

# YOUTH HEALTH CARE IN THE NETHERLANDS

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1. Characteristics YHC
2. Sources information and study design
3. Results study
4. Conclusions

# MAIN PURPOSE OF YHC

To provide 0 – 19 year old children and adolescents with continuous social and medical care in such a way that every youth can attain an optimal level of individual and social functioning

(Dutch Handbook Youth Health Care 1996)

# MAIN ACTIVITIES YHC

Well-care visits:

height, weight, motor and neurological development, tracti and senses; life style, psychosocial problems

(open) consultation hours

for teachers, parents and pupils

Screening:

(colour) vision, hearing, skeletal abnormalities, et cetera

# CHARACTERISTICS YHC

- a. objective very broad
- b. has been going on for very long time and all over the country
- c. high acceptance by public and professionals
- d. Long time between intervention and health outcome
- e. low incidence and prevalence of preventable health outcome
- f. very low level of computerisation of record-keeping on individual level
- g. many differences in frequency various activities between regions

# CHARACTERISTICS YHC (cont.)

- h. many inter- and even intra-professional differences in working methods
- i. topics of refresher courses based on personal interest
- j. no scientific underpinnings of changes whatsoever
- k. prevalence of health outcomes not a determining factor in choice of activities
- l. main efforts focussed on individual activities

# CHOICE OF STUDY DESIGN

A design is needed that is suitable for a:

- (1) post-hoc evaluation
- (2) of the effectiveness
- (3) of long-standing, community-wide prevention activities, that
- (4) show effect only after a prolonged period,
- (5) by comparing individual outcomes,
- (6) with a relatively low incidence,
- (7) between populations in regions with different youth health care programmes.

# STUDY DESIGN USED

Combination of case-referent design, in which cases were determined on the basis of information on individual health outcomes and the exposure on the basis of group characteristics.

## **ECOLOGIC CASE-REFERENT DESIGN**

# OUTCOME MEASURES

The health outcomes used must be clear-cut, measurable, and (in part) attributable to YHC.

1. Surgery for scoliosis
2. Suicide and suicide attempts
3. Present state of mind and mental health
4. Lifestyle variables  
(use of drugs like tobacco, alcohol, cannabis)
5. Eating habits and obesity



