

# The complex effect of ethnicity on the health of Roma people in Hungary

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# Approximate number of Roma population by country in Central and Eastern Europe

Romania	1,410,000 - 2,500,000
Hungary	550,000 - 800,000
Bulgaria	500,000 - 800,000
Slovakia	458,000 - 520,000
Croatia	180,000 - 300,000
Czech Republic	150,000 - 300,000
Macedonia ( FYR)	110,000 - 260,000
Albania	100,000 - 120,000



3,458,000 – 5,600,000



# What is already known about the health of Roma people?

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- The vast majority of the Roma population is socially marginalized, with poor education and widespread poverty
- Large proportion of Roma people live in an environment that poses considerable threat for their health
- Their lifestyle (esp. smoking and diet) is less conducive to future health than that of the general population
- Roma people in Central Europe have substantially lower life expectancy than the general population



# Objectives

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- To study
  - how Roma ethnicity is related to health and health behavior in Hungary,
  - whether Roma ethnicity has a direct effect on health and health behavior after taking into account the socio-economic status (SES),
  - whether Roma ethnicity modifies the relationship between SES and health and health behavior.



# Methods – a comparative health survey

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## Interviewer-administered questionnaire-based health surveys in 2003/2004

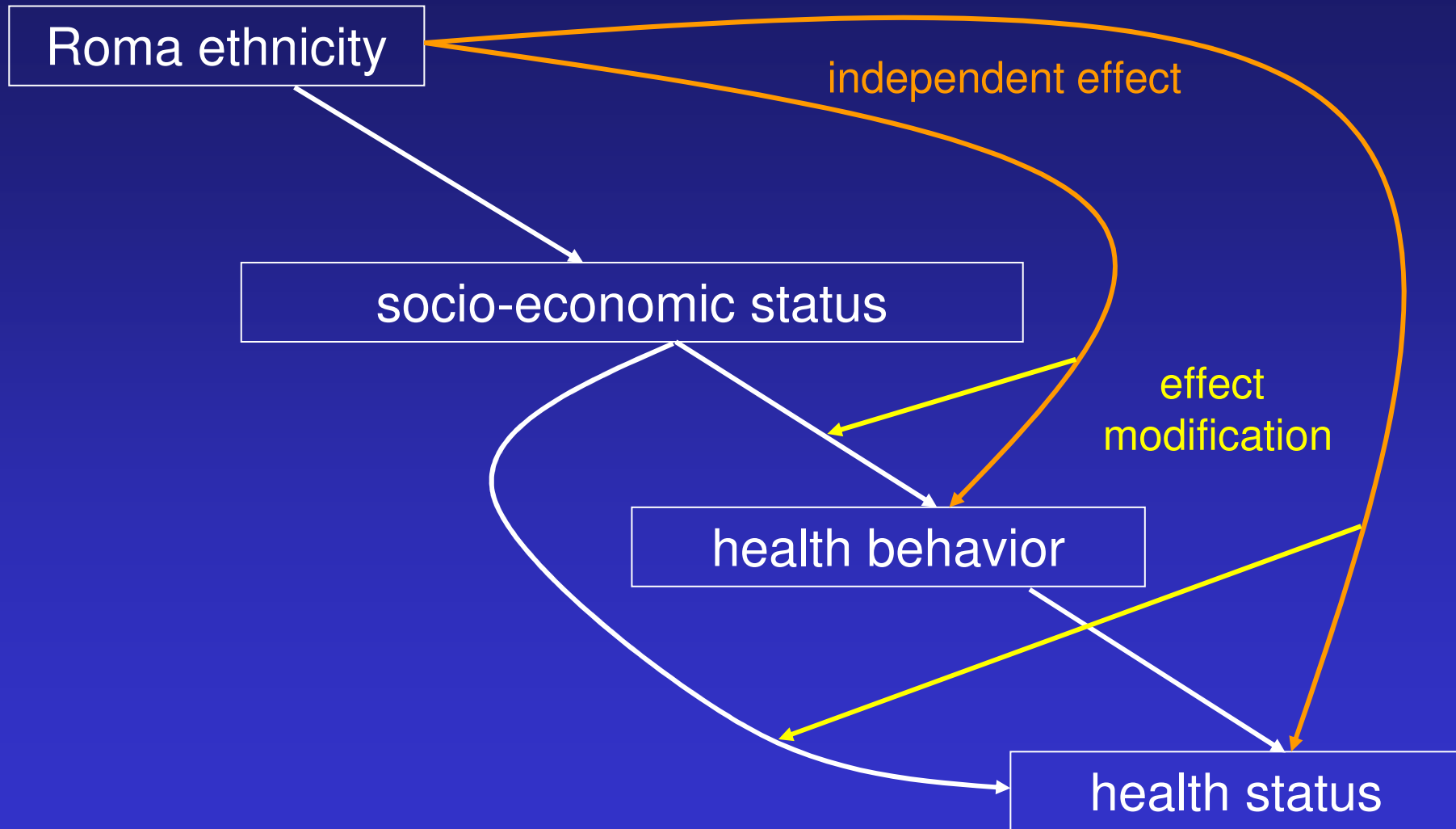
- a) 969 persons living in Roma settlements in three counties, random walk sampling, Roma interviewers
- b) 5072 persons in the National Health Interview Survey, registry based two-stage stratified cluster sampling of adult non-institutionalized people

