HEALTH PSYCHOLOGY IN LITHUANIA: RESEARCH AND PRACTICE. SELF-RATED HEALTH ASSESSMENT AND RELATED BEHAVIOR CHANGES WITHIN A CONTEXT OF BIOPSYCHOSOCIAL MODEL

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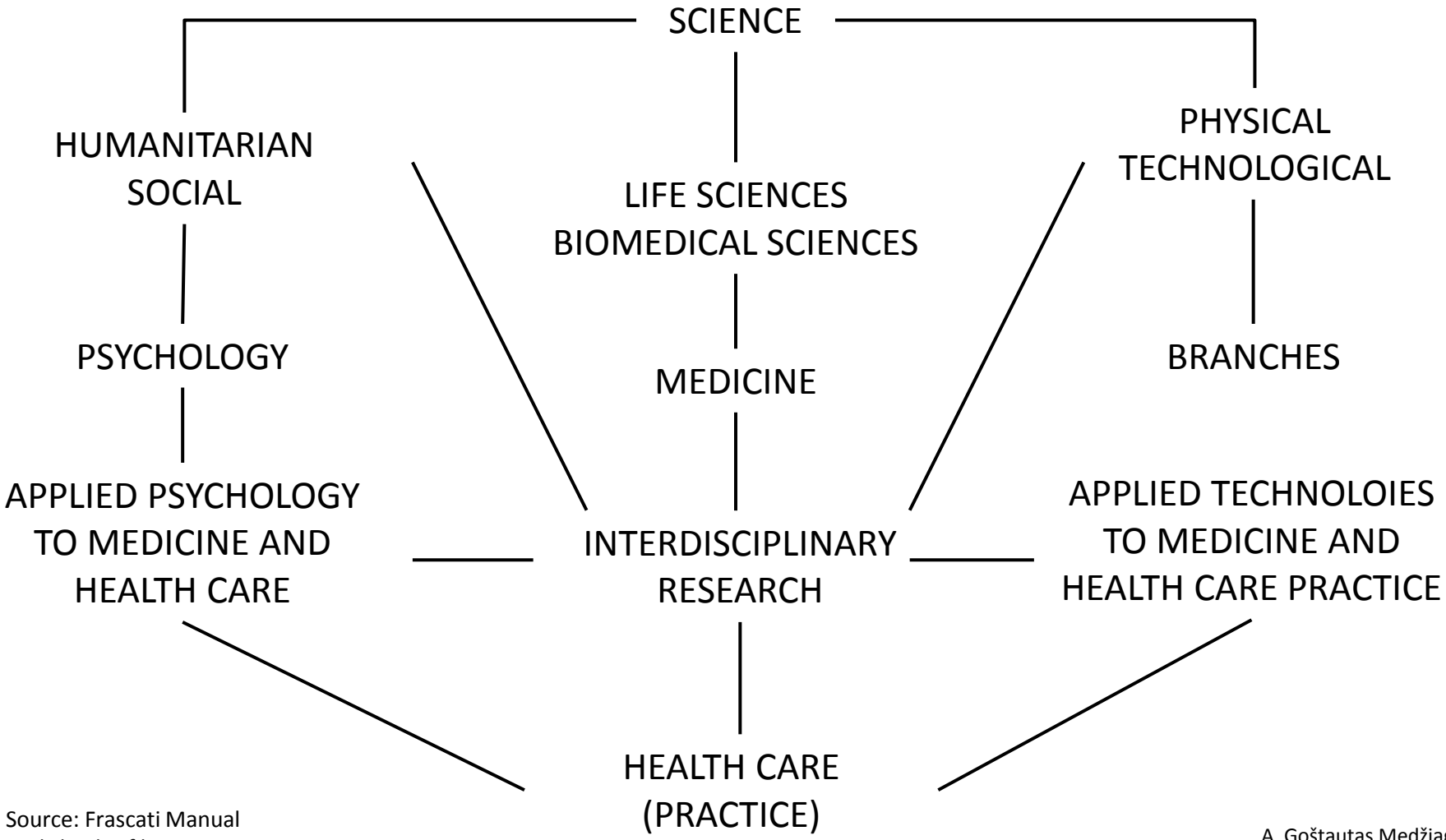
Vytautas Magnus University

Psychology in health care: science and practice perspectives



Source: Frascati Manual
Mokslo Klasifikacija

General background: psychological disciplines applied to medicine prior to emergence of Health Psychology and Behavioural Medicine

PSYCHOLOGY (W. Wundt, 1879)		**MEDICINE**
CLINICAL PSYCHOLOGY - course in child and abnormal psychology in Univ. of Pennsylvania (L. Witmer, 1907)	THE PSYCHOLOGICAL CLINIC - For children having mental and learning problems (L. Witmer, 1896)	CLINICAL PSYCHIATRY
PATHOPSYCHOLOGY, ABNORMAL PSY.		PSYCHOPATHOLOGY
	PSYCHOANALYSIS (S. Freud, 1890) PSYCHOANALYTIC METAPSYCHOLOGY	
PSYCHOSOMATIC PSYCHOLOGY	AMERICAN PSYCHOSOMATIC SOCIETY (1943)	PSYCHOSOMATIC MEDICINE F. Alexander, 1939; F. Dunbar, 1943)
	PSYCHOTERAPY	
REHABILITATION PSYCHOLOGY		REHABILITATION MEDICINE
NEUROPSYCHOLOGY	NEUROSCIENCES	NEURO/PATHO/LOGY NEUROSURGERY
	MEDICAL PSYCHOLOGY (E. Kretchmer, 1927)	
HEALTHCARE PSYCHOLOGY	HEALTH SCIENCES	PUBLIC HEALTH
COMMUNITY PSYCHOLOGY	HEALTH CARE	EPIDEMIOLOGY COMMUNITY MEDICINE
HEALTH PSYCHOLOGY APA 38 DIVISION, 1978; EHPS (1986)	BEHAVIOUR SCIENCES	BEHAVIORAL MEDICINE SBM, S. Weiss, 1978; ISBM

Health psychology, behavioral medicine and healthcare system – the aims

HEALTH PSYCHOLOGY: „THE AGGREGATE OF THE SPECIFIC EDUCATIONAL, SCIENTIFIC AND PROFESSIONAL CONTRIBUTIONS OF THE DISCIPLINE IN PSYCHOLOGY TO THE PROMOTION AND MAINTENANCE OF HEALTH, THE PREVENTION AND TREATMENT OF ILLNESS, AND THE IDENTIFICATION OF ETIOLOGIC AND DIAGNOSTIC CORRELATES OF HEALTH, ILLNESS AND RELATED DYSFUNCTIONS... AND TO THE ANALYSIS AND IMPROVEMENT OF THE HEALTH CARE SYSTEM AND HEALTH POLICY FORMATION.

Matarazzo, j. D. (1980).Behavioral health and behavioral medicine: Frontiers for a new health psychology. American psychologist, p.35, 807-817.

BEHAVIORAL MEDICINE: THE INTERDISCIPLINARY FIELD OF SCIENCE CONCERNED WITH THE DEVELOPMENT AND INTEGRATION OF SOCIO-CULTURAL, PSYCHOLOGICAL, BEHAVIORAL AND BIOMEDICAL KNOWLEDGE AND TECHNIQUES RELEVANT TO HEALTH AND ILLNESS, AND THE APPLICATION OF THIS KNOWLEDGE AND THESE TECHNIQUES TO DISEASE PREVENTION, HEALTH PROMOTION, AETIOLOGY, DIAGNOSIS, TREATMENT AND REHABILITATION; THE CONDUCT OF RESEARCH CONTRIBUTING TO THE FUNCTIONAL ANALYSIS AND UNDERSTANDING OF BEHAVIOR ASSOCIATED WITH MEDICAL DISORDERS AND PROBLEMS OF HEALTH CARE.

Schwartz, G. E., Weiss, S. M. (1978). Behavioral medicine revisited: An amended definition. Journal of Behavioral Medicine, 1, 249 – 251, p. 250 and the EHPS. The European Health Psychologist. Vol. 13, March 2011, 13-15.

HEALTH CARE SYSTEM CONCERN WITH APPLICATION OF ACHIEVEMENTS OF BIOMEDICAL, HEALTH AND RELATED SCIENCES AND PRACTICE TO: PROMOTION, MAINTENANCE AND PROTECTION OF HEALTH – PROMOTION LIFE STYLES CONDUCIVE TO HEALTH, DISEASE PREVENTION AND CONTROL – REDUCTION OR ELIMINATION OF PREVENTABLE CONDITIONS (HEALTH RISKS); REDUCTION NUMBER OF PREMATURE DEATH, ILLNESS, ACCIDENTS AND DISABILITY.

ETIOPATHOGENESIS, DIAGNOSIS AND TREATMENT OF DISEASE; REHABILITATION;
THE DEVELOPMENT OF HEALTH POLICY AND RESEARCH SEEKING TO ATTAIN BY ALL PEOPLE SOCIAL EQUITY IN HEALTH AND HIGHEST POSSIBLE LEVEL OF HEALTH RELATED QUALITY OF LIFE.

Who documents

Background of Health Psychology in Lithuania

In early seventies only some wide scale epidemiological studies on prevention CVD investigated psychological – behavioural factors together with medical investigation. Among these were so called Western Collaborating Group Study (WCGS), Framingham study, Belgium and France study.

At the same time, World Health Organisation (WHO) introduced multidisciplinary, multifactorial approach to health research technology focused on the problem of general methodology of preventing intervention studies. Within this context the system model of related biological, psychological (behavioural) and social risk factors for CVD was initiated in Kaunas (Lithuania) – Rotterdam (The Netherlands) methodological intervention study (KRIS) under guidance of WHO (1972).

The same methodology was used in subsequent international studies of multifactorial prevention (1976-1980), MONICA – Psychosocial (1984, 1988, 1992) CHEWE (1995) and other psychosocial preventive subprograms conducted in Laboratory of Medical Psychology and Social research from 1973 until 2003 and continued in Vytautas Magnus University.

J.S. Glasunov, Z. J. Januškevičius, L. Burema et collaborative group Behavioral and operational components of health intervention programs: project design. WHO –Kaunas-Rotterdam collaboration. Public health in Europe. Chronic diseases 2. Regional Office for Europe. WHO Copanhagen, 1973

Background of Health Psychology in Lithuania (cont'd)

The psychosocial sub programme of the KRIS was focused on the psychological – behavioural aspects of preventive intervention methodology. In high and moderate risk groups up to 4000 participants and assessment of health stays changes during the 2 years and follow-up.

List of indicators included subjective assessment of self health status, attitudes toward health, health related behaviours, smoking, usage of alcoholic beverages, life styles such as physical activity, dieting, psychological risks (Type A Behaviour Pattern), personal values related to health, social support, internal – external control, personality features, such as hypochondricity, dependency, iatrogenic effect of the study. Methods of assessment were translated in Dutch – Lithuanian retranslated to English language, compared and standardised for usage in both countries.

Observation during the 20 years of follow-up enabled to disclose importance of Health related psychological – behavioural – social and somatic (biological) risks for development of chronic (non communicable) diseases and excessive mortality.
The pooled and follow-up data from these studies served as basis for this presentation.