# SOURCES OF INFORMATION

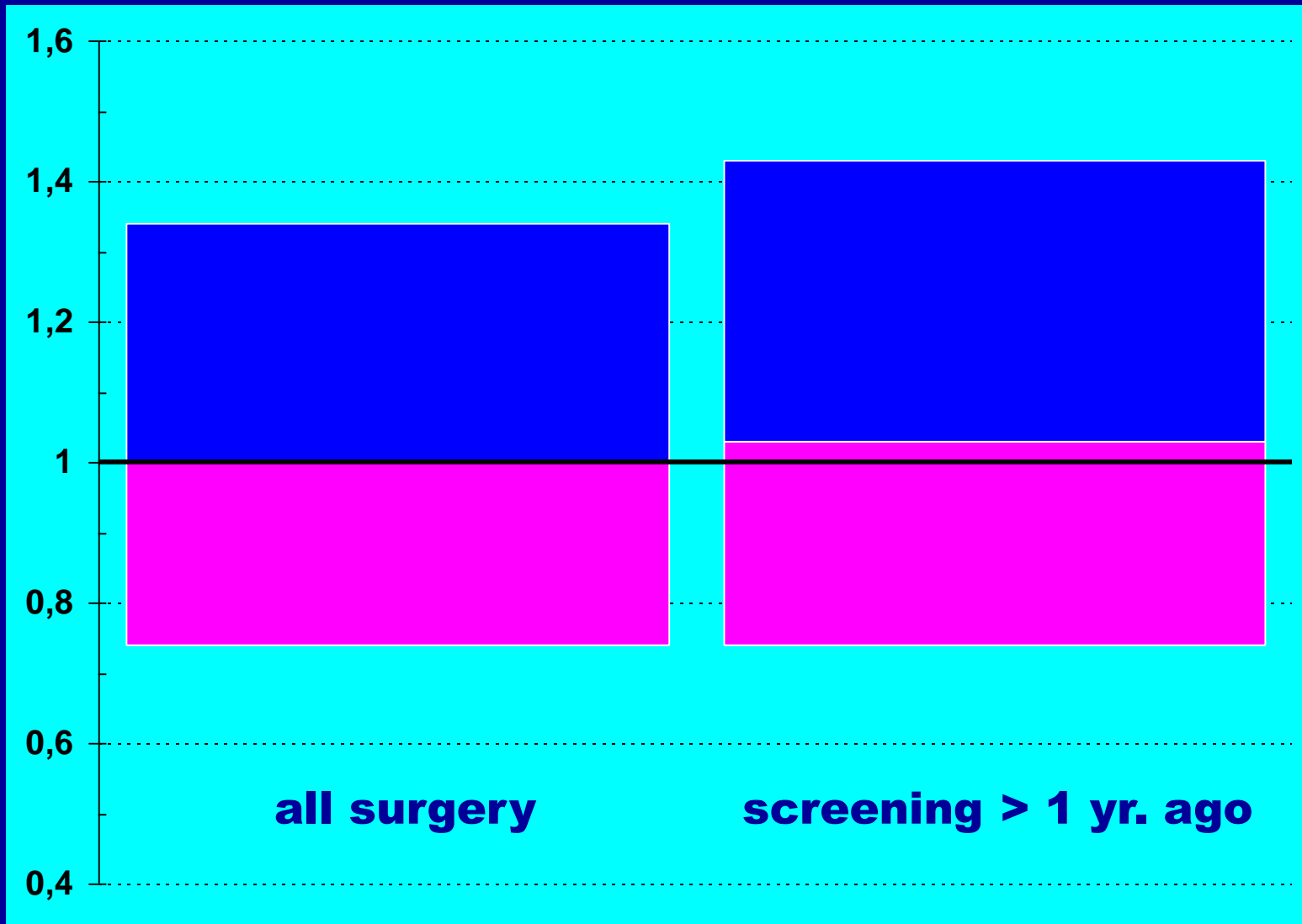
- a. All YHC regions in The Netherlands
- b. CBS: demographics and suicide mortality 1988 – 1993
- c. RIVM: demographics
- d. Hospital discharge data: parasuicide and surgery for scoliosis 1990 – 1993
- e. Regional Institutes for ambulant mental healthcare: activities prevention suicide in The Netherlands 1992
- f. Dutch Institute for Research on Government Spending: data on the distribution of possible confounding variables throughout The Netherlands
- g. Netherlands Institute for Budget Information (High-School Students Study
- h. Ministry of Defence: conscript data 1995 (N=12.251)

# SCOLIOSE

- outcome:** surgery for scoliosis
- exposure:** screening (all YHC regions)
- population:** cases from national hospital discharge register referents from census 12 or 13 year olds
- sources:** **YHC**; additional information from Orthopaedic Society (centres, protocol); census from National Institute for Public Health and Environmental Protection (RIVM) and the Netherlands Bureau of Statistics - CBS