### Analysis:

- restricted to age 18-65 years (936 and 4121 persons)
- prevalence estimates by age, gender and social status
- stepwise logistic regression models to study the relationship between different elements of the health status, health behavior and social status



# Conceptual models investigated



# Results

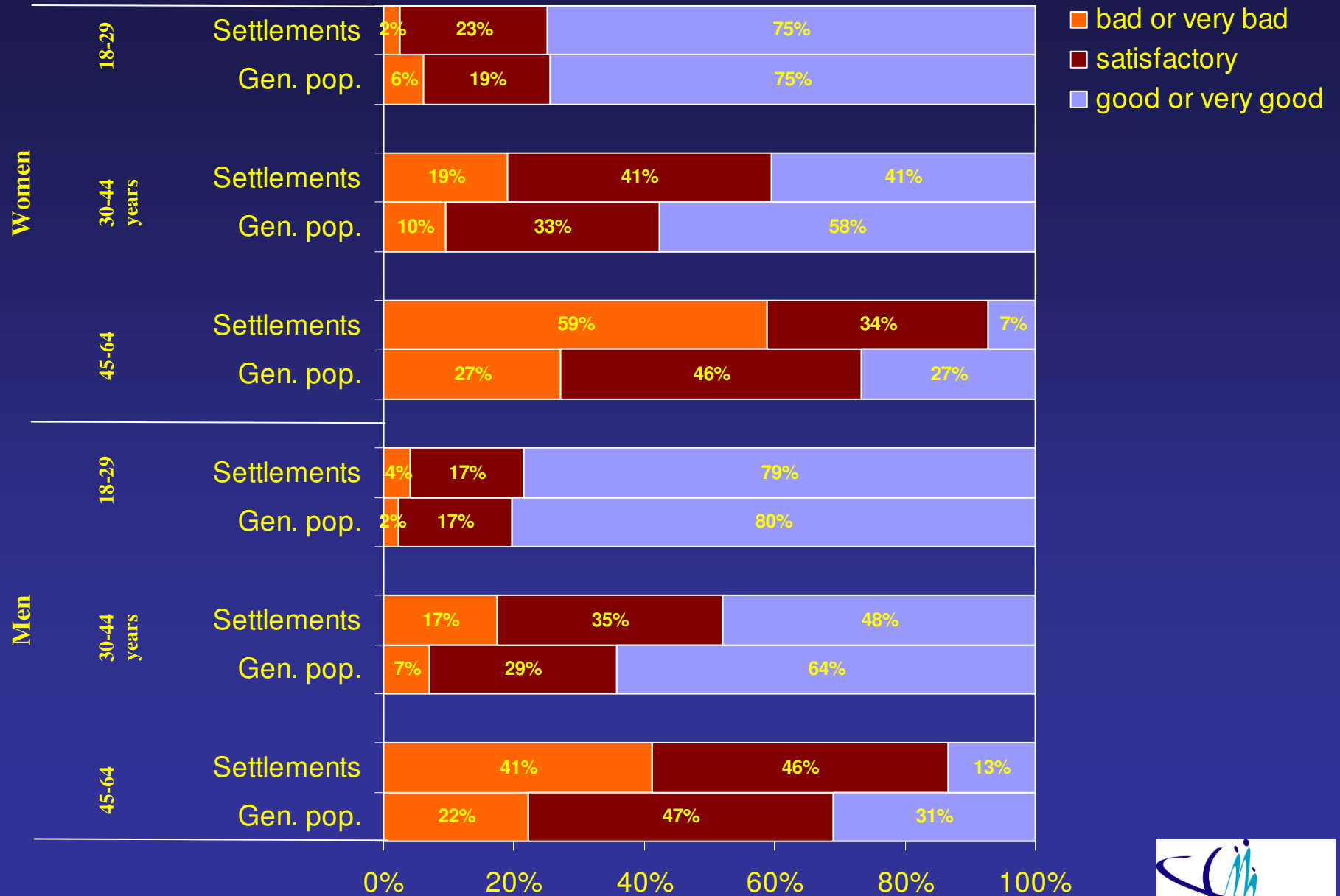
## Socio-economic status of persons living in settlements and persons in the lowest income quartile of the general population