Glasunov, Dowd, Baubiniene, Grabauskas, Sturmans and Schuurman (Eds.)
The Kaunas – Rotterdam Intervention study.
Elsevier (North – Holland) Biomedical Press, 1981. p. 192

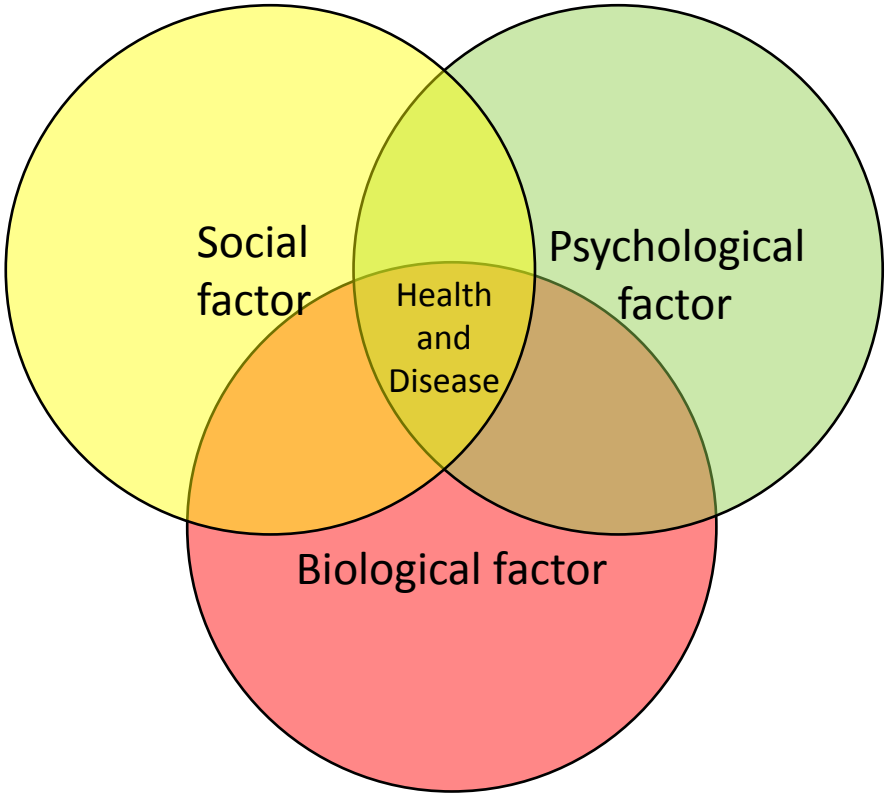
Concepts and principles unifying Health Psychology, Behavioral Medicine relevant to health care system

- Conceptual definition of health. WHO, 1948, 1980
- System approach in prevention, treatment and rehabilitation: Biopsychosocial model of health and disease. Engel, 1977
- Risk factors theory applied in prevention of non communicable disease. WHO
- Evidence based interventions achieving positive health outcomes
- Clinical excellence- treatment based on clinical studies and cost effectiveness
- Multidisciplinary (interdisciplinary) approach in research and health care practice
- Health related quality of life, life styles
- Patient oriented professional ethics and legislation

Objectives

The objectives of present analysis was to examine age induced changes in self-rated health status and health related psychological and behavioral risk factors (self –perceived emotional stress, smoking, use of alcoholic beverages) in men and women and disclose possible association of these factors with mortality by using polled and follow-up data from large scale psychosocial substudies carried out in Lithuania from 1972 through 2008 year within a frame of international and local epidemiological programs.

Health concept – System Approach
BioPsychoSocial model



- Modern science is discovering that, while it is operationally convenient for purposes of discussion to separate mental health from physical health, this is fiction created by language. Most “mental” and “physical” illnesses are understood to be influenced by combinations of biological, psychological and social factors. Furthermore, thoughts, feelings and behaviour are now acknowledged to have a major impact on physical health. Conversely, physical health is recognized as considerably influencing mental health and well-being.

Source: The World Health Report 2001. Mental Health: New Understanding, New Hope. WHO, Geneva, 2001, p. 5-6

A. Goštautas. Mokymo medžiaga sveikatos psichologijos kursui, 2002 m.

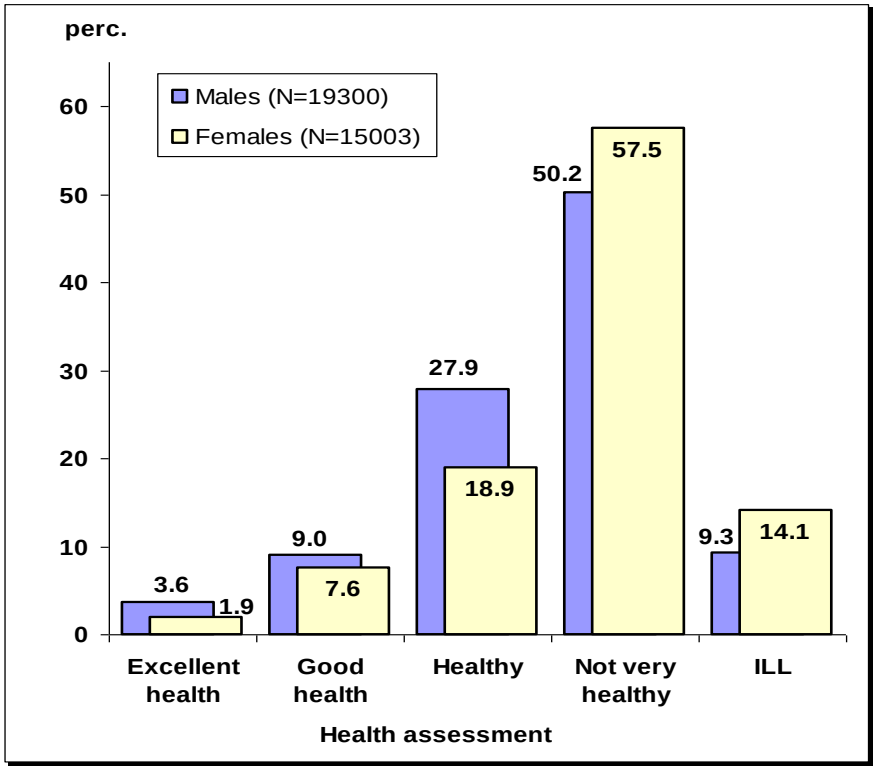
METHODS
ITEMS OF PERSONAL INTEGRAL SELF-HEALTH ASSESSMENT

- GENERAL HEALTH: very good, good enough, medium, not very good, bad.
- HEALTHY-ILL: excellent health, good health, healthy, not very healthy, ill.
- HEALTH THROUGH 12 MONTH: excellent, good, medium, bad, very bad.
- PHYSICAL HEALTH: excellent, very good, good, medium, bad, very bad.
- PSYCHICAL (EMOTIONAL) HEALTH: excellent, very good, good, medium, bad, very bad.
- HEALTH: very good, good, medium, bad, very bad.
- COMPLAINTS ABOUT HEALTH: Hs scale from the MMPI

Šaltinis: Doc. Eur/RC40/9 "HFA indicators and evaluation framework for the European Region of WHO (1990-1991) Annex 2
Health for All Targets. The Health Policy for Europe WHO Regional Office for Europe. Copenhagen. September 1991, p.62

A. Goštautas. Mokymo medžiaga
Sveikatos psichologijos kursui 1999 m.

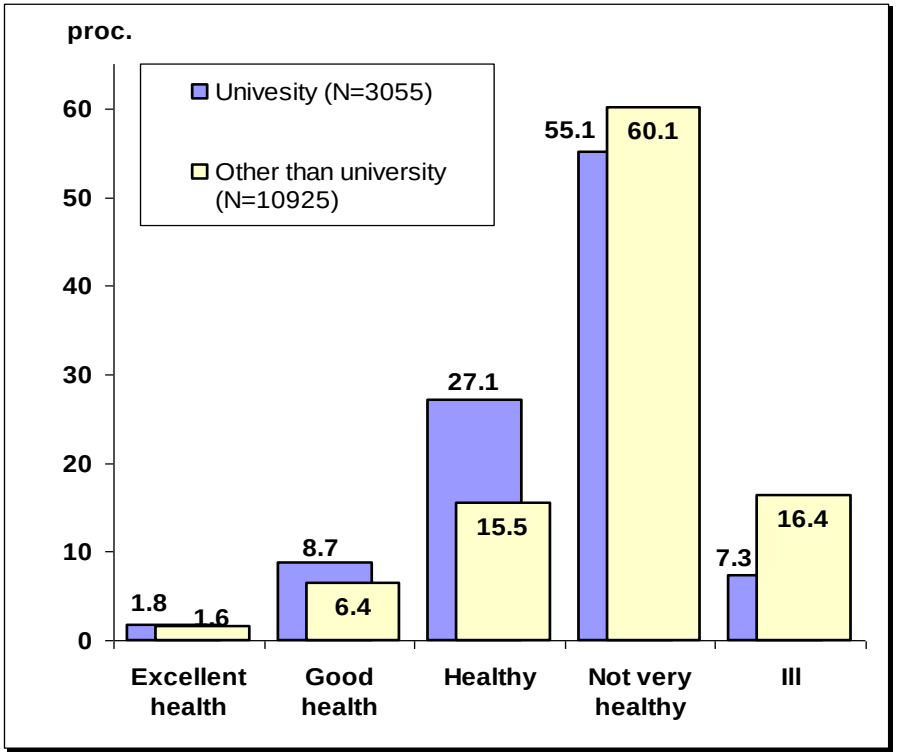
Self-health assessment of males and females aged from 20 through 95 year in Lithuania



Pearson χ^2=649.7106; df=4; p<0,00001

Gender	Health assessment (n., perc.)				
	Excellent health	Good health	Healthy	Not very healthy	Ill
Females (N=15003)	285 (1,9)	1138 (7,6)	2835 (18,9)	8622 (57,5)	2123 (14,1)
Males (N=19300)	696 (3,6)	1739 (9,0)	5381 (27,9)	9694 (50,2)	1790 (9,3)

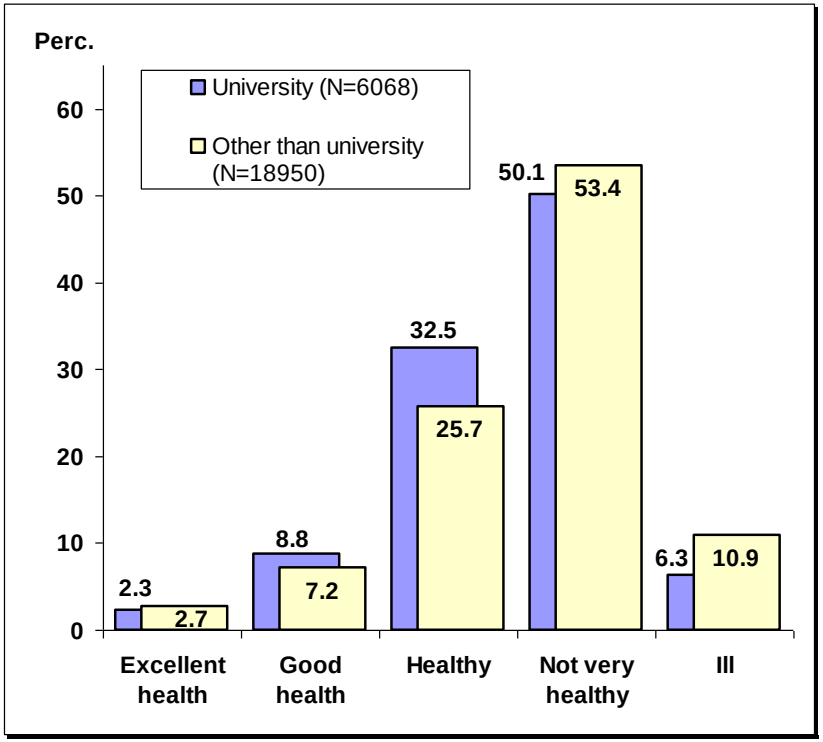
Self-rated health among Lithuanian females aged 25 through 90 year according to their educational level



χ^2=347,1690; df=4; p<0,00001

Education	Health assessment (abs. n., perc.)				
	Excellent	Good health	Healthy	Not very healthy	Ill
University (N=3055)	54 (1,77)	267 (8,74)	828 (27,10)	1683 (55,09)	223 (7,30)
Other than university (N=10925)	178 (1,63)	699 (6,40)	1688 (15,45)	6566 (60,10)	1794 (16,42)

Self-rated health among Lithuanian males aged 25 through 90 year according to their educational level