# SURGERY FOR SCOLIOSIS

Odds Ratios with 95% confidence interval



# SOURCES (PARA)SUICIDE

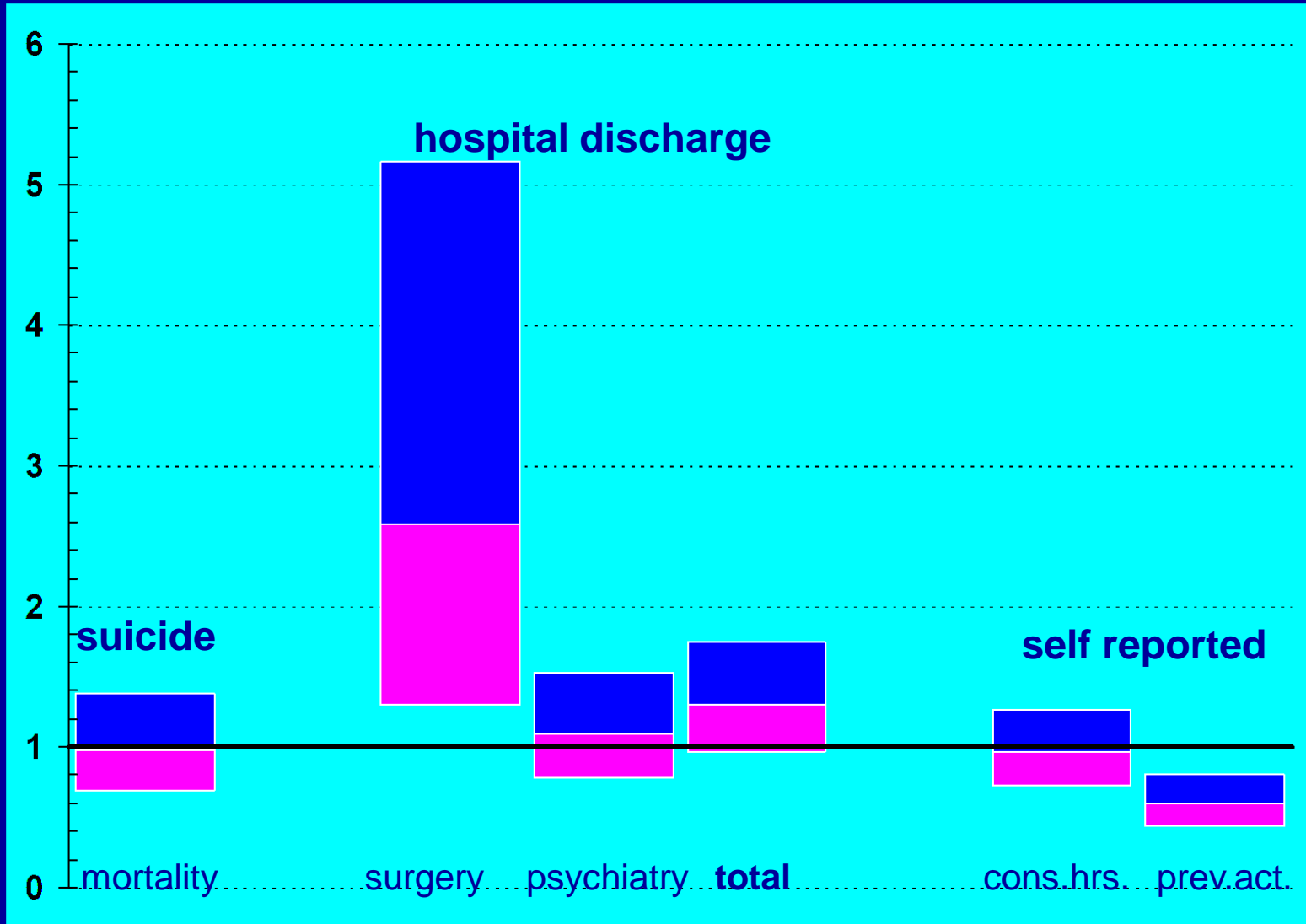
- YHC: open consultation hours
- hospital discharge data
- CBS: suicide mortality and demographics
- NIBUD: High-School Student Study
- RIAGG: preventive activities in The Netherlands

# RELEVANT OUTCOME MEASURES

- suicide mortality
- hospital: parasuicide with relevant psychiatric diagnosis
- hospital: parasuicide with surgical procedure
- self reported parasuicide

