; 55% in 75+ years Older age, female gender, low socio-economic class
Britt et al. (2008)	Australian general practitioner patients *N*= 9156 (all ages)	General practitioners records and self-report Multimorbidity defined as 2+ co-existing chronic diseases	83% in 75+
Schneider et al. (2009)	US Medicare recipients (institutional and not) *N*= 2,232,528 (all ages)	Chronic condition data warehouse Multimorbidity defined as 2+ co-existing chronic diseases	20.3%
Loza et al. (2009)	Spanish living in community *N*= 2192 (20+ years)	Self-report Chronic diseases Multimorbidity defined as 2+ co-existing chronic diseases	30%

Adulto mayor



>50%

Fig. 2. Variability in prevalence of multimorbidity (defined as 2+ co-existing chronic diseases) in the population across different studies (only 60+ year-old population are included).

MEDICARE®

1 de cada 4 Americanos (EUA)

2 tercios de los beneficiarios mayores de 65 años

Chronic Conditions: Making the case for ongoing care. September 2004 update. Johns Hopkins and the Robert Wood Johnson Foundation's Partnership for Solutions. Available at: http://www.partnershipforsolutions.org/DMS/files/chronicbook2004.pdf

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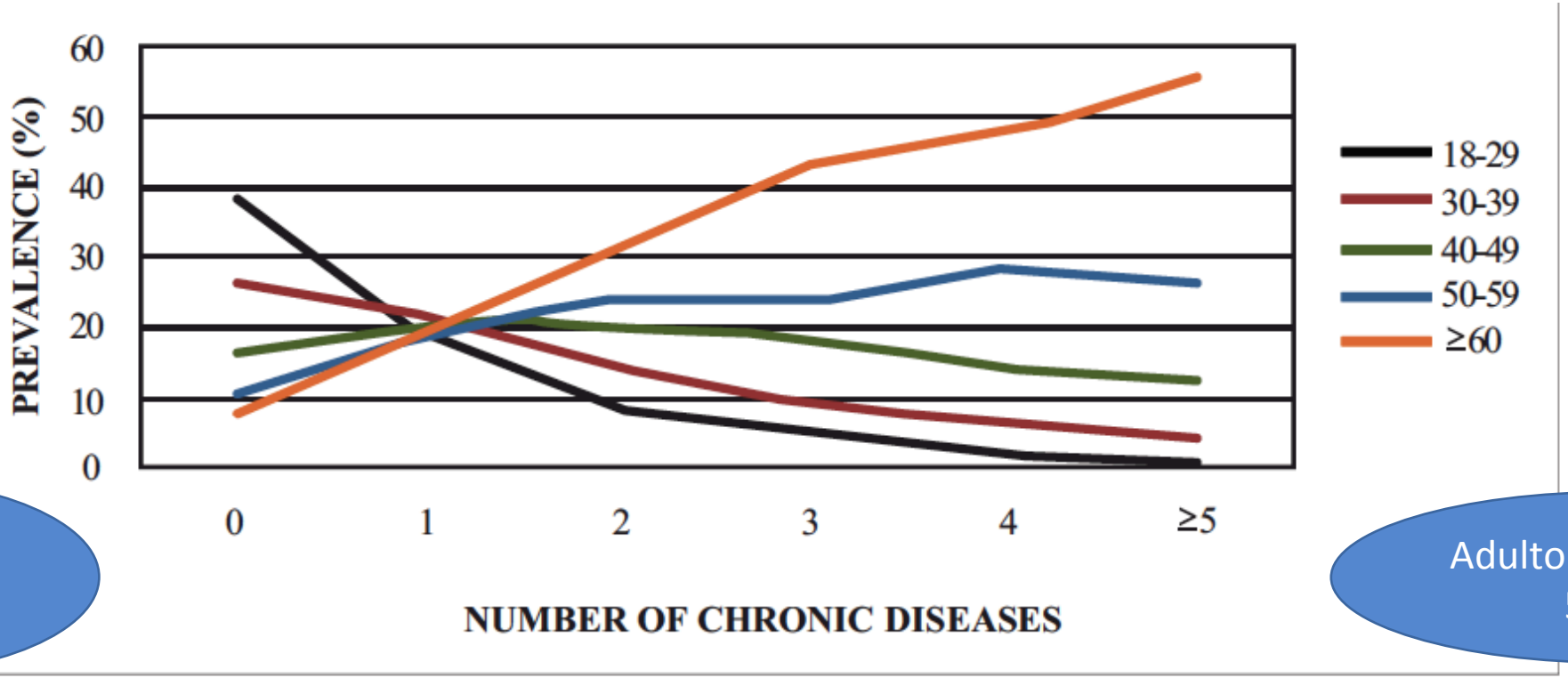
RESEARCH ARTICLE