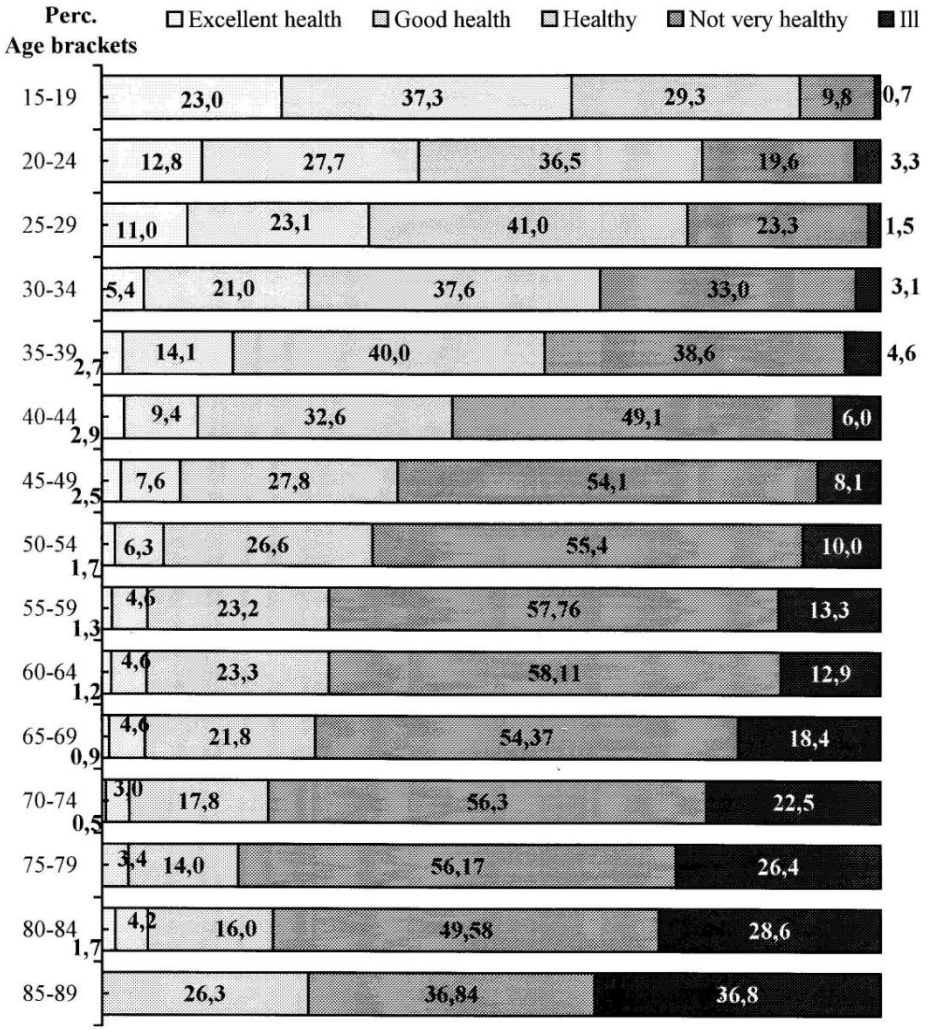


χ^2=206,8223; df=4; p<0,00001

Education	Health assessment (abs. n., perc.)				
	Excellent	Good health	Healthy	Not very healthy	Ill
University (N=6068)	140 (2,31)	535 (8,82)	1971 (32,48)	3041 (50,12)	381 (6,28)
Other than university (N=18950)	519 (2,74)	1371 (7,23)	4865 (25,67)	10127 (53,44)	2068 (10,91)

SELF RATED HEALTH AMONG MALES AND FEMALES WITHIN AGE BRACKET FROM 25 THROUGH 64 YEARS IN YEAR 1997

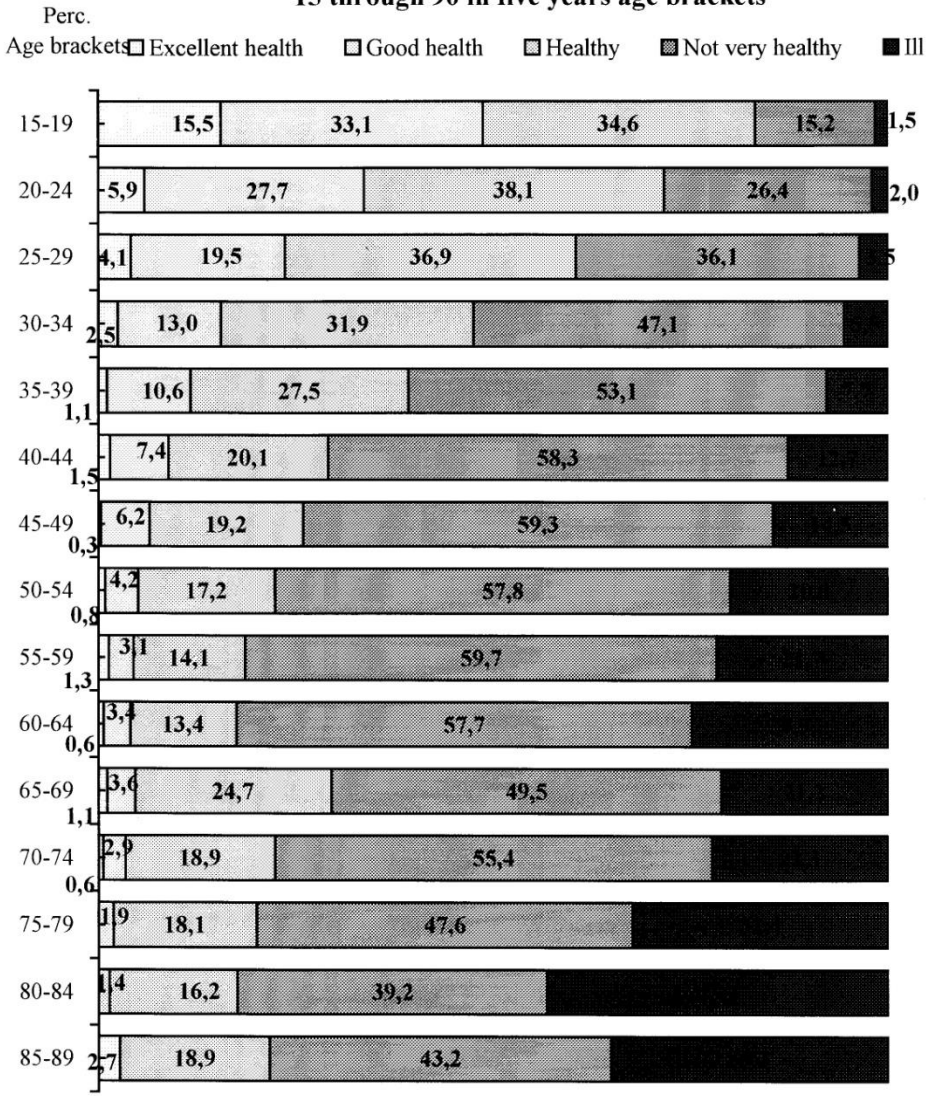
Self-rated health in Lithuania males age 15 through 90 in five years age brackets



Šaltinis: A. Goštautas. Health perception in Lithuania and its psychological correlates. Acta Media Baltica. Vol. 1. '94/188-92.

A. Goštautas, Mokymo medžiaga kursui "Sveikatos psichologija", 1998 m.

Self-rated health in Lithuania females age 15 through 90 in five years age brackets



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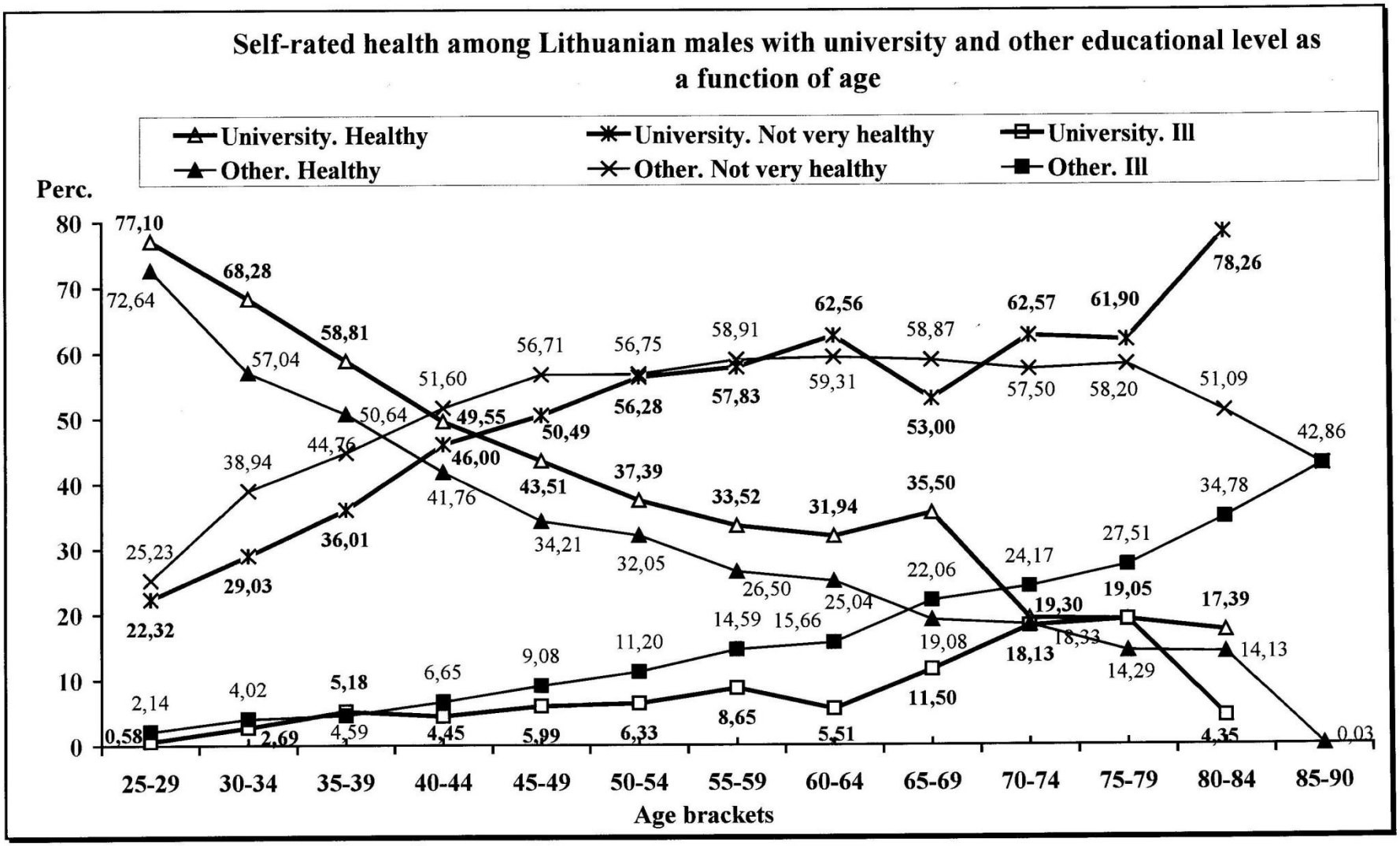
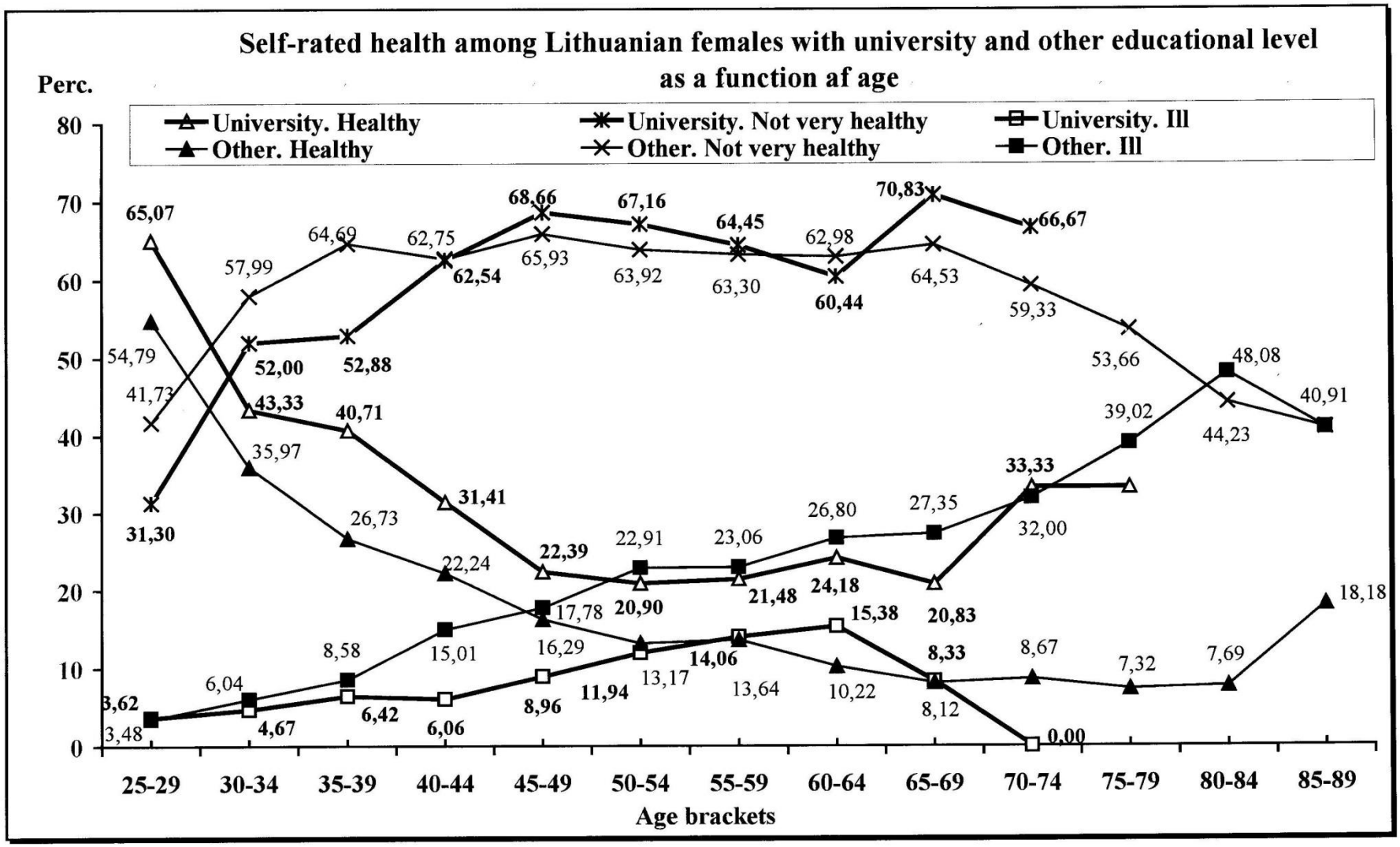