# (PARA)SUICIDE

Odds Ratios with 95% confidence interval

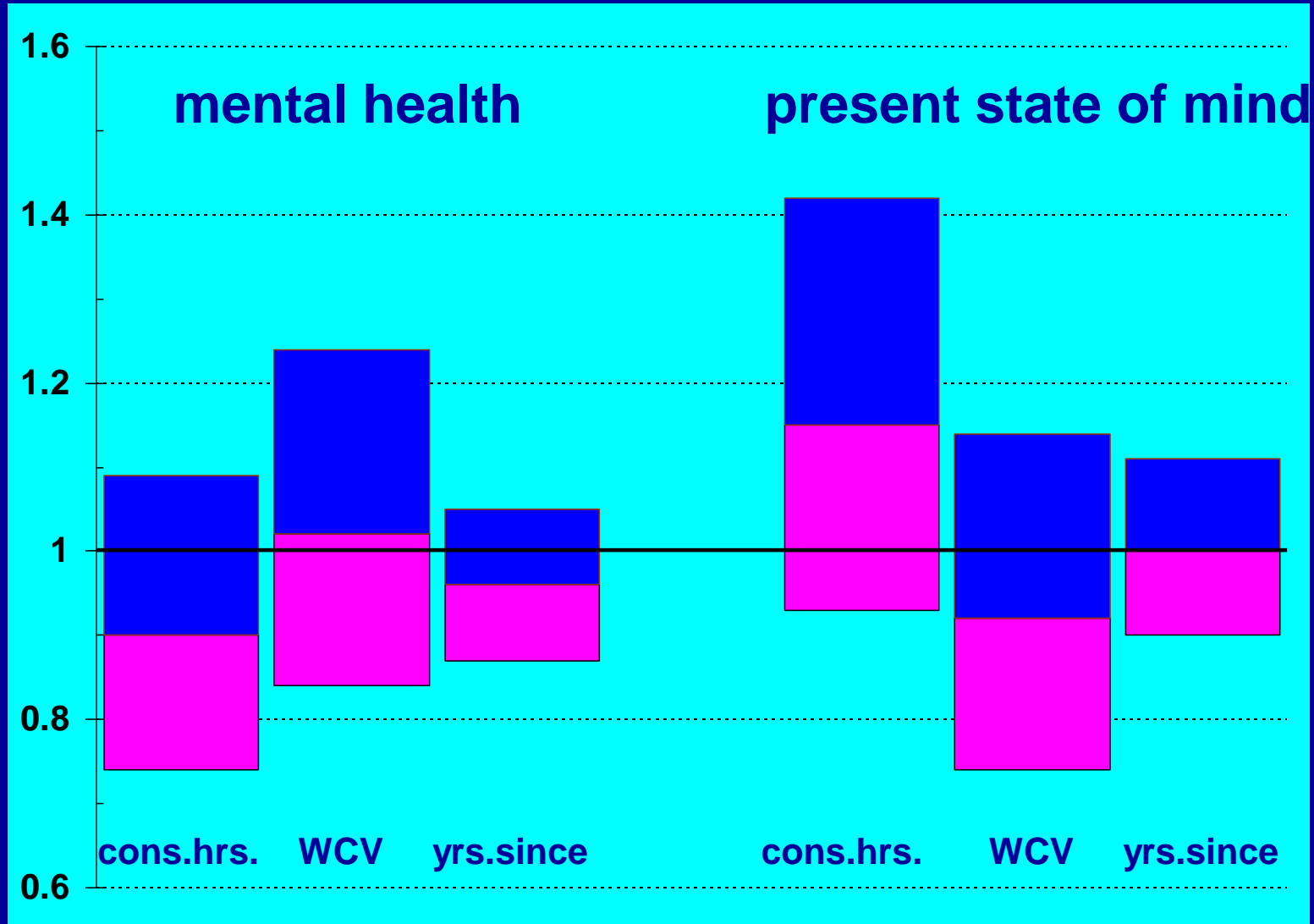


# MENTAL HEALTH

- Outcome:** good mental health and present state of mind (feeling now)
- Exposure:** number of WCV's and time since last; open consultation hours
- Population:** 4997 high school student study (cases and referents)
- Sources:** **YHC**; the Netherlands Institute for Budget Information (High-School Students Study mental health data on a total of 4,997 students)