	People living in Roma settlements			People in lowest income quartile		
	18-29 years	30-44 years	45-64 years	18-29 years	30-44 years	45-64 years
only primary education (%)	73 (68, 77)	80 (75, 84)	87 (82, 91)	43 (36, 50)	44 (38, 50)	50 (45, 56)
active worker (%)	17 (14, 21)	22 (18, 27)	11 (7, 16)	18 (12, 27)	40 (32, 49)	24 (19, 30)
mean household equivalent income per month (euro)	170 (160, 180)	161 (153, 169)	159 (150, 168)	143 (138, 148)	146 (142, 151)	150 (146, 154)

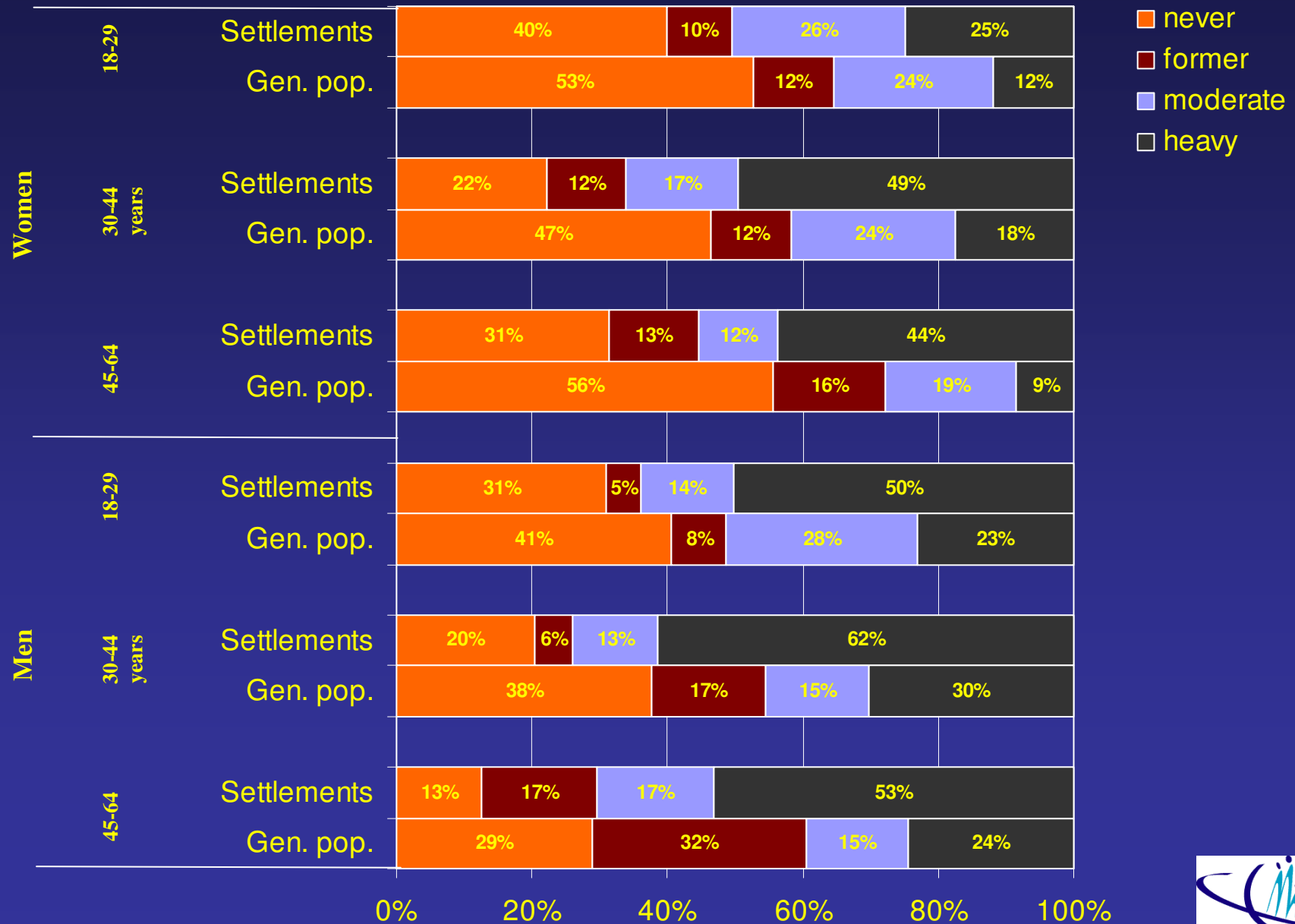
Numbers are estimated proportions (%) or means in the populations (95% confidence intervals).