Šaltinis: Sveikatos tyrimai MPSTL ir VDU, PK

A. Goštautas. Mokymo medžiaga kursui
"Sveikatos psichologija", 2000 m.



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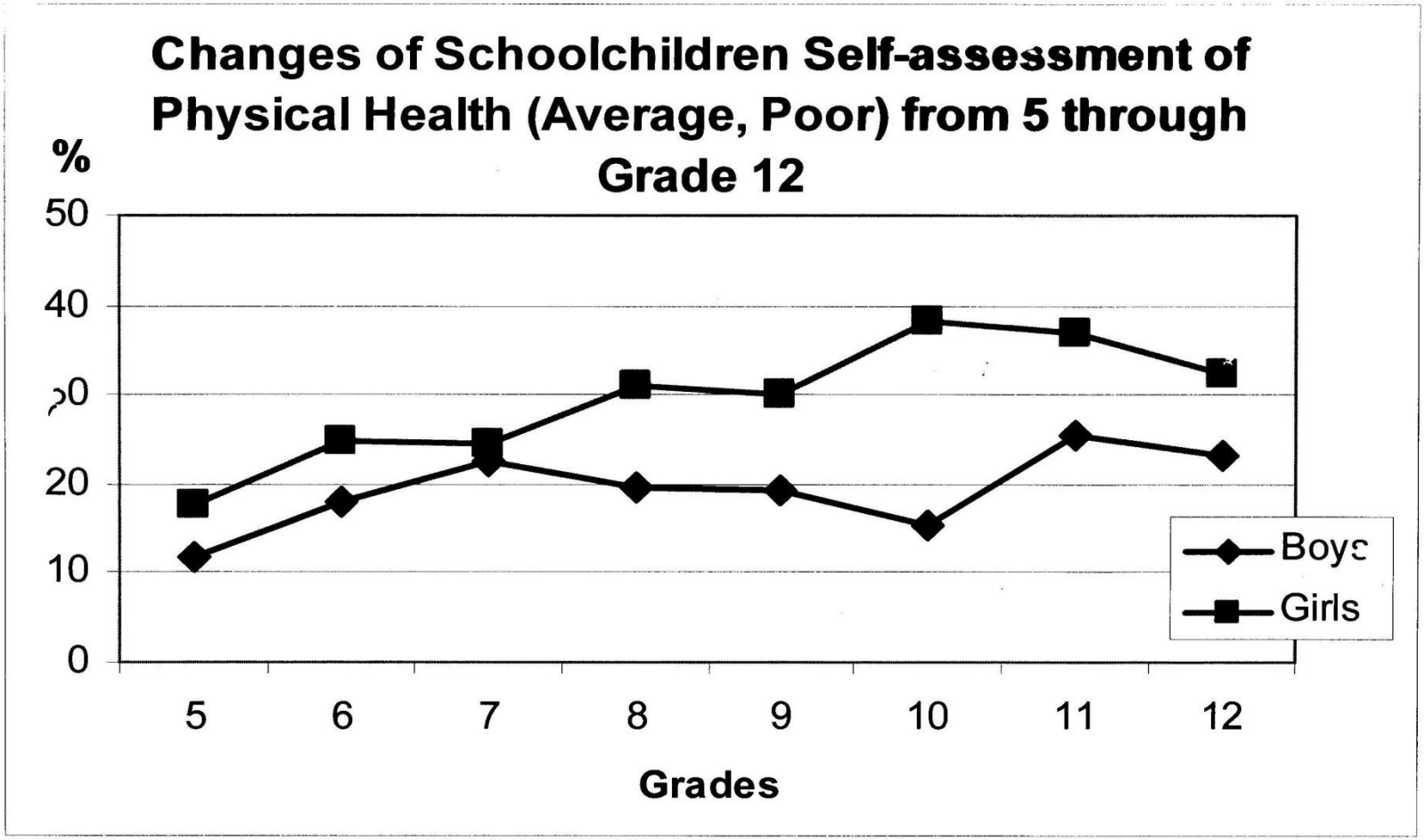
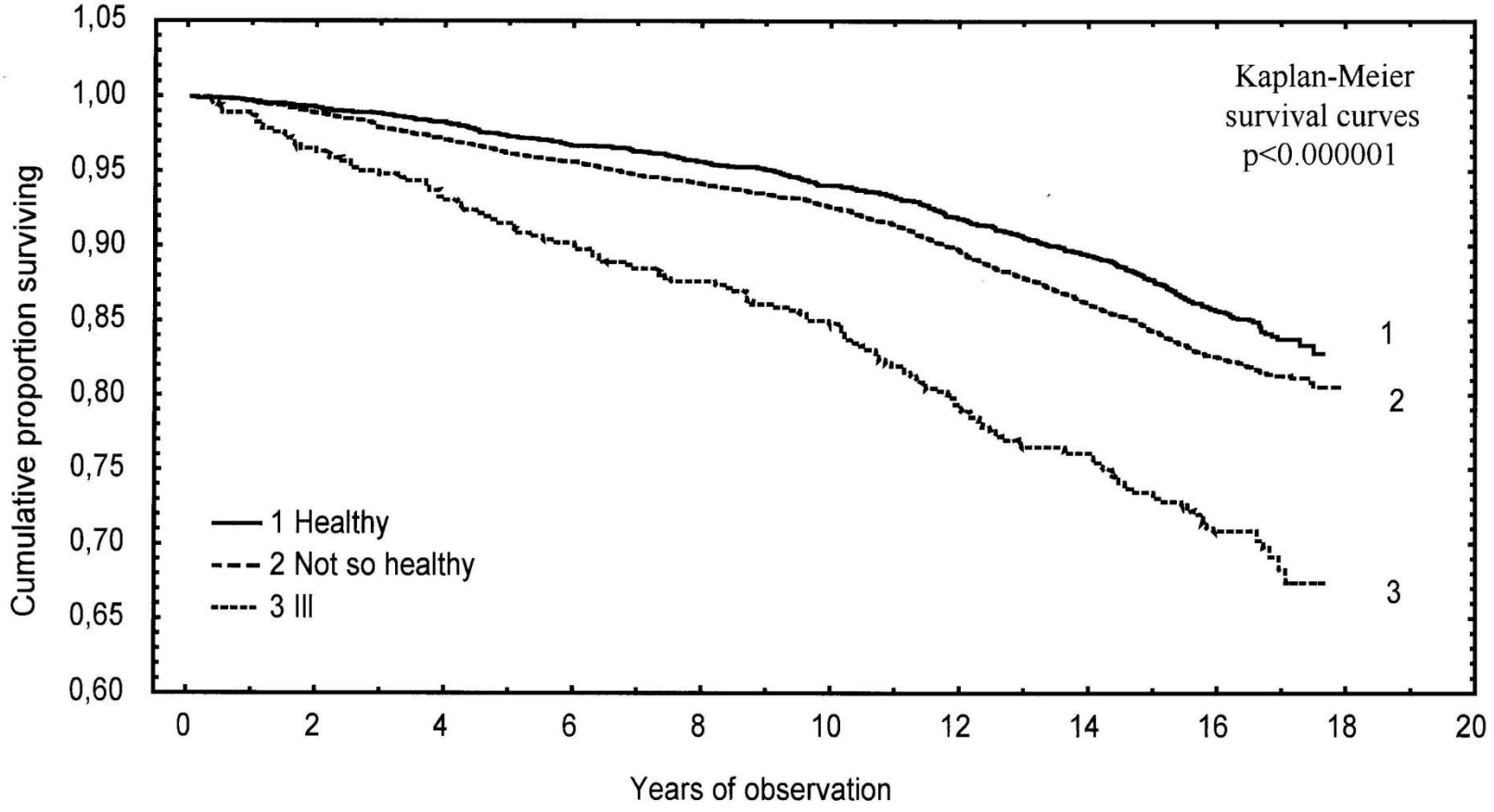


Boys χ^2=38,898; df=28; p=0,083
Girls χ^2=68,688; df=28; p=0,0001

Source: A. Gostautas, L. Seibokaite
Gender related differences of self health assessment among schoolchildren

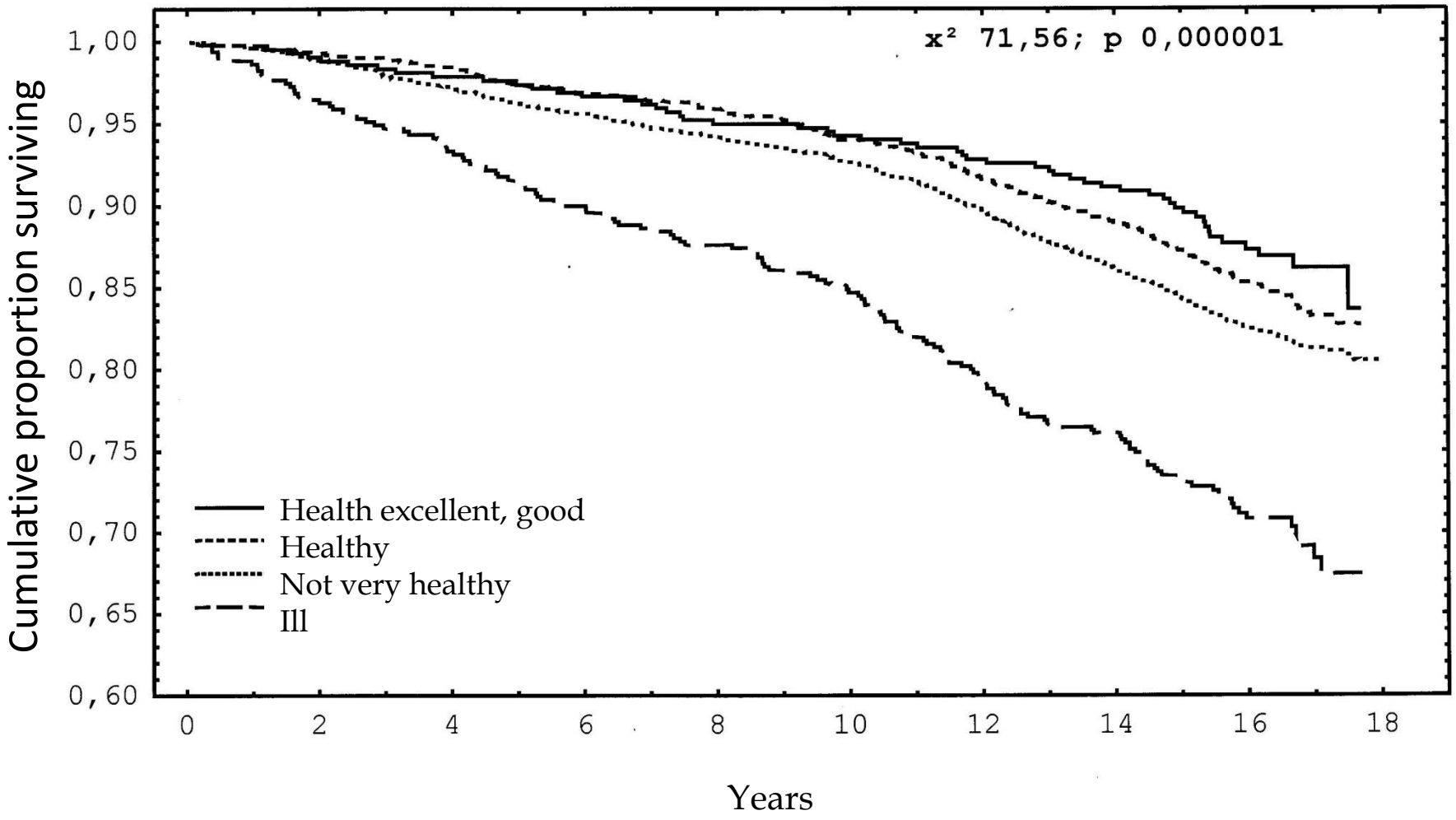
Material for conference "The 17th Conference of the European Health Psychology Society"
September 24-27, 2003. Island Kos, Greece