Prevalence of multimorbidity in the Brazilian adult population according to socioeconomic and demographic characteristics

Januse Nogueira de Carvalho[1]*, Ângelo Giuseppe Roncalli[1], Marianna de Camargo Cancela[2], Dyego Leandro Bezerra de Souza[1]

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2 Division of Population Research, Brazilian National Cancer Institute, Rio de Janeiro, Brasil





Población general : 23,6%

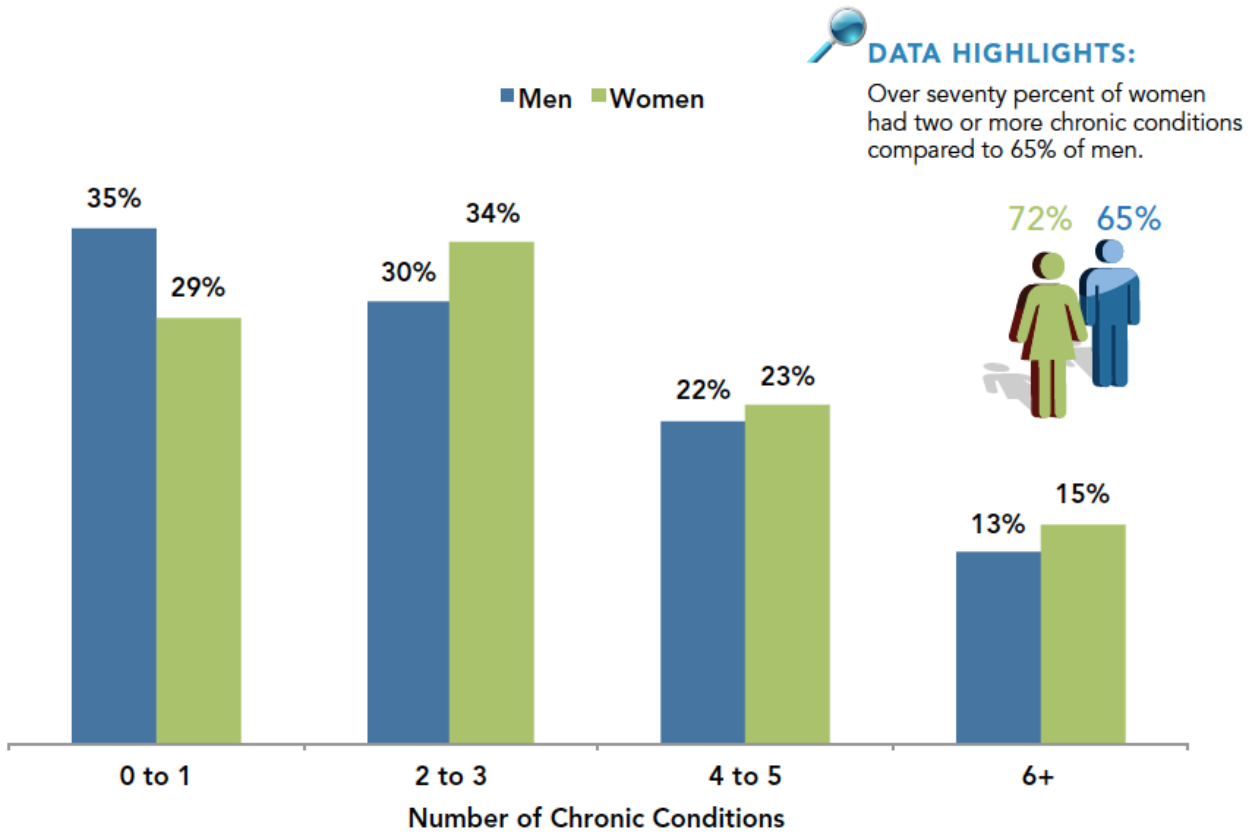
Adulto Mayor ≥ 60: 51,2%

ig 1. Prevalence (%) of chronic diseases by age in the adult Brazilian population—NHS, Brazil, 2013.

PLOS ONE | https://doi.org/10.1371/journal.pone.0174322 April 6, 2017

Género

Figure 1.2c *Percentage of Medicare FFS Beneficiaries by Number of Chronic Conditions and Sex: 2010*



CHRONIC CONDITIONS AMONG MEDICARE BENEFICIARIES, CHARTBOOK: 2012 EDITION



	Males %($CI_{95\%}$[a])	Females %($CI_{95\%}$[a])
	n = 4,317	n = 9,152
Age (years)		
18–29	4.2(3.5–5.1)	7.0(5.9–8.2)
30–39	9.5(8.1–11.0)	14.8(13.4–16.3)
40–49	16.0(14.3–17.8)	30.6(28.6–32.7)
50–59	29.7(27.2–32.3)	42.6(40.2–45.0)
≥60	43.4(40.7–46.2)	57.1(55.1–59.1)

PLOS ONE | https://doi.org/10.1371/journal.pone.0174322 April 6, 2017

Global Multimorbidity Patterns: A Cross-Sectional, Population-Based, Multi-Country Study

Noe Garin,[1,2,3,4] Ai Koyanagi,[3,4] Somnath Chatterji,[5] Stefanos Tyrovolas,[3,4] Beatriz Olaya,[3,4] Matilde Leonardi,[6] Elvira Lara,[3,4] Seppo Koskinen,[7] Beata Tobiasz-Adamczyk,[8] Jose Luis Ayuso-Mateos,[4,9,10] and Josep Maria Haro[3,4]