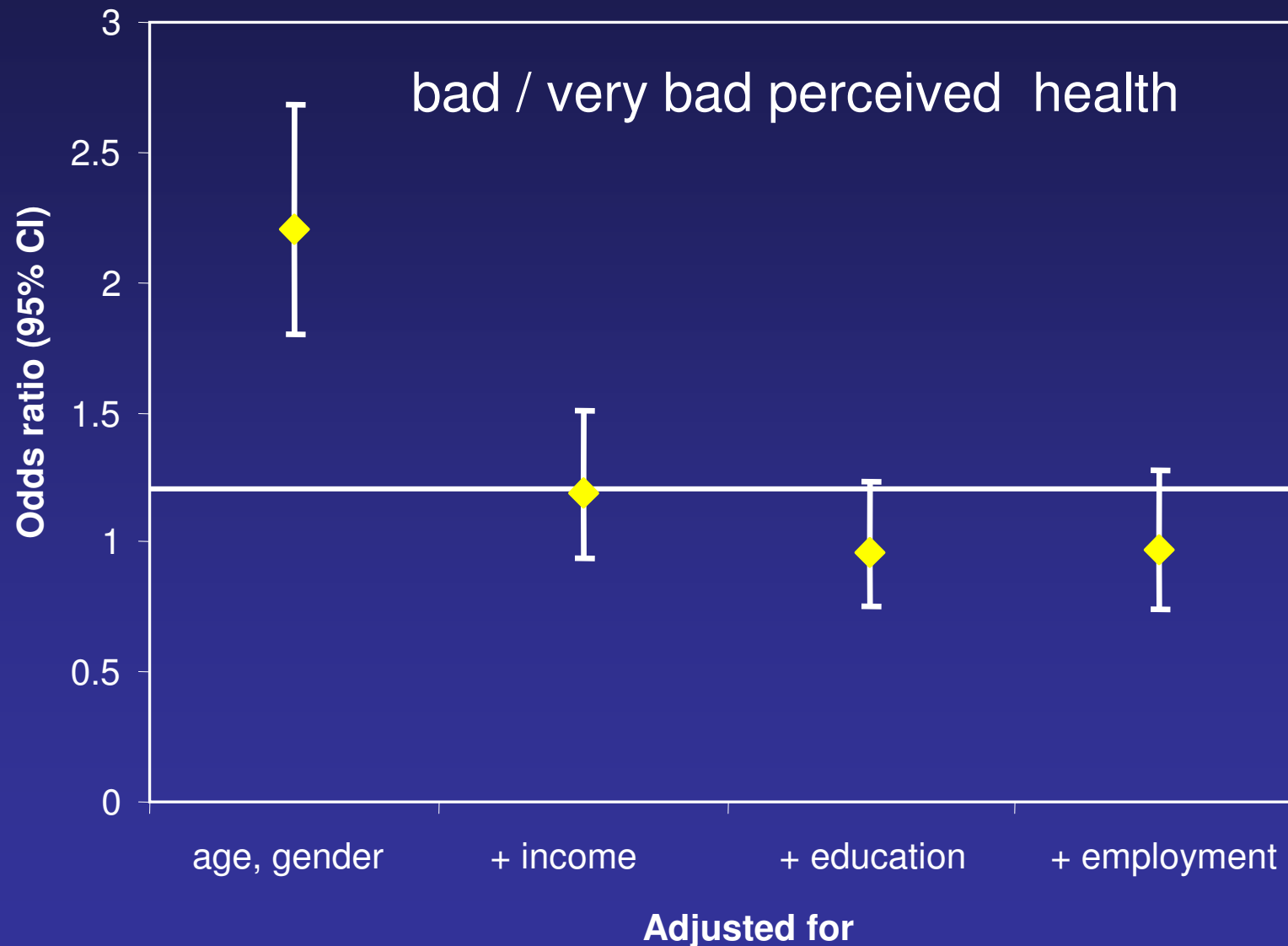
# Perceived health