Proportion of subjects surviving in groups with different attitude towards health

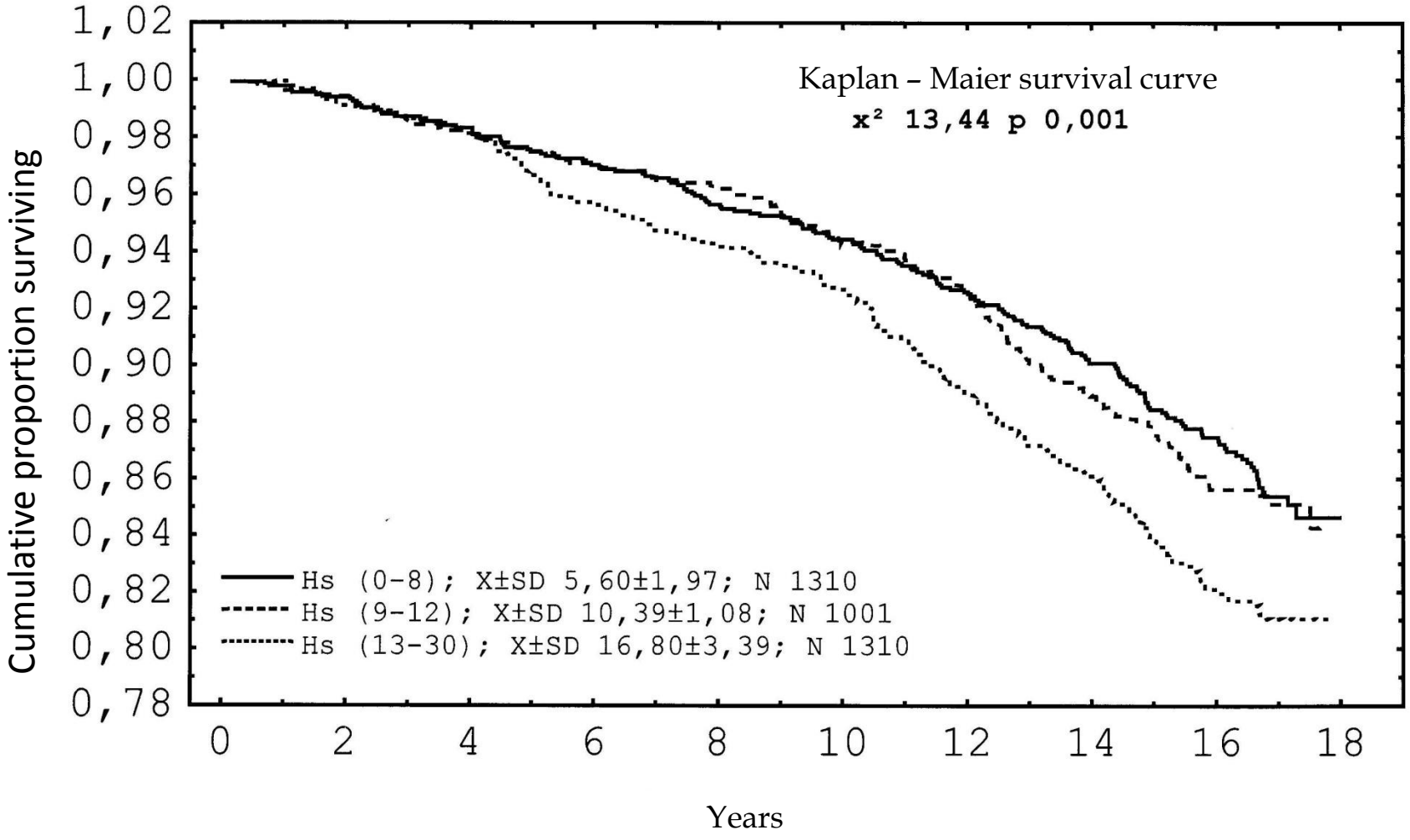


A. Goštautas. Materials for James E. Smith Midwest Conference on World Affairs March, 2001.

Self-rated health and survival



Complaints (Hs) and survival



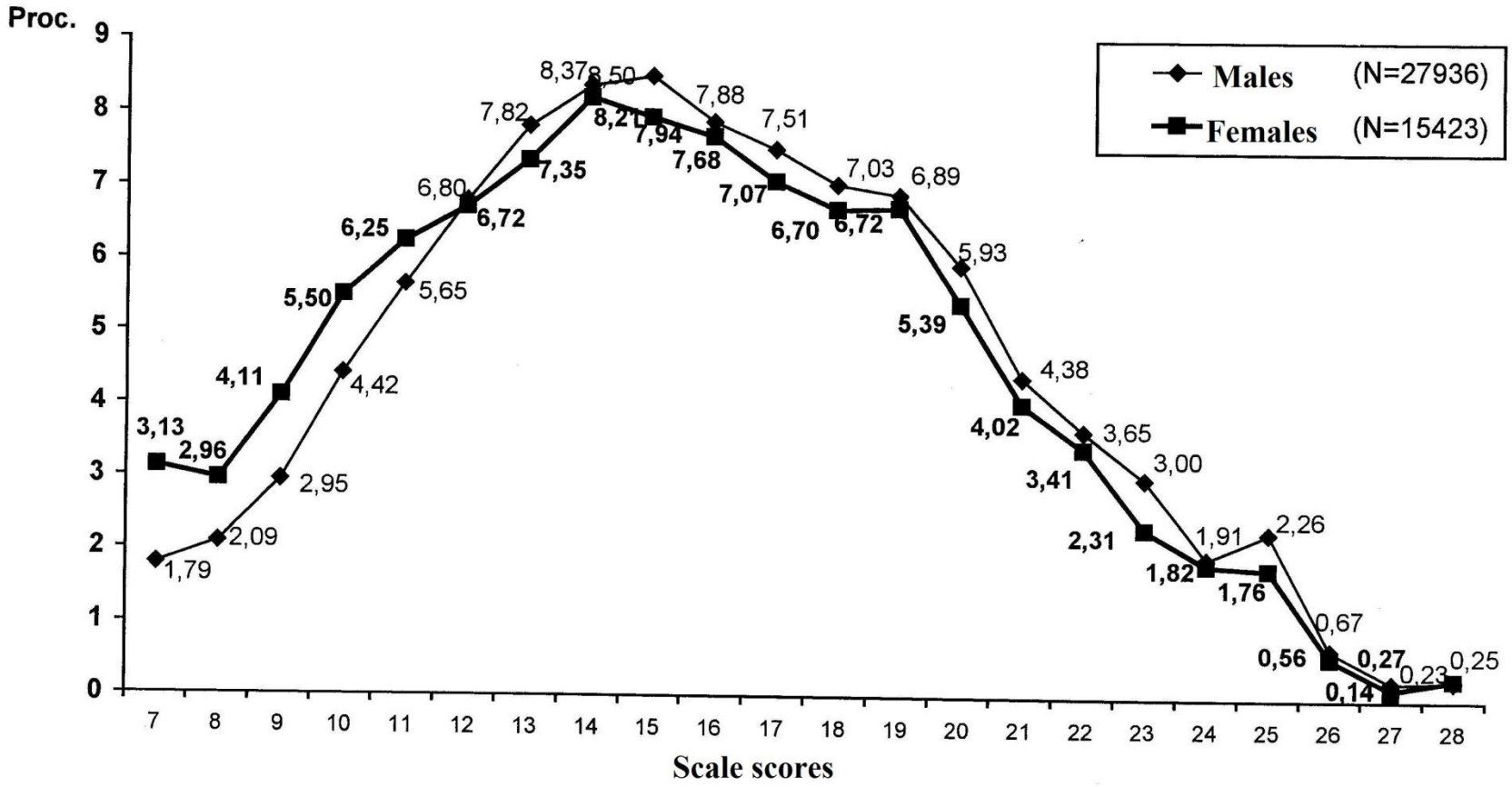
Emotional tension evaluation:

Psychosocial stress scale (L. Reeder)

- In general I am tense and nervous
- I worry very much about my job
- My daily activities are trying and stressful
- I often experience tension
- There is much nervous strain in my daily activities
- I experience often tension with other people
- I am exhausted mentally and physically at the end of the day

Projektas 1.
Modulis: Stresas.

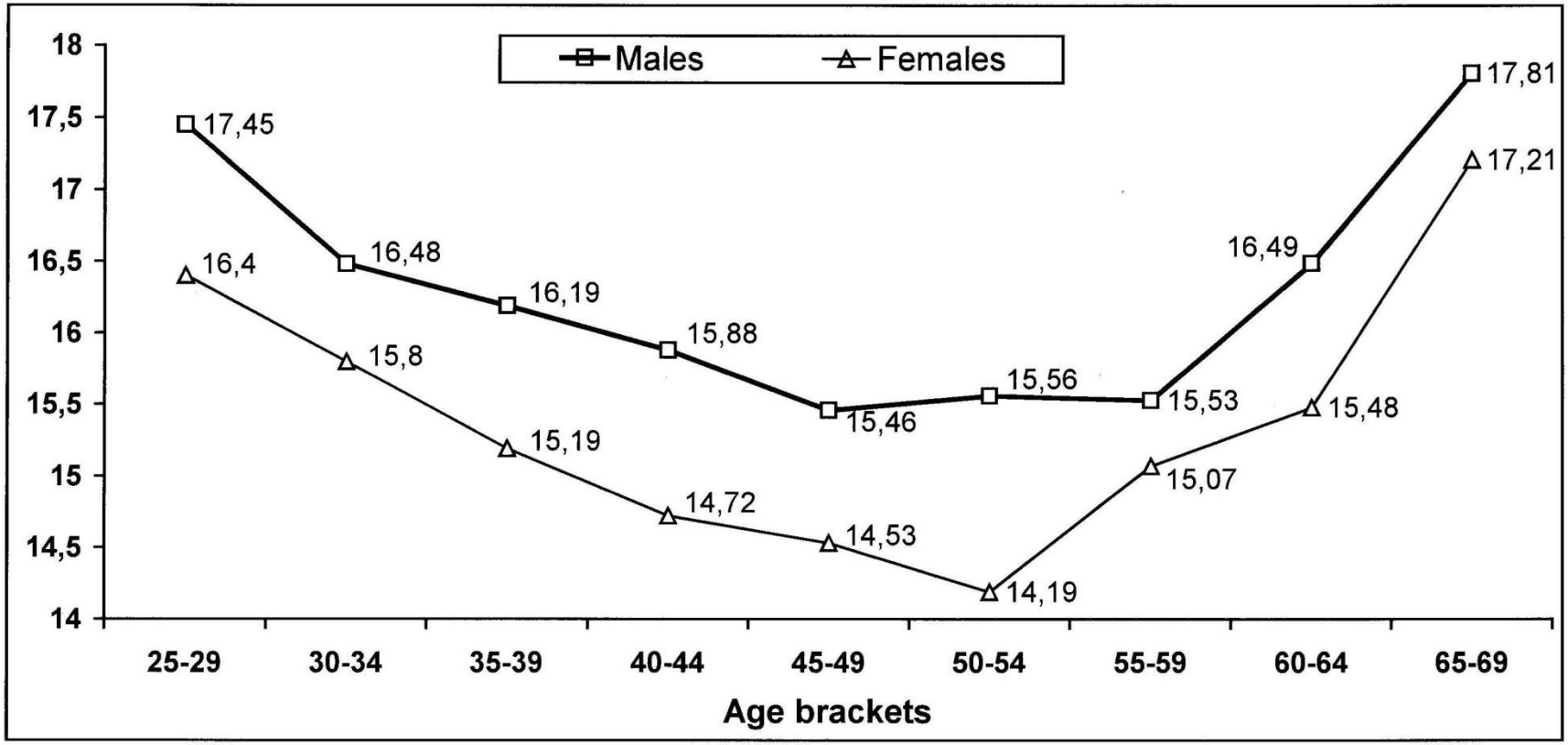
Psychosocial stress (L. Reeder scale)