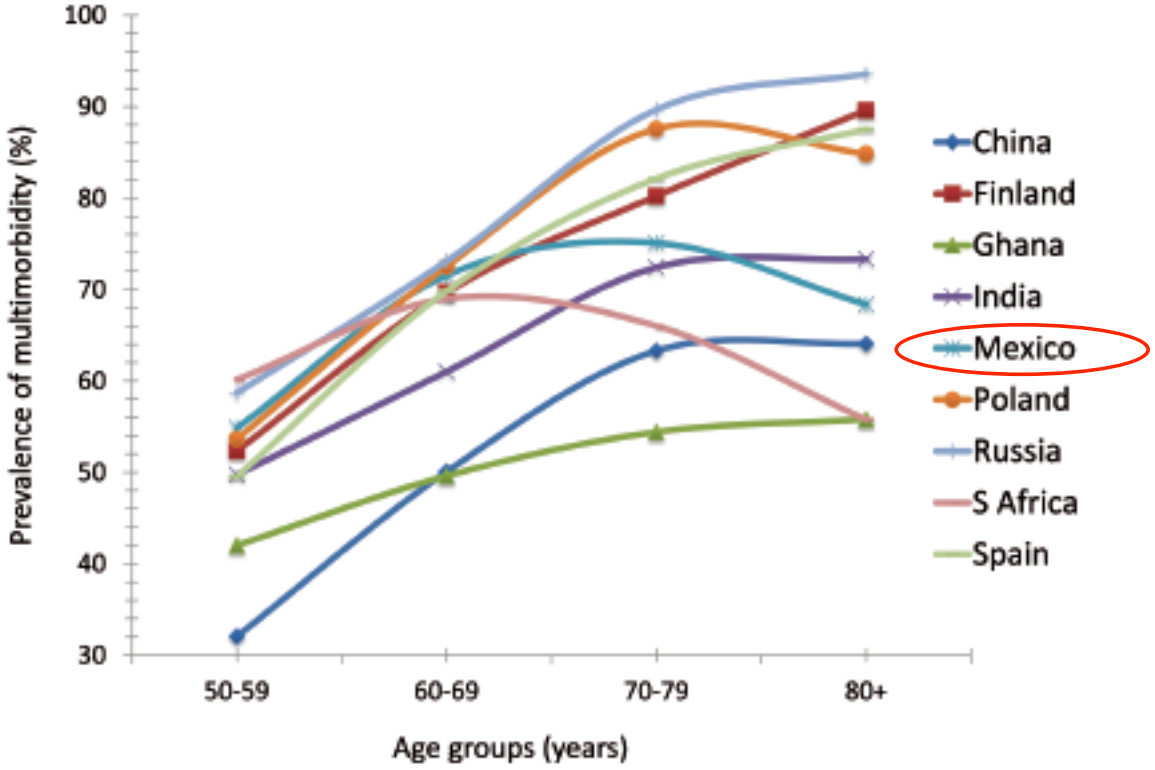


Figure 1. Multimorbidity prevalence across age groups. Prevalence calculation was based on weighted sample. Multimorbidity defined as having at least two of the following conditions: angina, arthritis, asthma, cataract, COPD, depression, diabetes, edentulism, hypertension, cognitive impairment, obesity, and stroke.

- El análisis multivariable mostró probabilidades significativamente más altas de multimorbilidad para los siguientes factores:

✓ mayor edad (excepto Sudáfrica);

✓ mujeres (excepto Finlandia, Polonia y España),

✓ educación inferior (excepto China, Ghana y México);

✓ separados / divorciados / viudos en Ghana, India, Sudáfrica y España; y

✓ habitat rural en China, Ghana y Sudáfrica

Journals of Gerontology: MEDICAL SCIENCES, 2016, Vol. 71, No. 2

Aging with multimorbidity: A systematic review of the literature

Alessandra Marengoni[a,b,*], Sara Angleman[a], René Melis[a,c], Francesca Mangialasche[a,d], Anita Karp[a,e], Annika Garmen[a,e], Bettina Meinow[a,e], Laura Fratiglioni[a,e]

Characteristics of the selected studies concerning incidence and risk factors of multimorbidity.

Author, year of publication	Setting Participants	Study design/ascertainment of diseases	Results Incidence and risk factors