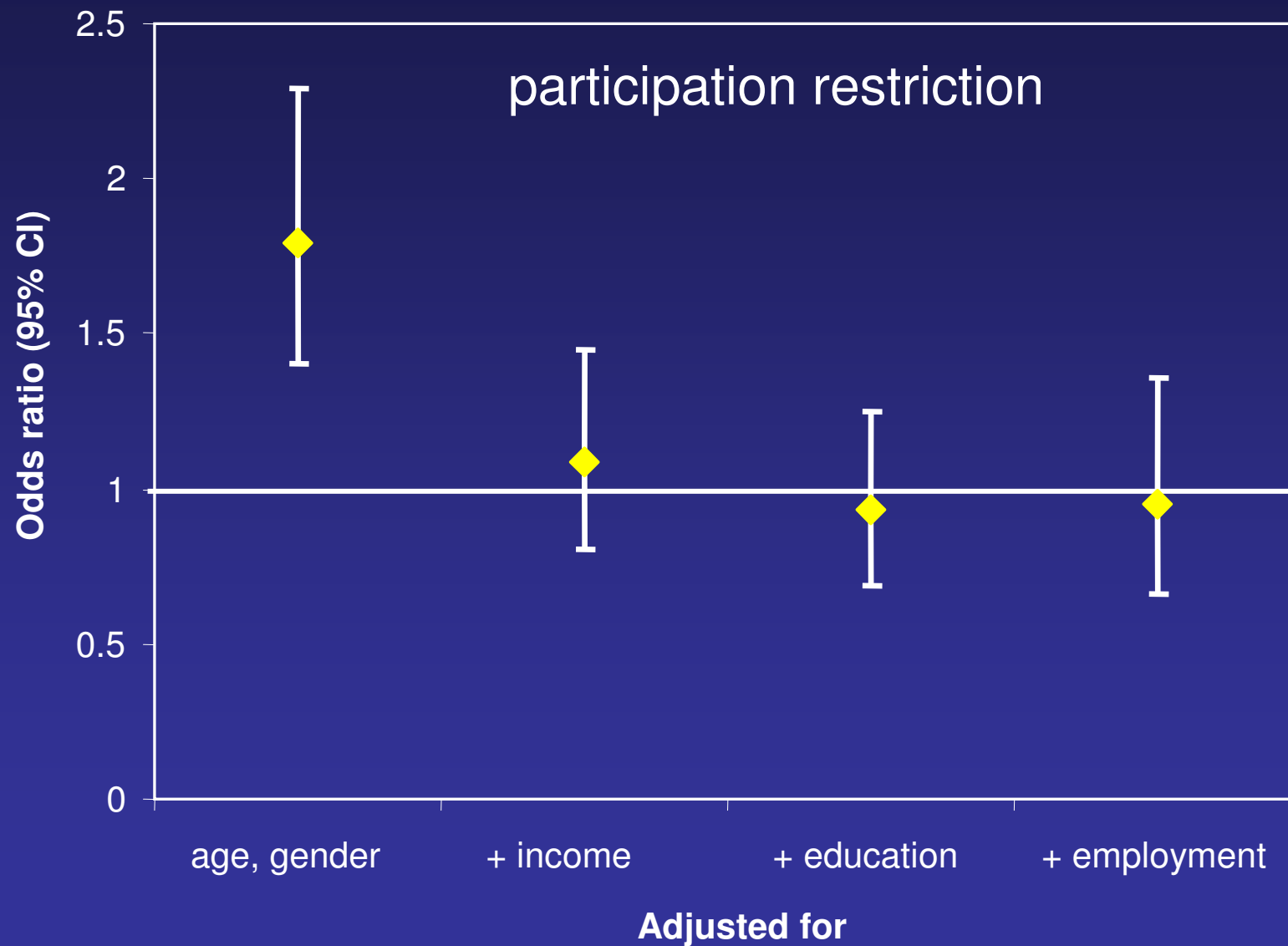
# Smoking



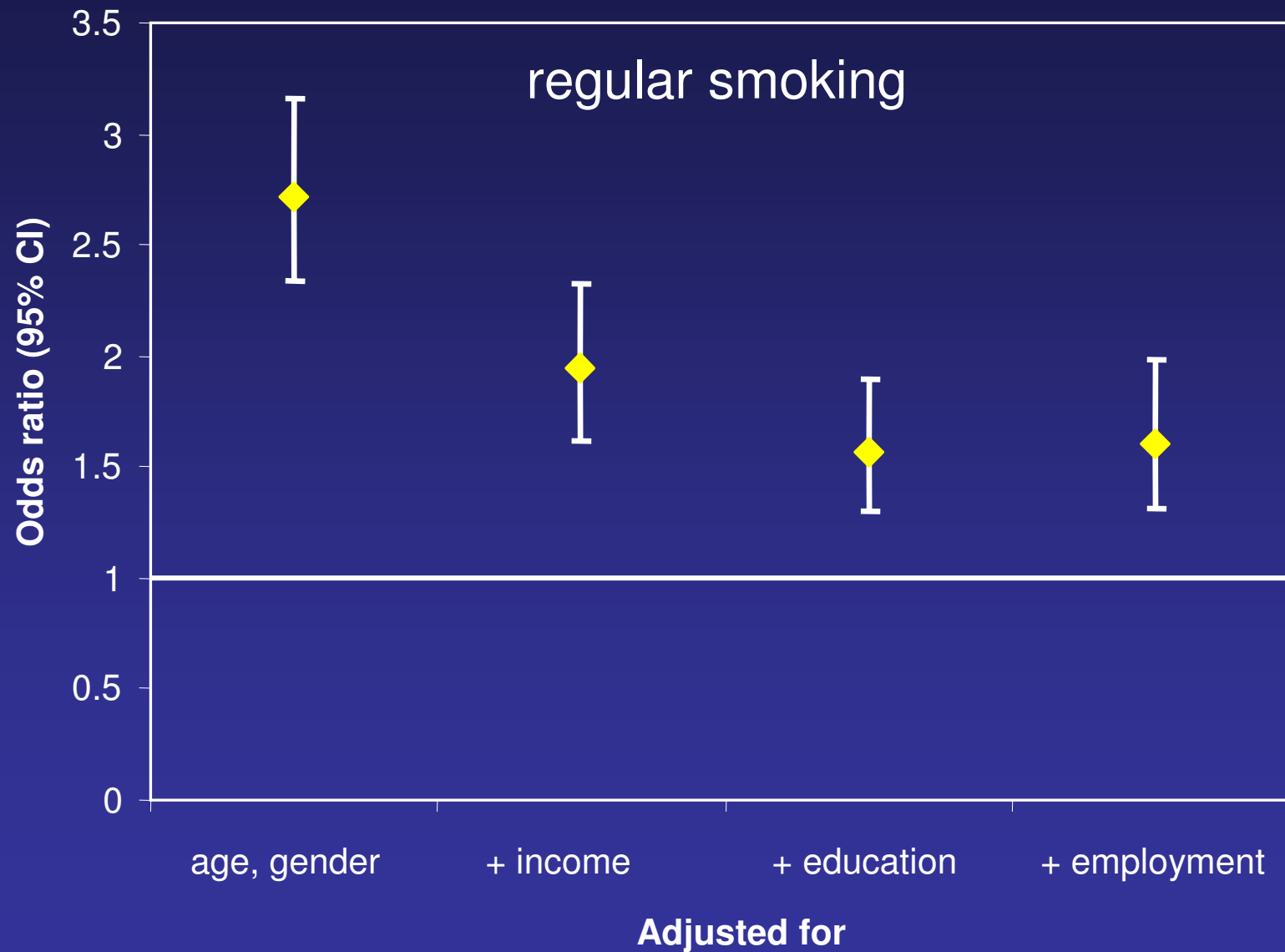
# The association between Roma ethnicity and perceived health