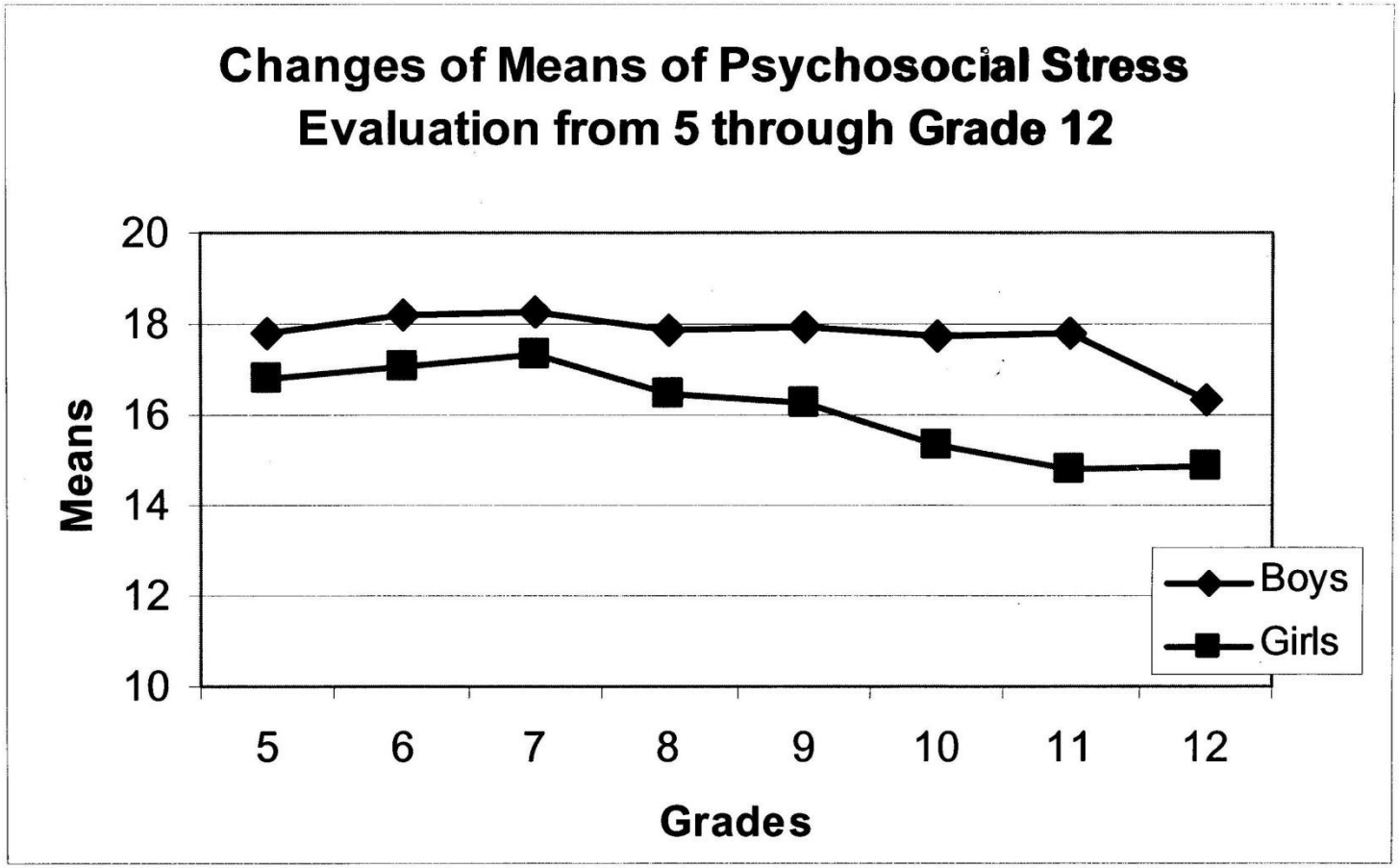


Šaltinis: KI MPSTL&VDU psichologijos katedros
Tyrimų duomenys

A. Goštautas. Mokymo medžiaga
Sveikatos psichologijos kursui, 2000 m.

Means of psychosocial stress indicator changes throughout life span in age brackets from 25 through 69 yr.





Boys F=2,039; df=7; p=0,047
Girls F=9,897; df=7; p=0,0001

Source: A. Gostautas, L. Seibokaite
Gender related differences of self health assessment among schoolchildren

Material for conference "The 17th Conference of the European Health Psychology Society"
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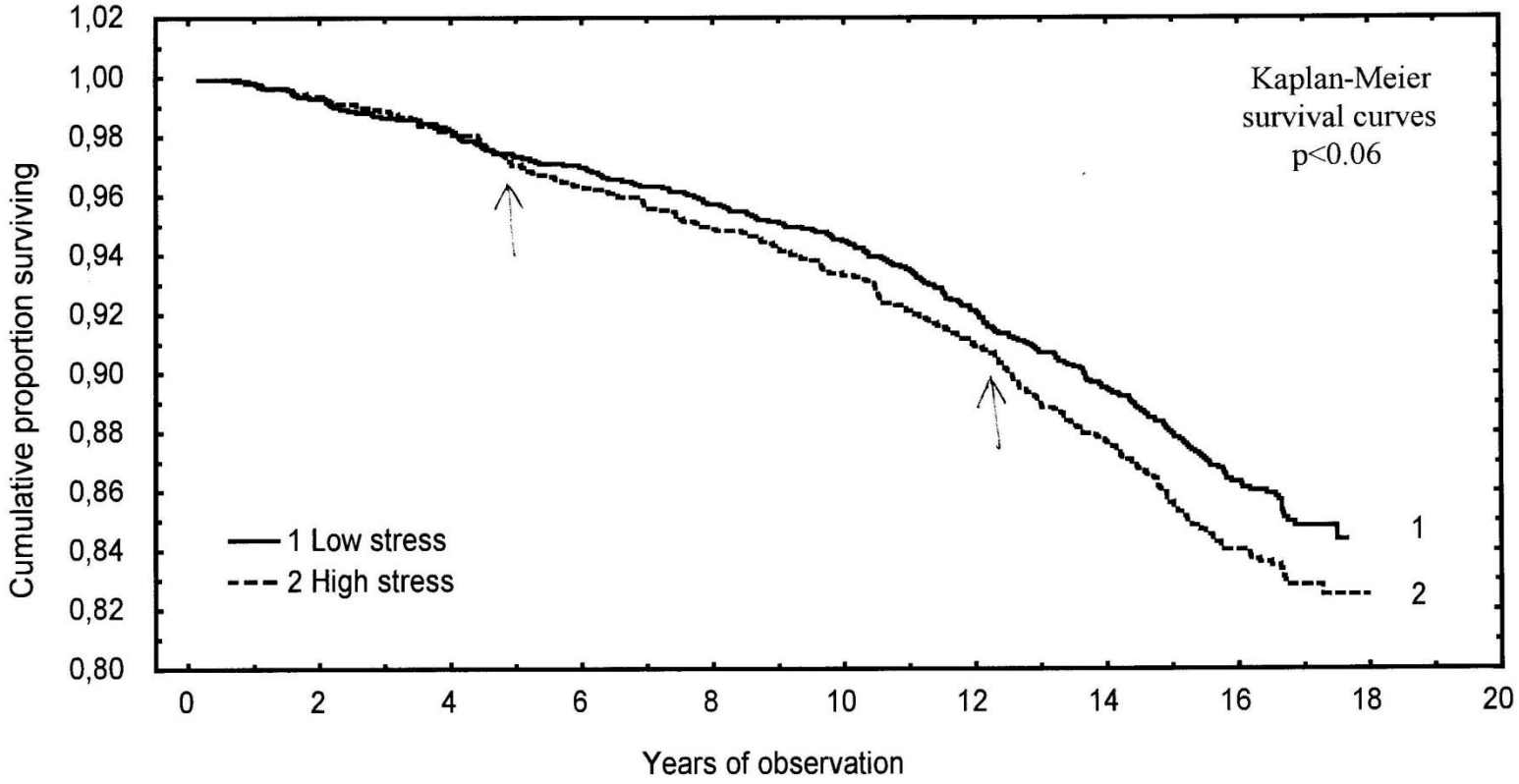
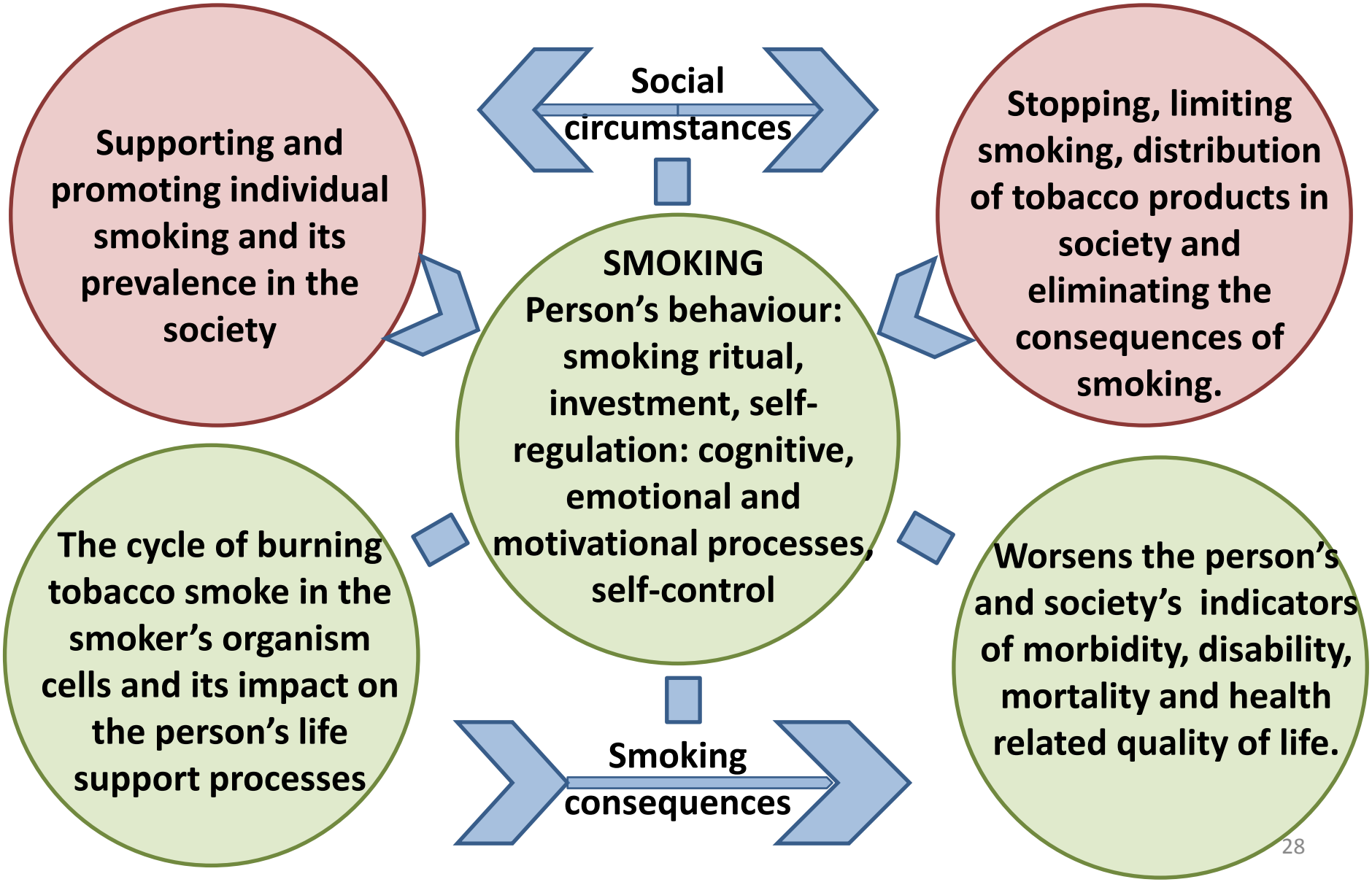
Proportion of subjects surviving in groups with different psychosocial stress evaluation



A. Goštautas. Materials for James E. Smith Midwest Conference on World Affairs March, 2001.

Biopsychosocial model of smoking behaviour within the context of Health psychology



Methods:

Alcohol consumption and smoking

- Do you take alcoholic drinks?