# MENTAL HEALTH; STATE OF MIND

Odds Ratios with 95% confidence interval





# LIFESTYLE AND OBESITY

**Outcome:** improved lifestyle (tobacco, alcohol, cannabis, eating habits) and less obesity

**Exposure:** WCV's and open consultation hours

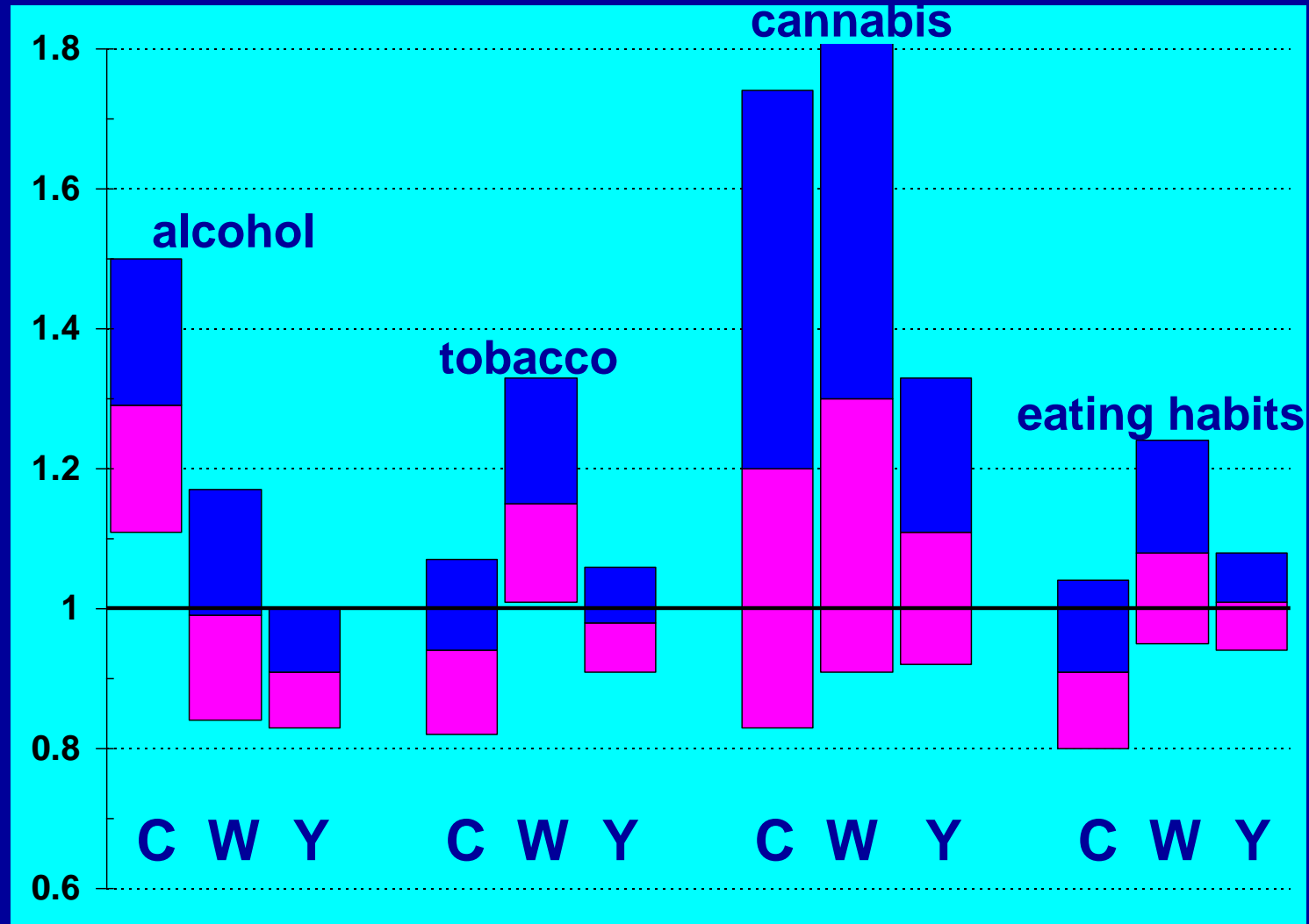
**Population:** respondents high school questionnaire;  
Ministry of Defence conscript data 1995:  
1,004 (8.2%) with BMI > 27.

Census in the regions of the participating youth health care departments served as referents.

