22nd European Meeting on Hypertension and Cardiovascular Protection

ESH European Society of Hypertension

HIGH CARDIOVASCULAR RISK IN THE ADULT POPULATION OF THE FRENCH WEST INDIES WIDE SOCIAL INEQUALITIES

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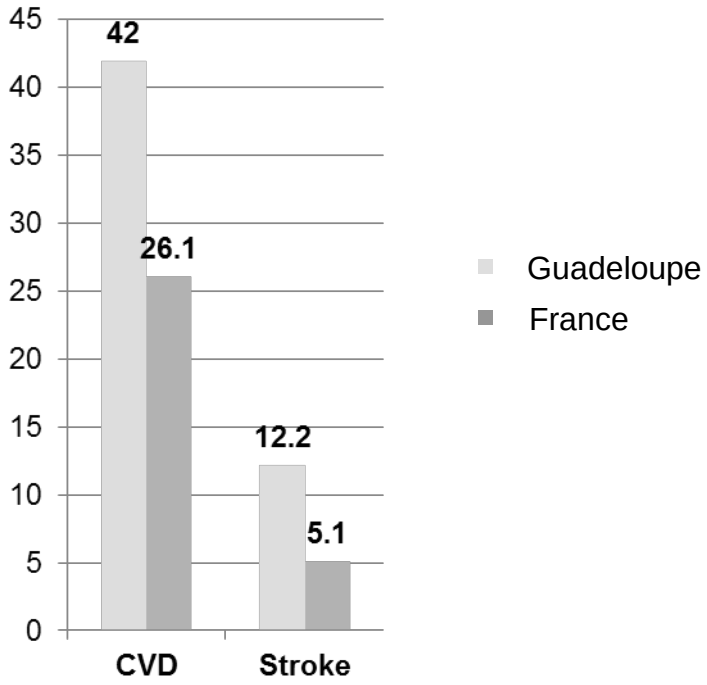
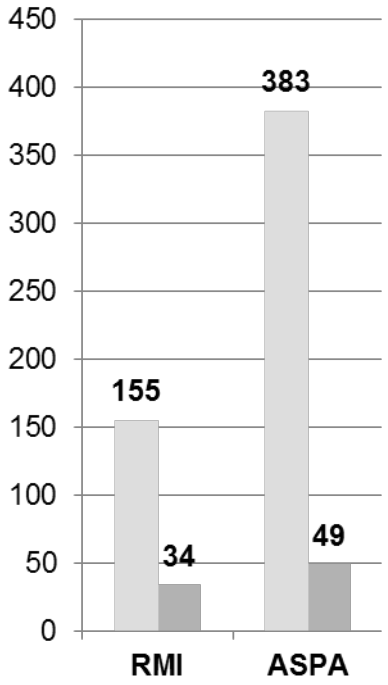
Background

Guadeloupean early mortality related to Cardio-Vascular Disease: Standardized mean annual rate, for 100 000, years 2007-2009 [1]



Guadeloupean poverty indicators: Rate of recipients of social welfare, for 1 000, year 2008 [2]



RMI : Revenu Minimum d'Insertion
ASPA : Allocation de Solidarité aux Personnes Âgées

[1]: INSERM Data

[2]: INSEE Data

Objective

- To assess the relationship between socioeconomic factors and the expression of multiple cardiovascular risk factors in the adult Caribbean population

Patients and methods

- CONSANT: Cross-sectional study
- Representative sample of the adult Guadeloupean population: 1 005 subjects aged 25-74 years (stratified random sample)
- Face-to-face interviews conducted at respondents' home by trained investigators working in pairs

  Second blood pressure measurement carried out by a nurse, separate from the first

Definitions

- Expression of multiple Cardiovascular Risk Factors (CvRFs): presence of 3 or more risk factors in the same individual, including:
  - Hypertension (diagnosis based upon 2 consultations, i.e., 6 blood pressure measurements)
  - Abdominal obesity (measured waist circumference ≥ 102 cm for men, or ≥ 88 cm for women)
  - Dyslipidemia & diabetes (diagnoses based upon declared treatment)
  - Tobacco consumption

Statistical analysis

- Stata Package v11
- On available data
- Bivariate: chi2 tests

  Multivariate: logistic regression; customary evaluations (interaction analyses, correlation matrix, Hosmer-Lemeshow goodness-of-fit statistic)

Results: characteristics of the sample

- From May 06 to December 07
  465 men and 540 women
- 708 were younger than 55 years
- Elementary education: 23.4%
  Welfare recipients: 8.4% to 10%

	Men	Women
Total, N (%)	465 (46.3)	540 (53.7)
Age, %		
25-44 years	52.3	51.1
45-54 years	19.4	18.3
55-74 years	28.4	30.6
Education, %	n=462	n=533
< 6 years	23.4	23.5
6-12 years	63.4	58.5
> 12 years	13.2	18.0
Income, %	n=450	n=520
Welfare	8.4	10.0

	Men	Women
Cv Risk Factors [a], %	n=385	n=482
0	47.5	30.1
1	32.7	40.0
2	12.7	19.3
≥ 3	7.0	10.6

a: among tobacco, diabetes, dyslipidemia, hypertension and abdominal obesity

- Expression of three or more CvRFs
  7% of men et 10.6% of women

Results: relationship between expression of multiple CvRFs and socioeconomic factors

- In bivariate analysis, among subjects younger than 55 years strong relationship

	Expression of multiple CvRFs [a]		
	%	OR [b]	p
Education	n=600		
< 6 years	20.0	8.92	
≥ 6 years	2.7	1	$< 10^{-3}$
Income	n=579		
Welfare	10.6	3.26	
Higher	3.5	1	0.004

a: three or more CvRFs among tobacco, diabetes, dyslipidemia, hypertension and abdominal obesity

b: crude OR

Results: relationship between expression of multiple CvRFs and socioeconomic factors