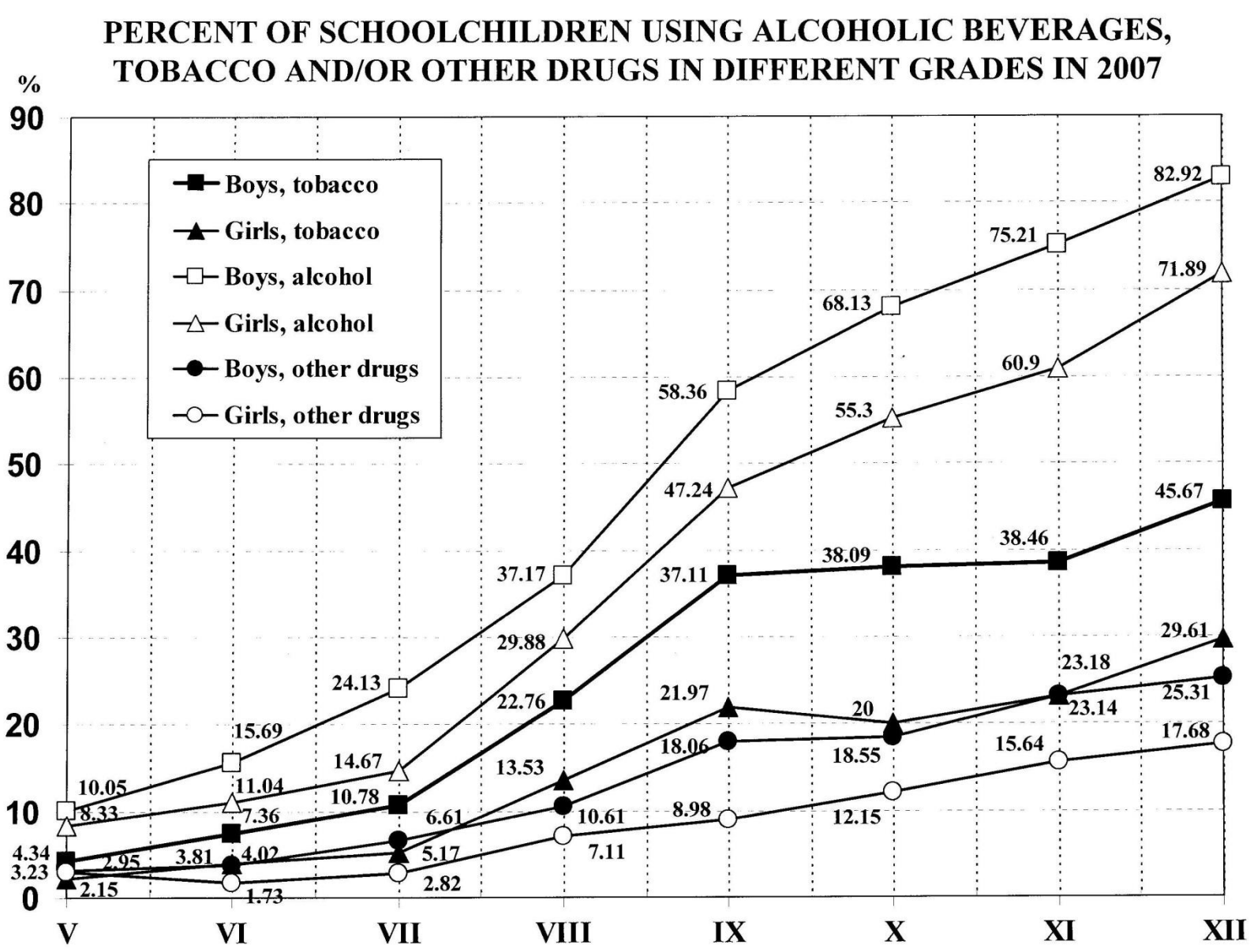
No never (1) not now, did previously (one year or more ago) (2) yes occasionally (3) yes regularly (4).

- How often do you drink?

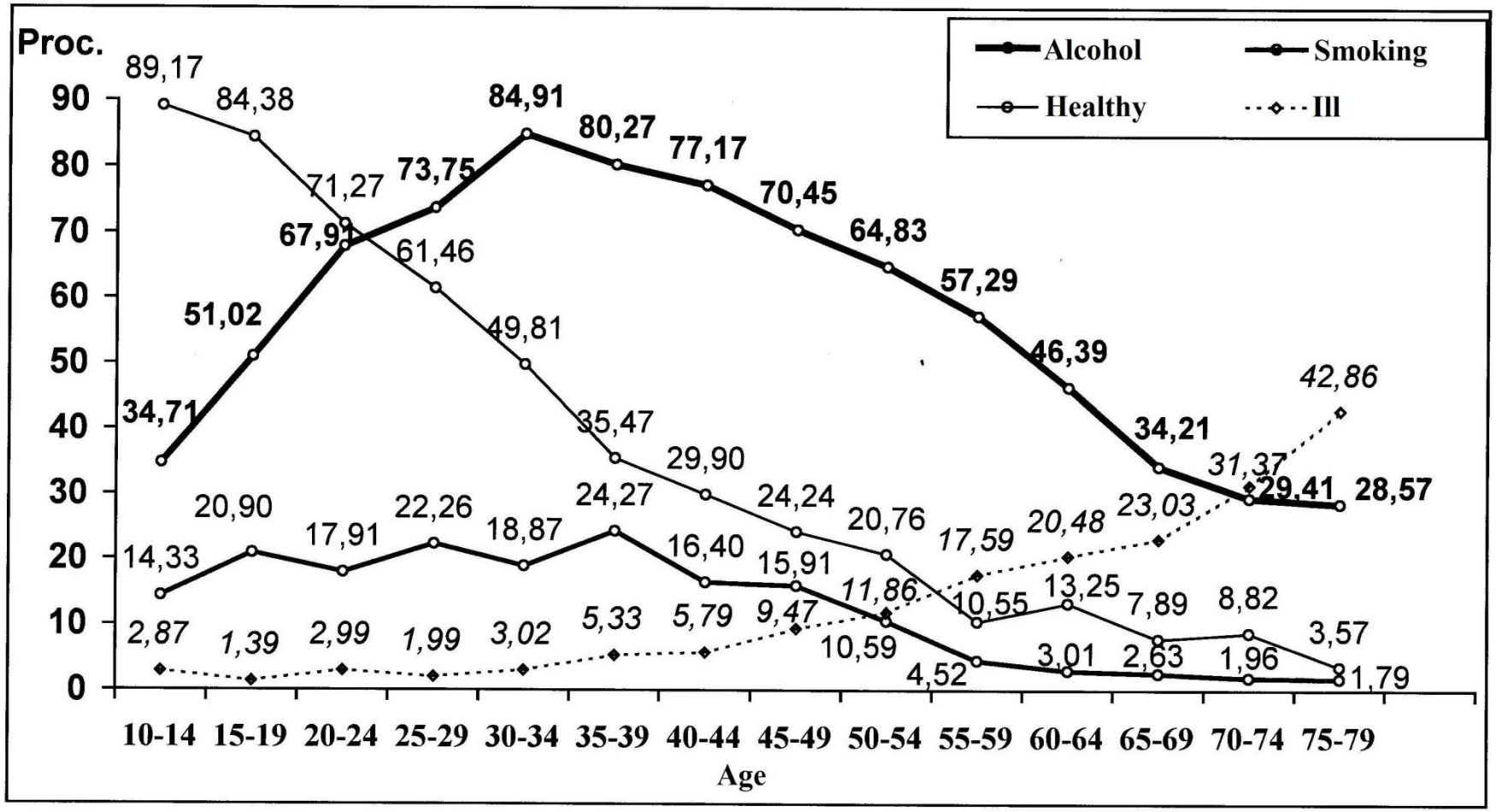
Once a year (1) once a month (2) once a week (3) several times a week but not daily (4) daily

- Have you ever tried to change your smoking habits for health reasons?

I never smoked (1), I used to smoke but totally stopped (2), I smoke, but I have periodically stopped for short periods (4), I smoke, and I have unsuccessfully attempted to restrict my smoking (5), I smoke, and have never tried to stop (6).


PERCENT OF SCHOOLCHILDREN USING ALCOHOLIC BEVERAGES, TOBACCO AND/OR OTHER DRUGS IN DIFFERENT GRADES IN 2007
%
90
80
70
60
50
40
30
20
10
0
V
VI
VII
VIII
IX
X
XI
XII
Boys, tobacco
Girls, tobacco
Boys, alcohol
Girls, alcohol
Boys, other drugs
Girls, other drugs
10.05
8.33
15.69
11.04
24.13
14.67
37.17
29.88
58.36
47.24
68.13
55.3
75.21
60.9
82.92
71.89
4.34
3.23
2.95
2.15
3.81
4.02
1.73
5.17
2.82
10.78
6.61
22.76
13.53
37.11
21.97
38.09
20
38.46
23.14
45.67
29.61
7.11
10.61
8.98
18.06
18.55
12.15
23.18
15.64
25.31
17.68

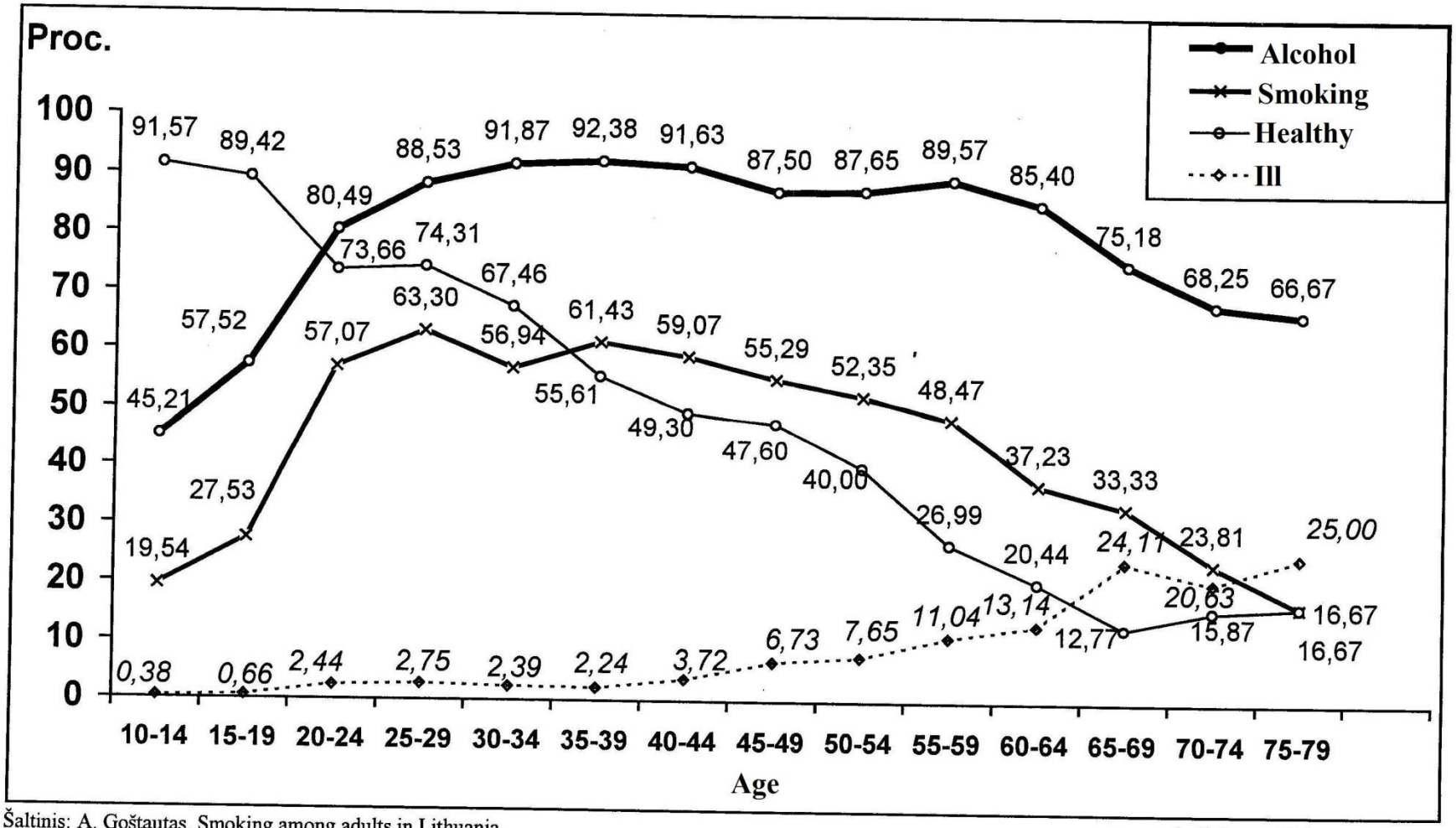
PERCENT OF FEMALES USING ALCOHOLIC BEVERAGES, SMOKING TOBACCO WITH HEALTH EVALUATION FROM AGE OF 10 THROUGH 80 YEARS



Šaltinis: A. Goštautas. Smoking among adults in Lithuania.
Annals of the Kaunas Institute of Cardiology 1994: 1(1): 18-22.