**Sources:** Ministry of Defence; CBS/RIVM (census);  
high school student study

# ALCOHOL, TOBACCO, CANNABIS, EATING HABITS

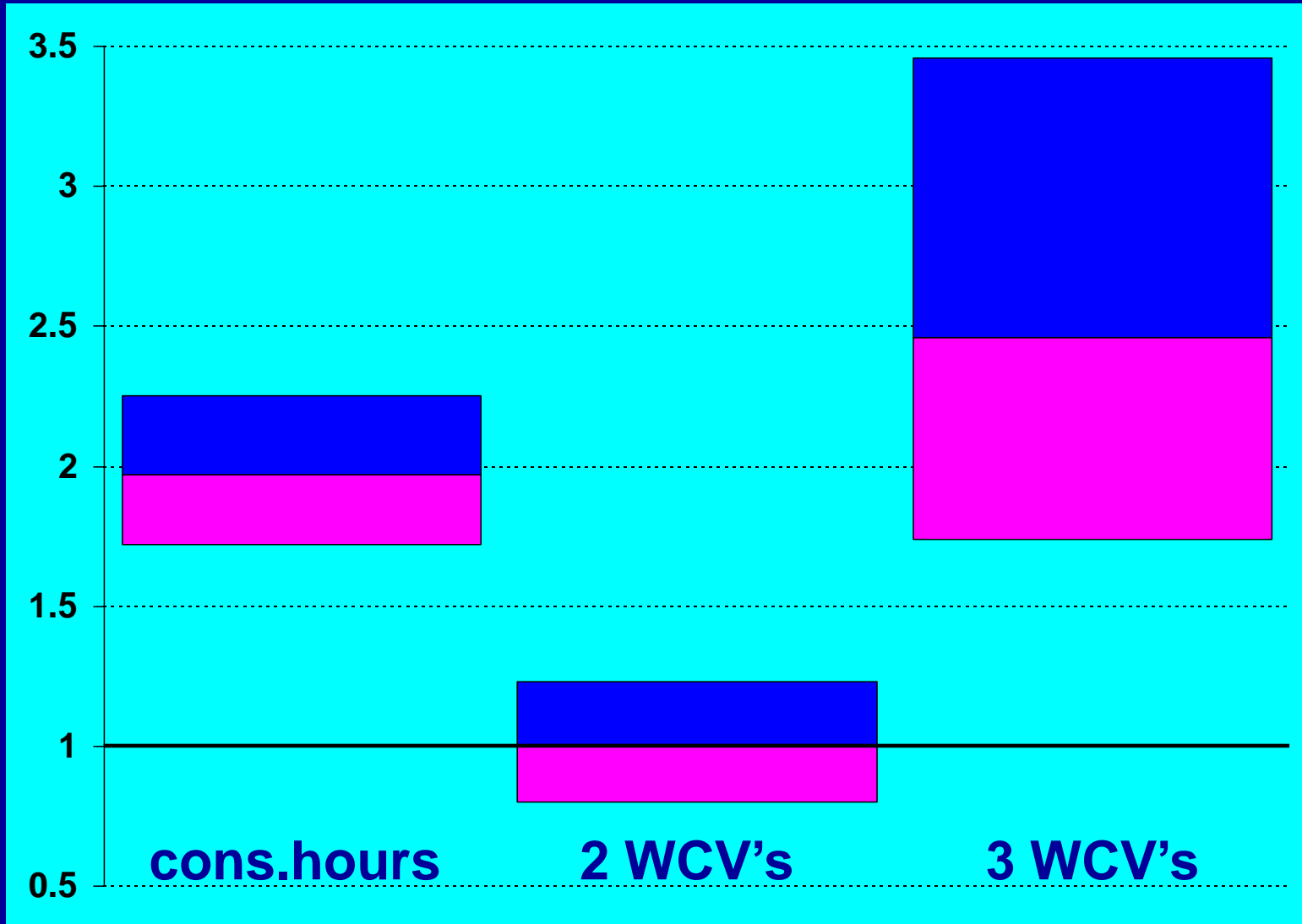
Odds Ratios with 95% confidence interval



C = cons.hours; W = well-care visits; Y = yrs. since

# OBESITY

Odds Ratios with 95% confidence interval



# SUMMARY RESULTS

	cons.hours	WCV
significantly negative	3	2
negative	3	3
indifferent (OR 0,95-1,05)	2	1
positive	3	1
significantly positive	0	0

# CONCLUSION 1

If the object of the screening is the prevention of surgery for adolescent scoliosis, continuation of this procedure should be discontinued.

If the aim of screening is no longer prevention of scoliosis surgery, different screening methods and instruments, employment of other (than) YHC-workers, and/or the choice of a different age group should be considered.

# CONCLUSION 2

Institution of freely accessible consultation hours on schools for secondary education do not contribute to the reduction in the rates of (para)suicide in adolescents.

Open consultation hours possibly have a beneficial influence on mental health, but only when certain conditions are met: concurrent enhancement of professional expertise of teachers and student advisors, targeting specific groups like pupils of schools for lower vocational education, et cetera.

# CONCLUSION 3

At a population level no beneficial influence could be demonstrated of (any number of) well-care visits.

Further studies are necessary to determine whether well-care visits, targeting only particular regions or groups of population at risk, can have the desired effect. For influencing mental or physical well-being, or unhealthy behaviour in the general population, however, the use of this labour-intensive and costly instrument seems unjustified.

# GENERAL CONCLUSION

The way YHC is presently conducted (at least in The Netherlands, where all activities are laid down in minute detail in the revised Collective Preventive Health Care Act):

- ◆ decreases (self-reported) health
- ◆ is dangerous
- ◆ increases socio-economic health inequalities