van den Akker et al. (1998)	South Netherlands Community residents *N*= 60,857 (all ages)	Longitudinal General practitioners records	1-year incidence: 5.6% in men and 6.1% in women in 80+ years Risk factors: older age, public health insurance and previous multimorbidity
van den Akker et al. (2000)	South Netherlands Community residents *N*= 3745 (20+ years)	Nested case–control study General practitioners records	Risk factors: increasing age, higher no. of previous diseases, and low socioeconomic status
van den Akker et al. (2001)	South Netherlands Community residents *N*= 3551 (all ages)	Longitudinal General practitioners records	Protective factors: a high internal locus of control belief, living with someone and large social network
Nagel et al. (2008)	Heidelberg, Germany Community residents *N*= 13,781 (50–75 years)	Longitudinal Self-report	Risk factors: low education (BMI was an intermediate factors in the association)

FACTORES DE RIESGO

- Edad
- Baja escolaridad
- Bajo nivel socioeconómico
- Numero de enfermedad preexistente
- Multimorbidad previa

FACTORES PROTECTORES

- Autocontrol
- Viviendo con una persona
- Mayor red social

Cuáles son los factores de riesgo y protectores?

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población brasileña económicamente activa entre la edad: 40 ± 59 años: 29.9%

Table 1. Prevalence(%) of multimorbidity according to socioeconomic characteristics by sex. NHS, Brazil. 2013.