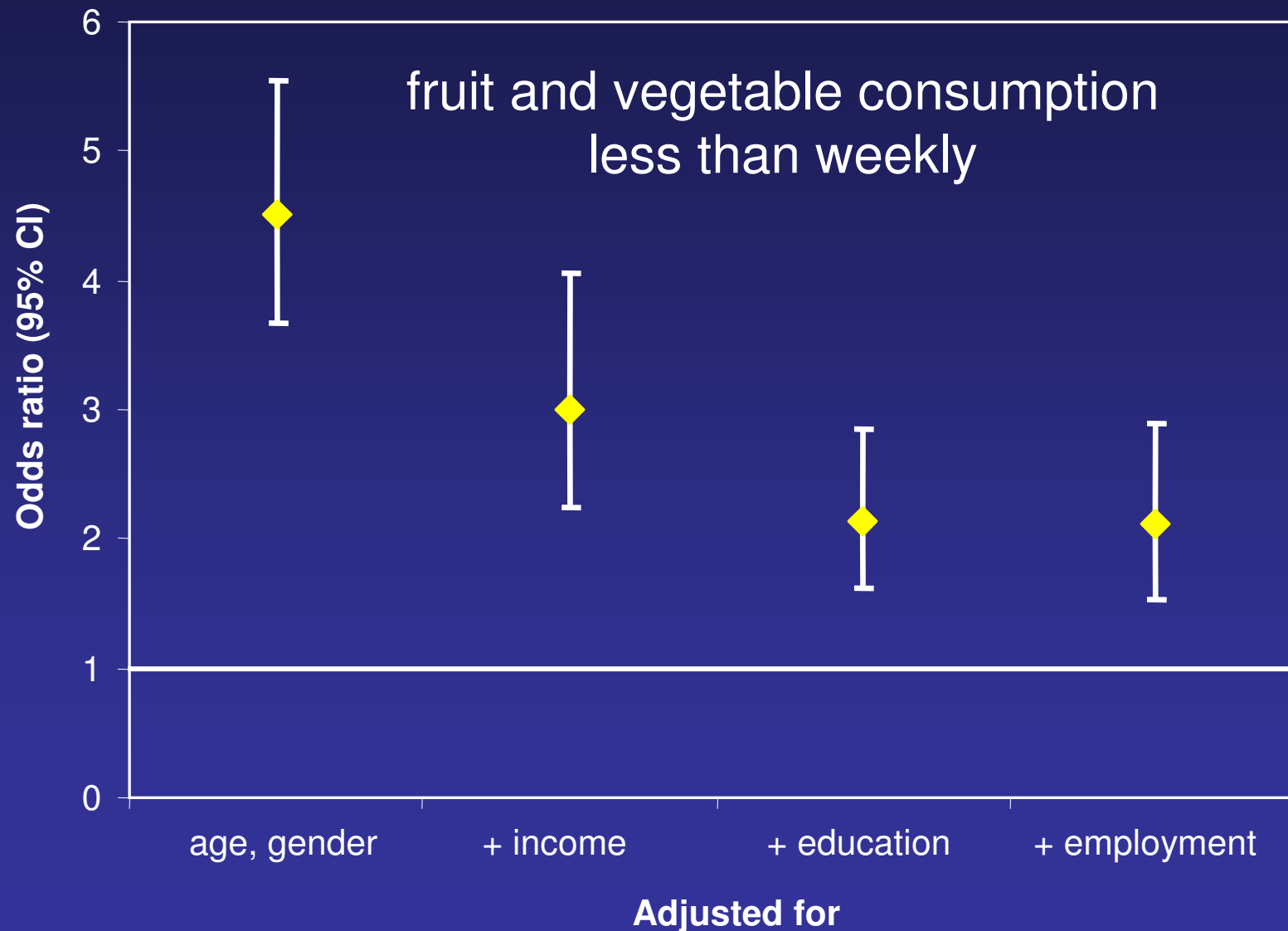
# The association between Roma ethnicity and functionality



# The association between Roma ethnicity and smoking



# The association between Roma ethnicity and fruit and vegetable consumption



# Effect modification

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- Roma ethnicity did not modify the association between different socioeconomic factors and health status but in some instances it modified the association between socioeconomic factors and health behavior:
  - daily smoking was not related to age in the general population, but its odds increased by age among Roma people;
  - income was very strongly associated with daily smoking and consumption of fresh fruits and vegetables among people living in Roma settlements, but less in the general population.



# Conclusions

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- People living in Roma settlements in Hungary
  - have poorer health than the general population, mostly determined by their worse socioeconomic status,
  - their health behavior is directly related to their ethnic characteristics.
- In the development of public health interventions aiming to improve the health of Roma people cultural differences, their specific attitudes, beliefs, knowledge, and values should be taken into account.

