Self-reported diabetes: a feasible solution for national surveys in developing countries as Brazil.

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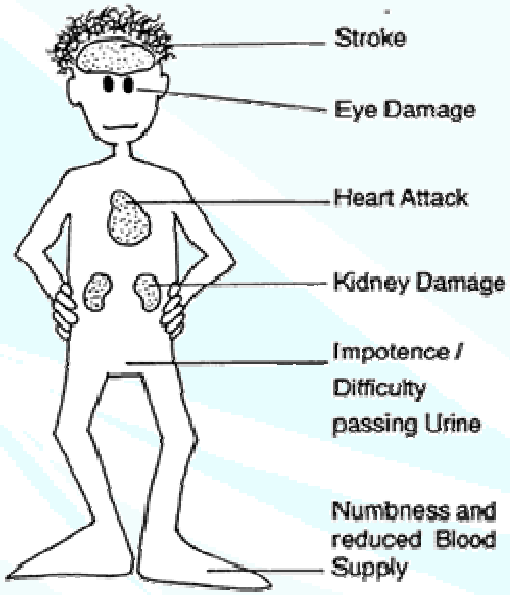
INTRODUCTION



Type 2 diabetes incidence is increasing, especially in developing countries like Brazil, because of ageing and current nutritional changes.

Adverse influences of diabetes extend to all components of the cardiovascular system: the microvasculature, the larger arteries, and the heart, as well as the kidneys.

Diabetes is an important predictor of premature mortality as it is associated with a substantial increase in mortality from all causes, especially from coronary heart diseases

INTRODUCTION

Brazil is a developing country and has about 170 million inhabitants.

To carry on national surveys is a great challenge.

The unique multicentric study on diabetes conducted among adults in 9 Brazilian cities, found levels of prevalence of 7.6% (Malerbi et al, 1992).

Between 1995 and 2025, diabetes prevalence in the 20-or-more-year old population may increase about 335% in Latin America.

In 1998, Brazil had about 4.9 million adults with diabetes. In 2025 this number is expected to jump to about 11.6 million