	Multimorbidity		
	Males %($CI_{95\%}$[a])	Females %($CI_{95\%}$[a])	Total %($CI_{95\%}$[a])
	n = 4,317	n = 9,152	n = 13,469
Age (years)			
18–29	4.2(3.5–5.1)	7.0(5.9–8.2)	5.6(4.9–6.4)
30–39	9.5(8.1–11.0)	14.8(13.4–16.3)	12.3(11.3–13.4)
40–49	16.0(14.3–17.8)	30.6(28.6–32.7)	23.9(22.6–25.3)
50–59	29.7(27.2–32.3)	42.6(40.2–45.0)	36.4(34.7–38.2)
≥60	43.4(40.7–46.2)	57.1(55.1–59.1)	51.1(49.5–52.8)
Skin color			
White	20.5(19.2–21.9)	30.2(28.8–31.6)	25.7(24.6–26.7)
Indigenous	18.1(9.3–32.3)	30.0(20.2–42.1)	25.1(17.9–34.0)
Black	17.5(14.6–20.9)	28.8(26.1–31.6)	23.5(21.5–25.6)
Yellow	22.4(14.3–33.3)	22.8(15.7–32.0)	22.6(16.9–29.6)
Brown	15.7(14.6–16.8)	26.3(25.1–27.6)	21.2(20.3–22.1)
Education (years of study)			
0–3	26.3(23.6–29.2)	46.4(43.3–49.4)	37.2(35.0–39.4)
4–7	22.4(20.9–24.0)	37.5(35.9–39.1)	30.1(28.9–31.3)
8–10	11.6(10.5–12.8)	19.1(17.9–20.5)	15.6(14.7–16.5)
≥11	17.6(15.5–19.8)	19.9(18.1–21.9)	18.9(17.4–20.4)
Marital status (Living with a partner)			
Yes	21.6(20.4–22.7)	28.6(27.3–29.8)	25.1(24.2–26.0)
No	12.2(11.1–13.3)	28.1(26.8–29.3)	21.1(20.2–22.1)
Area of residence			
Urban area	18.6(17.7–19.6)	28.9(27.9–29.9)	24.1(23.3–24.9)
Rural area	15.7(14.0–17.5)	24.7(22.7–26.8)	20.1(18.8–21.5)
Employed			
Yes	13.8(12.9–14.7)	21.9(20.8–23.1)	17.3(16.5–18.1)
No	31.1(29.1–33.2)	34.7(33.4–36.1)	33.6(32.5–34.8)
Total	18.2(17.3–19.0)	28.4(27.4–29.3)	23.6(22.9–24.3)

[a] $CI_{95\%}$: confidence interval 95%

Desigualdad



Table 5. Prevalence of multimorbidity among individuals over 18 years of age, per federative unit and federal district. PNS, Brasil, 2013.

Federative unit	Prevalence of multimorbidity%($CI_{95\%}$[a])
Rio Grande do Sul	30.5(28.0–33.2)
Santa Catarina	29.3(25.6–33.3)
Paraná	27.8(24.6–31.2)
Minas Gerais	26.0(23.5–28.6)
São Paulo	25.8(24.2–27.6)
Rio Grande do Norte	24.4(21.7–27.2)
Pernambuco	23.9(21.8–26.1)
Tocantins	23.9(21.1–27.0)
Rio de Janeiro	23.4(21.5–25.4)
Goiás	23.2(21.0–25.7)
Mato Grosso	22.6(19.6–
Mato Grosso do Sul	22.0(19
Ceará	21.2(18
Distrito Federal	20.2(18
Alagoas	19.6(17.3
Paraíba	19.6(17.4–22.
Espírito Santo	19.6(16.9–22.7)
Rondônia	19.5(16.3–23.2)
Sergipe	19.4(17.2–21.8)
Bahia	19.1(16.9–21.6)
Piauí	18.3(15.4–21.6)
Amapá	17.7(15.1–20.6)
Acre	16.7(14.5–19.2)
Maranhão	16.5(13.9–19.6)
Amazonas	16.4(14.5–18.5)
Pará	14.9(12.8–17.4)
Roraima	13.9(12.0–16.1)