- Confirmed in multivariate analysis among subjects aged < 55

	Expression of multiple CvRFs [a]		
	OR [b]	95%CI	p
Education	n=578		
< 6 years	4.00	1.57-10.21	0.004
≥ 6 years	1		
Income			
Welfare	2.91	1.09-7.75	0.033
Higher	1		

a: three or more CvRFs among tobacco, diabetes, dyslipidemia, hypertension and abdominal obesity

b: OR adjusted on age, sex, education and income levels

Limits

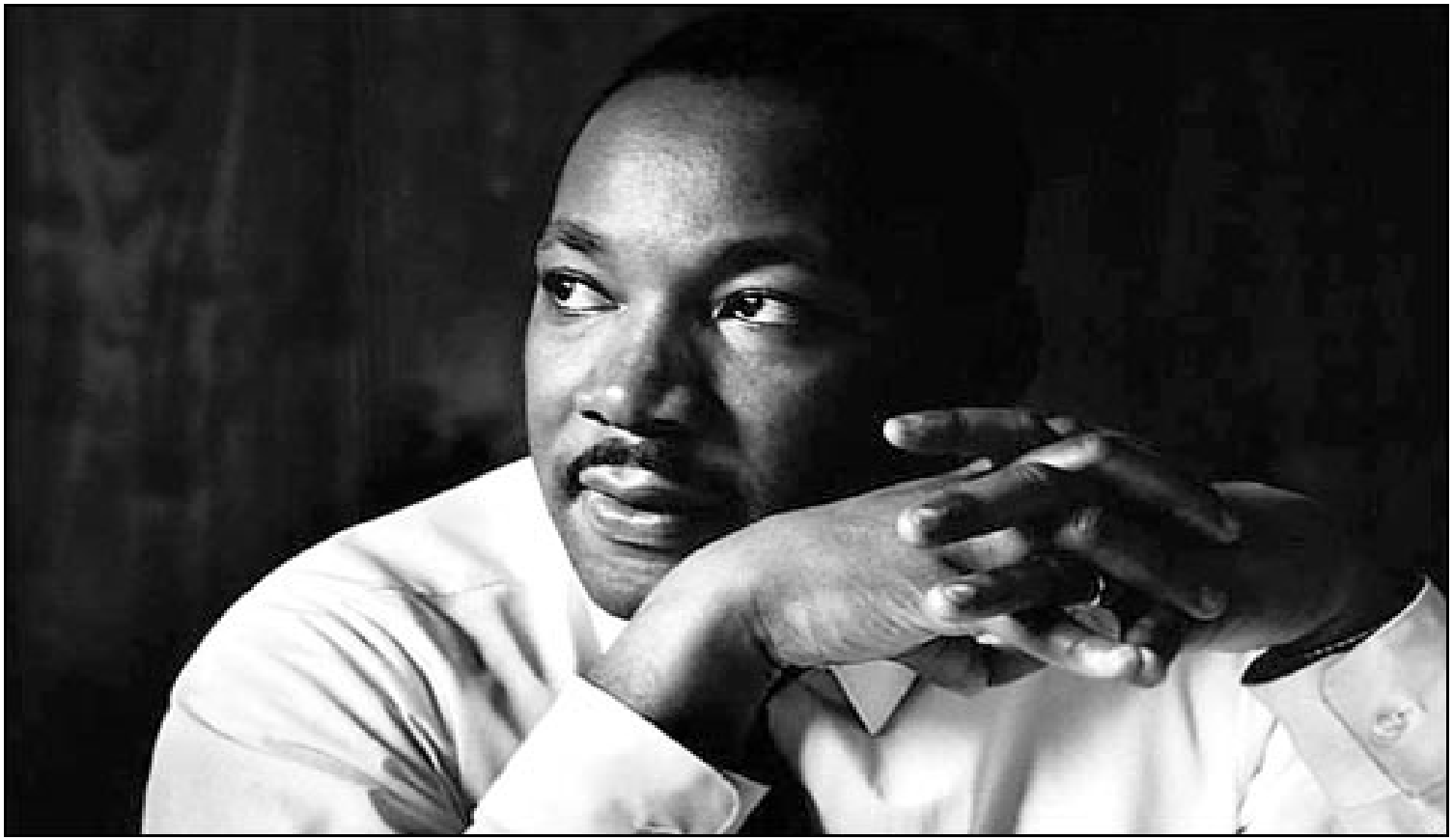
- Cross-sectional design: reverse causality is not excluded between income and expression of multiple CvRFs
- Diagnoses of diabetes and dyslipidemia based upon declared treatments: lack of sensibility (but high specificity)
- Missing data: 18% (Missing Completely At Random)

Conclusion

- Higher CV risk for the socio-economically disadvantaged
  Strong potential impact of socioeconomics on CvD
  in this population of African descent
- Several explanatory assumptions:
  genetic, behavioral, psychosocial, health care system, materialist, ecosocial
- Wide social inequalities
  “Easy” access to care is insufficient
  More must be done

Acknowledgements

- Caisse Générale de Sécurité Sociale de la Guadeloupe
- Régime Social des Indépendants
- Groupement Régional de Santé Publique
- Institut de Recherche en Santé Publique
- Institut National de Prévention et d'Éducation pour la Santé
- Haute Autorité de Santé
- Institut National de la Santé Et de la Recherche Médicale
- Fondation de Recherche sur l'Hypertension Artérielle.



"Of all forms of inequality,
injustice in Health is the most shocking and inhumane"

25 Mars 1966, National Convention of the Medical Committee for Human Rights, Chicago

Martin Luther King Jr