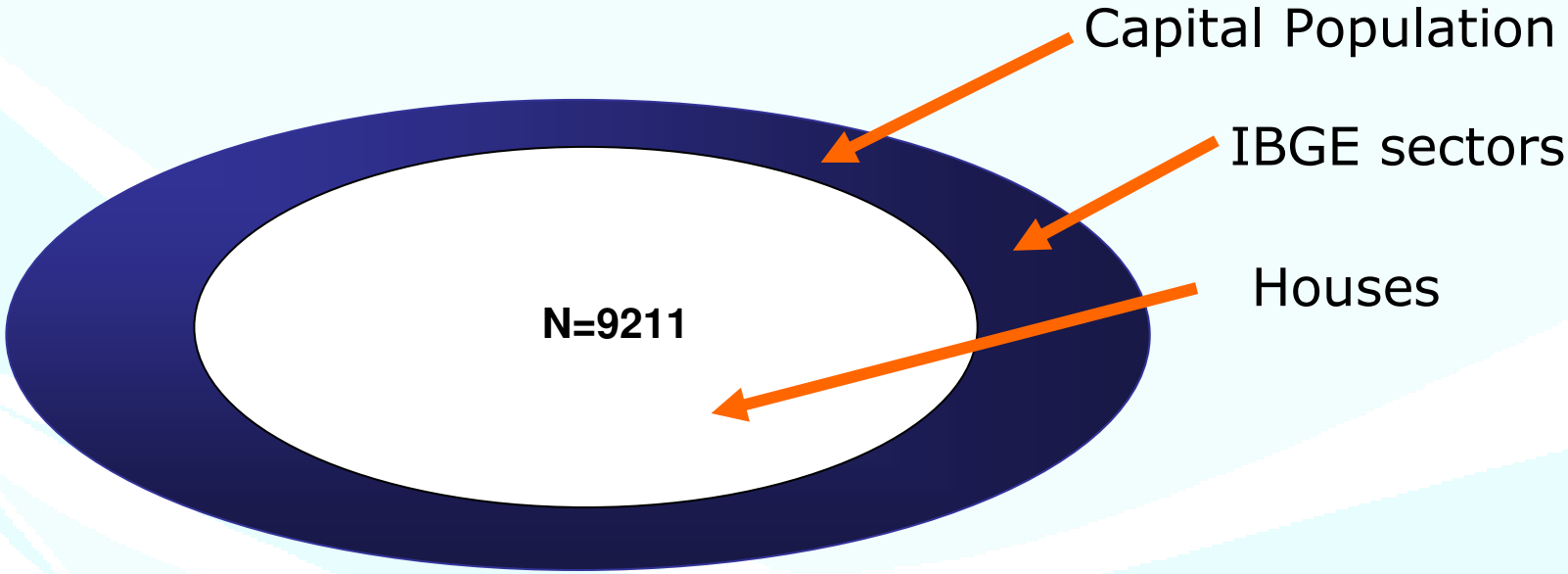
OBJECTIVES

Household Survey on Risk Behavior and Morbidity on Non-Transmissible Diseases and Violence, 2002-2003

To determine the prevalence of self-reported diabetes among Brazilian adults in a population based study from 16 State Capitals.

MATHERIAL AND METHODS

A representative sample of 6,069 adults (25-59 years) and 3,142 older adults (60+ years) participated.



Self-reported diabetes: report of medical diagnostic of diabetes among those who had a blood test in the previous 2 years.

Socio-demographic variables (sex, age, schooling and income) and cardiovascular risk factors (inadequate diet, physical inactivity, alcohol, tobacco and hypertension) were also investigated.

MATHERIAL AND METHODS

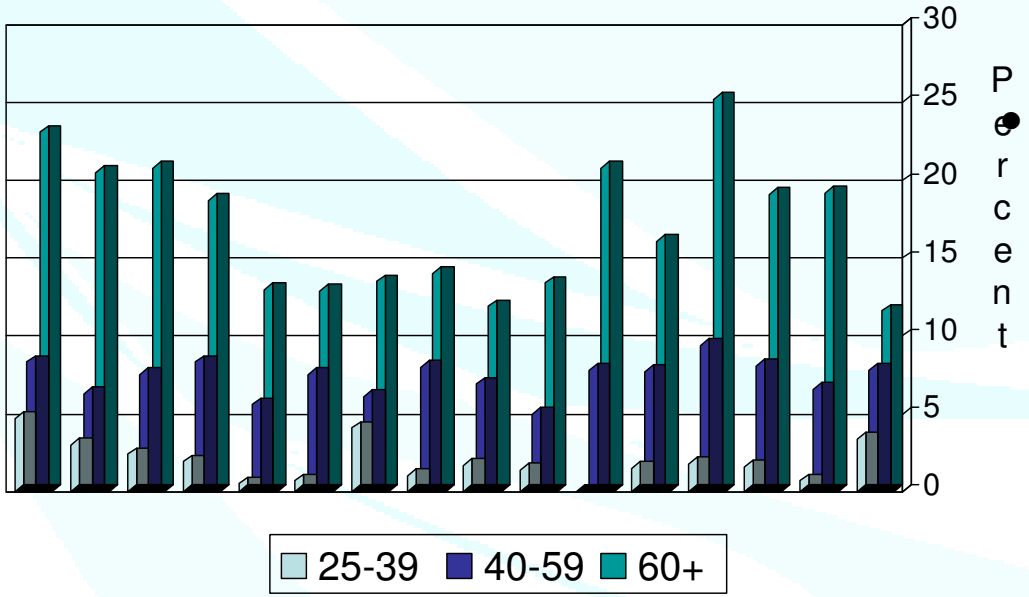
State Capitals: Aracaju, Belém, Belo Horizonte, Brasília, Campo Grande, Curitiba, Florianópolis, Fortaleza, João Pessoa, Manaus, Natal, Porto Alegre, Recife, Rio de Janeiro, São Paulo e Vitória.

The analysis was performed in Stata Statistical Software.

Prevalences (total, by sex and by age) were calculated and multiple logistic regression used to determine the magnitude of the association between the diseases and independent variables.

RESULTS

Prevalence of self-reported diabetes by Capital and age-group.