[a] CI_{95}%: confidence interval 95%

Sur

Norte

Población en el sur más envejecida

Falta de acceso al sistema de salud

Review

Multimorbidity and mortality in older adults: A systematic review and meta-analysis

Bruno Pereira Nunes[a,b,*], Thaynã Ramos Flores[b], Grégore Iven Mielke[b], Elaine Thumé[a,c], Luiz Augusto Facchini[b,c]

[a] Department of Nursing, Federal University of Pelotas, Pelotas, RS, Brazil
[b] Postgraduate Program of Epidemiology, Federal University of Pelotas, Pelotas, Brazil
[c] Postgraduate Program of Nursing, Federal University of Pelotas, Pelotas, RS, Brazil

- en comparación con las personas sin multimorbidad, el riesgo de muerte fue ***1,73 y 2,72*** para los individuos con 2 o más y 3 o más morbilidad respectivamente

Description of the selected studies on consequences of multimorbidity: mortality.

Author, year of publication	Setting Participants	Ascertainment of diseases	Results
Menotti et al. (2001)	Men rural community in Finland, Italy, and the Netherlands *N* = 2285 (65–84 years)	Clinical examination and self-report	Having 2 or 3+ diseases significantly increased the 10-year mortality risk in all cohorts
Deeg et al. (2002)	Community-dwelling in the Netherlands *N* = 2141 (65–85 years)	Self-report	Having a multimorbidity profile was associated with 3-year mortality
Byles et al. (2005)	Australian veterans and war widows *N* = 1541 (70+ years)	Self-administered questionnaire	Having 7+ diseases increased the risk of 2-year mortality
Marengoni et al. (2009)	Swedish living in community and institutions *N* = 1099 (78+ years)	Diagnoses from clinical examination, lab data, drugs and medical records	3-year risk of death was the same for people with one disease as well as 4+ diseases
Landi et al. (2010)	Italians living in community *N* = 364 (80+ years)	Self report and medical records	Multimorbidity affected 4-year mortality, only if associated with disability

Mortalidad

Desfechos geriátricos: Discapacidad

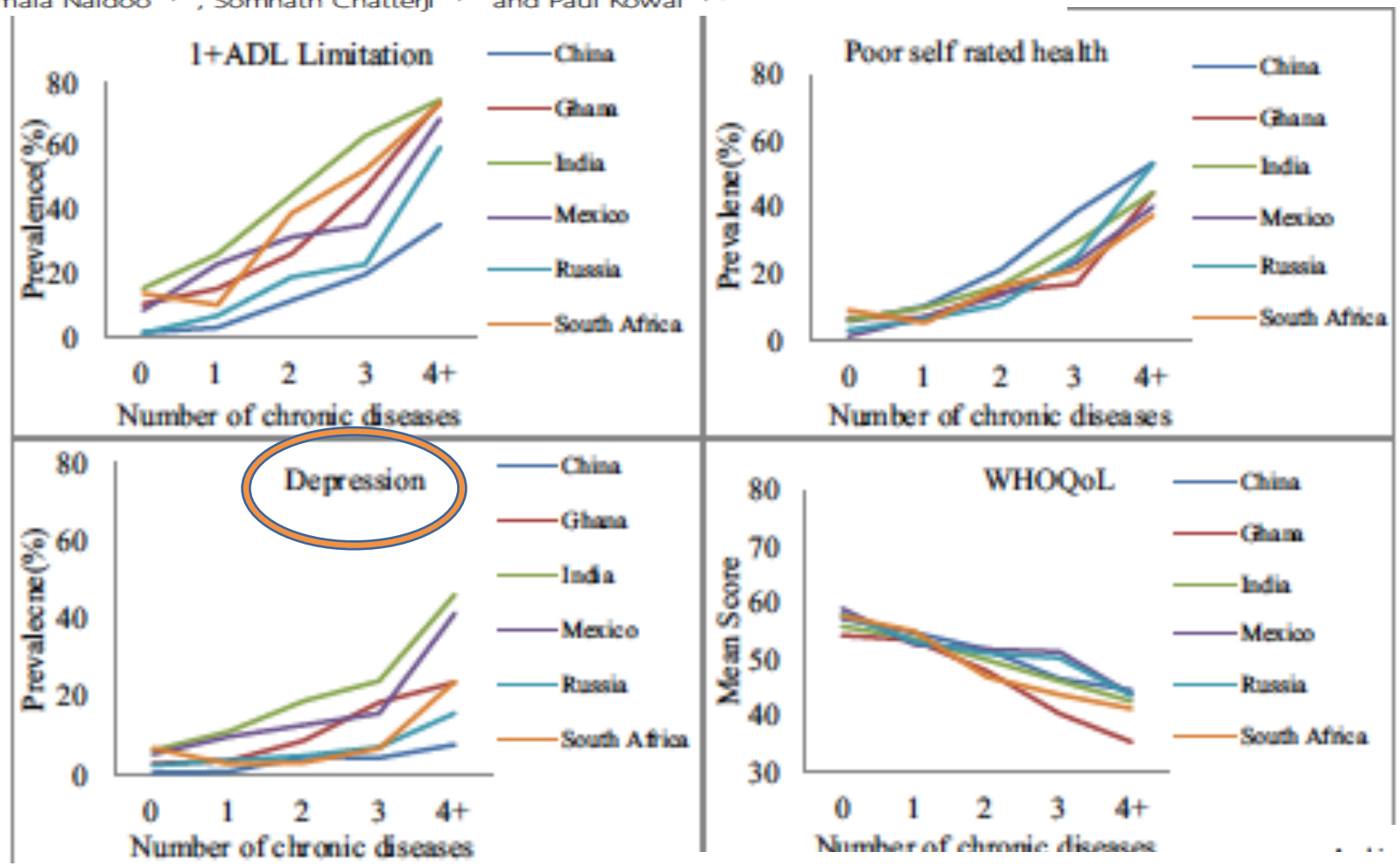
Description of the selected studies on consequences of multimorbidity: disability and functional decline.

Author, year of publication	Setting Participants	Study design/ascertainment of diseases	Results
Bayliss et al. (2004)	US *N* = 1574 (57.6, SD = 15.4)	Longitudinal Medical records	Having 4+ chronic diseases was associated with 4-year decline in the physical component summary score SF-36
Kadam et al. (2007)	Community dwellers in UK *N* = 9439 (50+ years)	Cross-sectional General practice consultations	Compared to those with one disease, having 2–3, 4–5, or 6+ diseases was associated with poorer physical function measured with the SF-12
Hudon et al. (2008)	Residential households in Quebec, Canada *N* = 16782 (18–69 years)	Cross-sectional Interview and self-report	Multimorbidity was not associated with physical activity levels
Marengoni et al. (2009)	Swedish living in community and institutions *N* = 1099 (78+ years)	Longitudinal Diagnoses from clinical examination, lab data, drugs and medical records.	Increasing number of chronic conditions increased the risk of 3-year functional decline
Loza et al. (2009)	Spanish living in community *N* = 2192 (20+ years)	Cross-sectional Questionnaires	Multimorbidity was associated with impaired functioning

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The impact of multimorbidity on adult physical and mental health in low- and middle-income countries: what does the study on global ageing and adult health (SAGE) reveal?