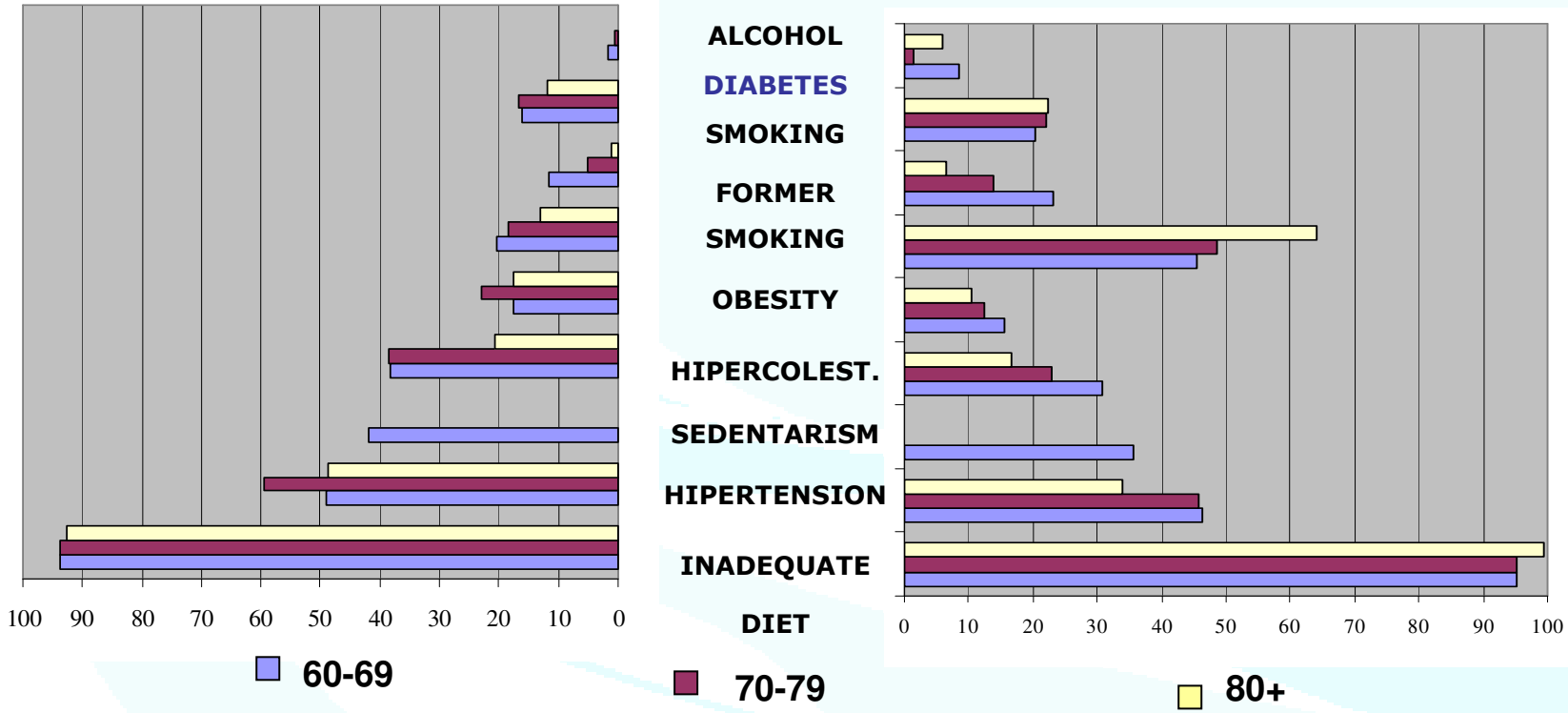


Age-group: years-old

- Prevalence of blood test increased from 79.5% among adults to 87.5% among older adults.
- The overall prevalence of diabetes was 11.1%, varying from 1.7% for those with 25-29 years old, to 6.9% to 40-59 years old and 14% for older adults.