Perianayagam Arokiasamy[1], Uttamacharya Uttamacharya[1], Kshipra Jain[1], Richard Berko Biritwum[2*], Alfred Edwin Yawson[2], Fan Wu[3], Yanfei Guo[3], Tamara Maximova[4], Betty Manrique Espinoza[5], Aarón Salinas Rodríguez[5], Sara Afshar[6], Sanghamitra Pati[7], Gillian Ice[8], Sube Banerjee[9], Melissa A. Liebert[10], James Josh Snodgrass[10], Nirmala Naidoo[11,12], Somnath Chatterji[11,12] and Paul Kowal[12,13]



Medicine (2015) 13:178

Journals of Gerontology: MEDICAL SCIENCES, 2016, Vol. 71, No. 2

Untangling the Concepts of Disability, Frailty, and Comorbidity: Implications for Improved Targeting and Care

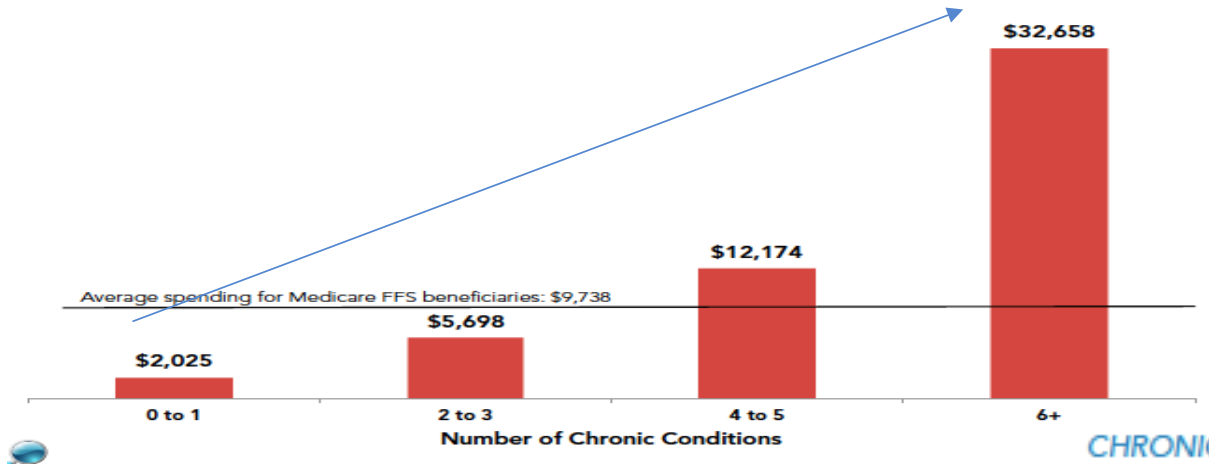
Linda P. Fried,[1,2,3] Luigi Ferrucci,[3] Jonathan Darer,[4] Jeff D. Williamson,[5] and Gerard Anderson[2]

Table 2. Utilization Patterns for Adults Aged 65 Years and Older With Comorbidity, With or Without Disability

Number of Chronic Conditions	Disability and/or Functional Limitation*	Total Inpatient and Medication Costs	Percent Hospitalized	Mean Number of Physician Visits	Mean Number of Home Care Visits	Mean Number of Prescription Drugs
None	No	$316	4%	2.1	0.1	2.7
None	Yes	$790	8%	3.0	4.5	6.4
2 or more	No	$2141	15%	8.0	1.2	19.4
2 or more	Yes	$4865	28%	10.2	27.7	23.5

6,7x
15x

Figure 3.1a *Per Capita Medicare Spending for Medicare FFS Beneficiaries by Number of Chronic Conditions: 2010*



Journal of Gerontology: MEDICAL SCIENCES
2004, Vol. 59, No. 3, 255–263

GASTOS EN SALUD

CHRONIC CONDITIONS AMONG MEDICARE BENEFICIARIES, CHARTBOOK: 2012 EDITION

Conclusiones

- Heterogenidad en la Metodología,
- Constructo y Concepto Geriátrico;
- Realidad en la población anciana pero no exclusiva
- Se relaciona con indicadores socioeconómicos (ingresos y escolaridad)
- Mujeres y negros
- Consecuencias: Mortalidad, Declinio Funcional, peor calidad de vida, mayor costo en salud
- Relación con otros problemas geriátricos: depresión, demencia

- **América Latina: Desigualdad y Acceso a la salud**

Obrigado, Gracias