RESULTS

Self-reported risk factors for cardiovascular diseases among elderly. Prevalence by gender and age group. Brazil, 2002-2003



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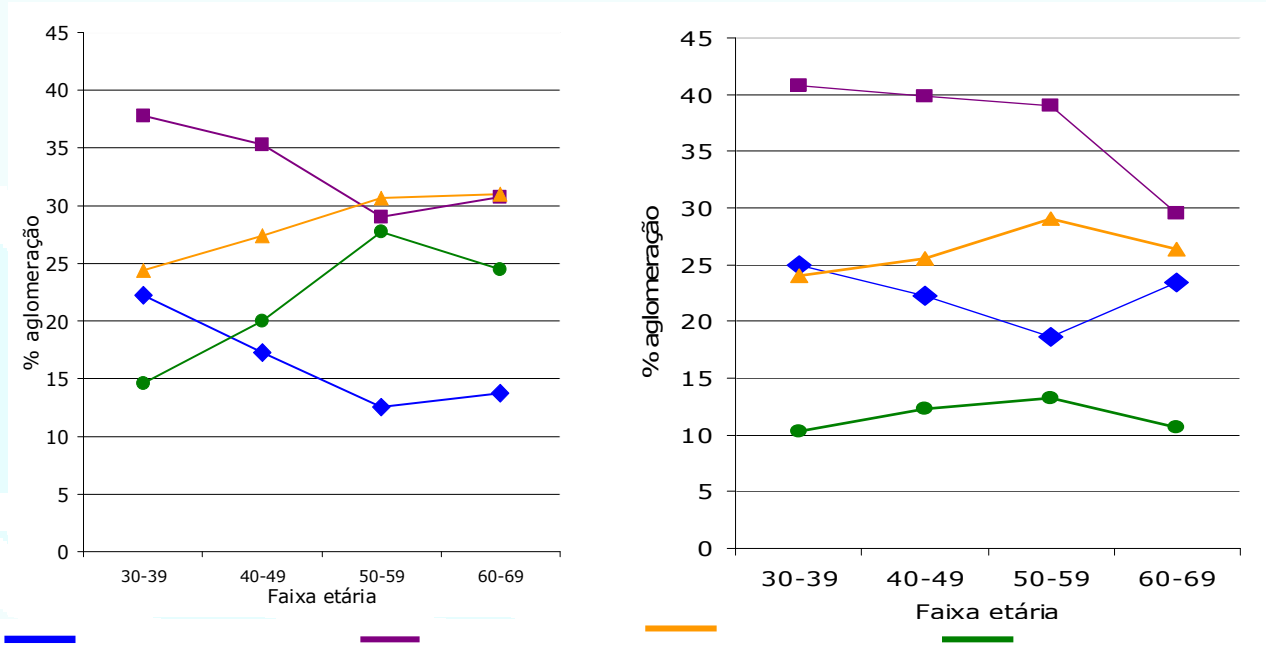
RESULTS



No CVRrisk factor One CVRF 2 CVRF 3+ CVRF

- The average years of schooling were 8.1 years and 50.5% had an annual family income lower than USD10,000.

- Older adults with 4 or more risk factors presented higher probability (OR= 4.1 IC_95% 2.5-6.4) of reporting diabetes, hypertension or coronary heart disease.

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DISCUSSION

- Self-reported diabetes reflects the presence of disease, mediated by access to diagnosis. Compared with medical registries, self-reported diabetes appears to have good validity (73% of sensitivity and 80% specificity) (Martin et al, 2000).

- Access to diagnosis is quite high in City Capitals areas of Brazil, as public health service is universal and free. In this survey, access to blood test increased from 79.5% among adults to 87.5% among older adults.

- However, schooling and medical visits were determinants of the elderly awareness of being diabetics in a small city (20.000 inhabitants) at Brazil. This cross-sectional study, which validity of self-reported diabetes was assessed comparing to diabetes mellitus defined by medical criteria (fasting glucose > 126 mg/dl or current treatment) revealed prevalence of diabetes mellitus and self-reported diabetes equal to 14.5% and 11.7%, respectively. Medical visits in the previous two years, as well as schooling were positively and independently associated with sensitivity (Costa et al, 2007).

- At Brazil, schooling levels are very low, specially considering elderly group. This situation is been reversed in the past years. Otherwise, access to medical visits are also improving.

- Diabetes estimates are important in planning preventive measures and self-reported morbidity may be a feasible surveillance tools in developing countries, specially if associated to a effective combat against social inequalities.