A. Goštautas. Mokymo medžiaga
Sveikatos psichologijos kursui, 2000 m.

PERCENT OF MALES USING ALCOHOLIC BEVERAGES, SMOKING TOBACCO WITH HEALTH EVALUATION FROM AGE OF 10 THROUGH 80 YEARS



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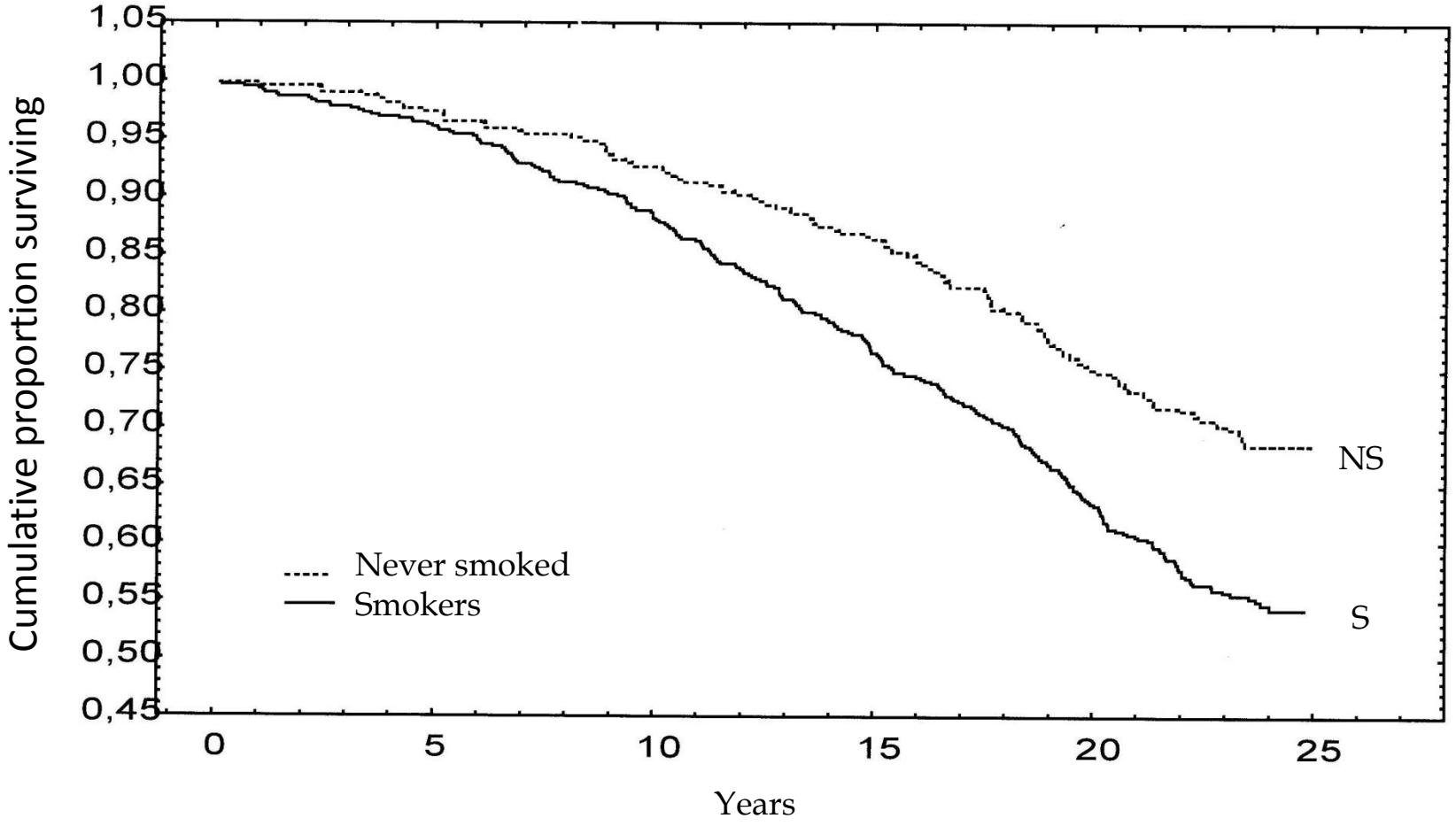
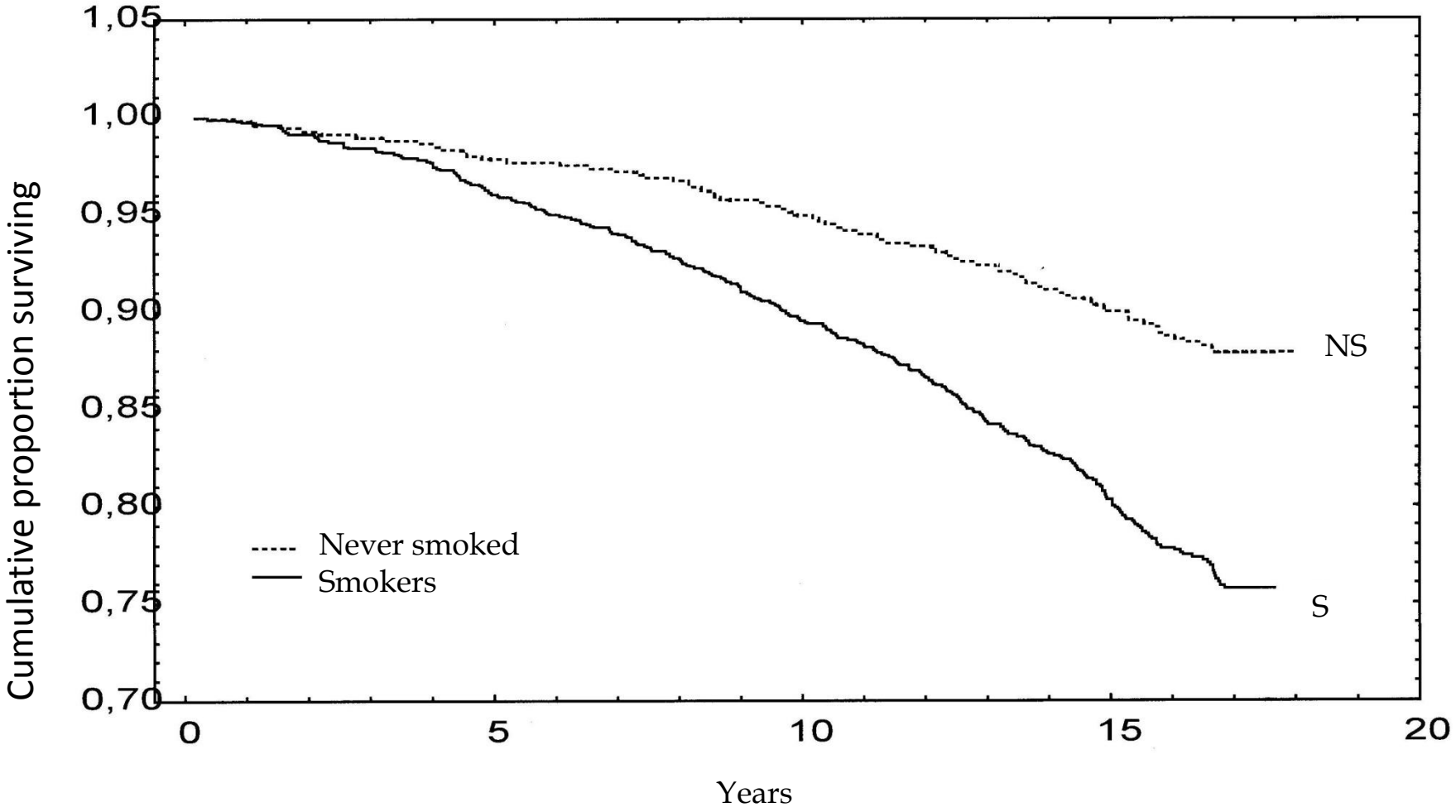
Annals of the Kaunas Institute of Cardiology 1994: 1(1): 18-22

A. Goštautas. Mokymo medžiaga
Sveikatos psichologijos kursui, 2000 m.

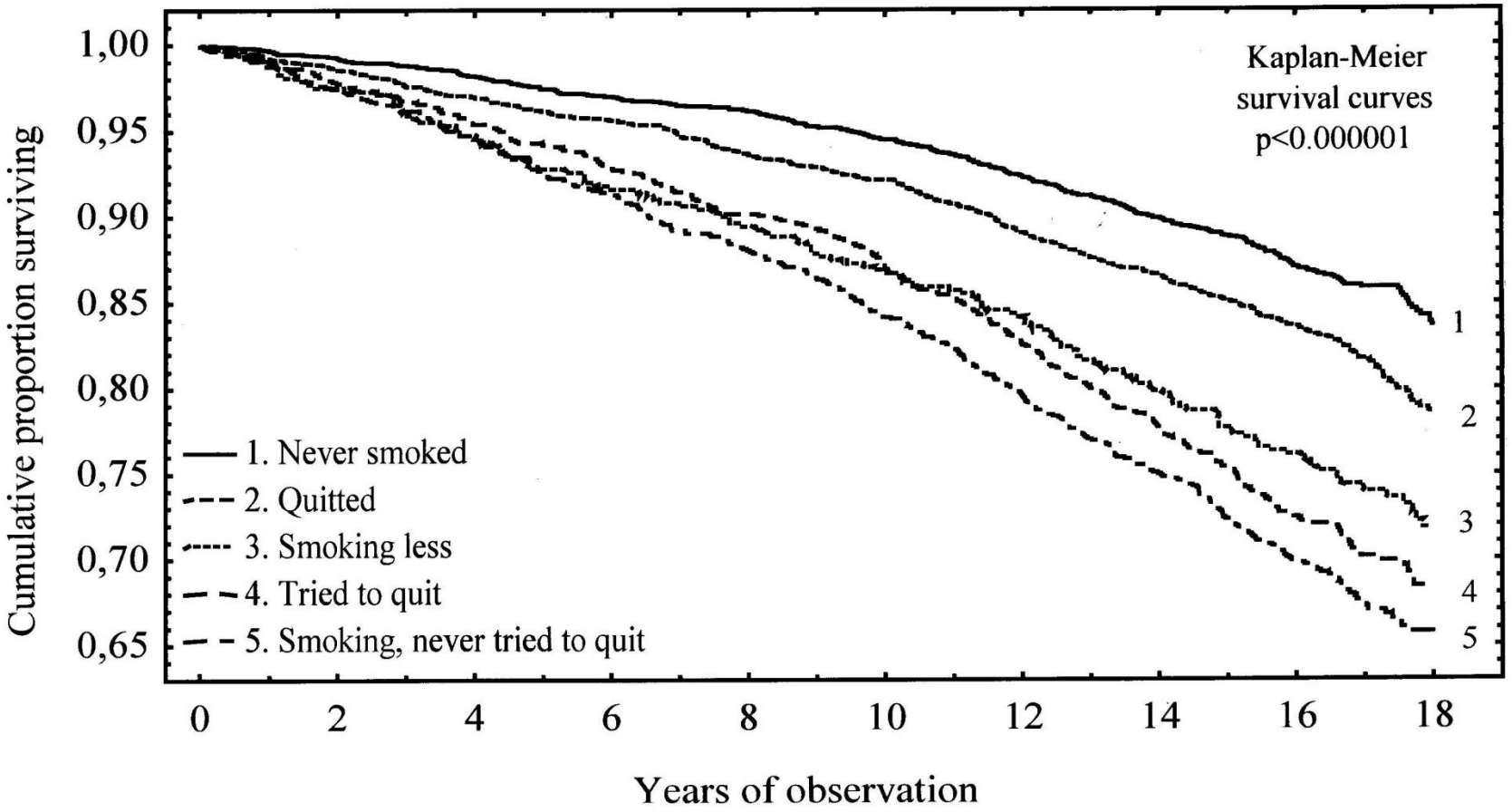
Survival curves depending on smoking
KRIS data Z=4,21 p=0.000003



Survival curves depending on smoking
Multifactorial prevention data Z=6,99 p=0.000001

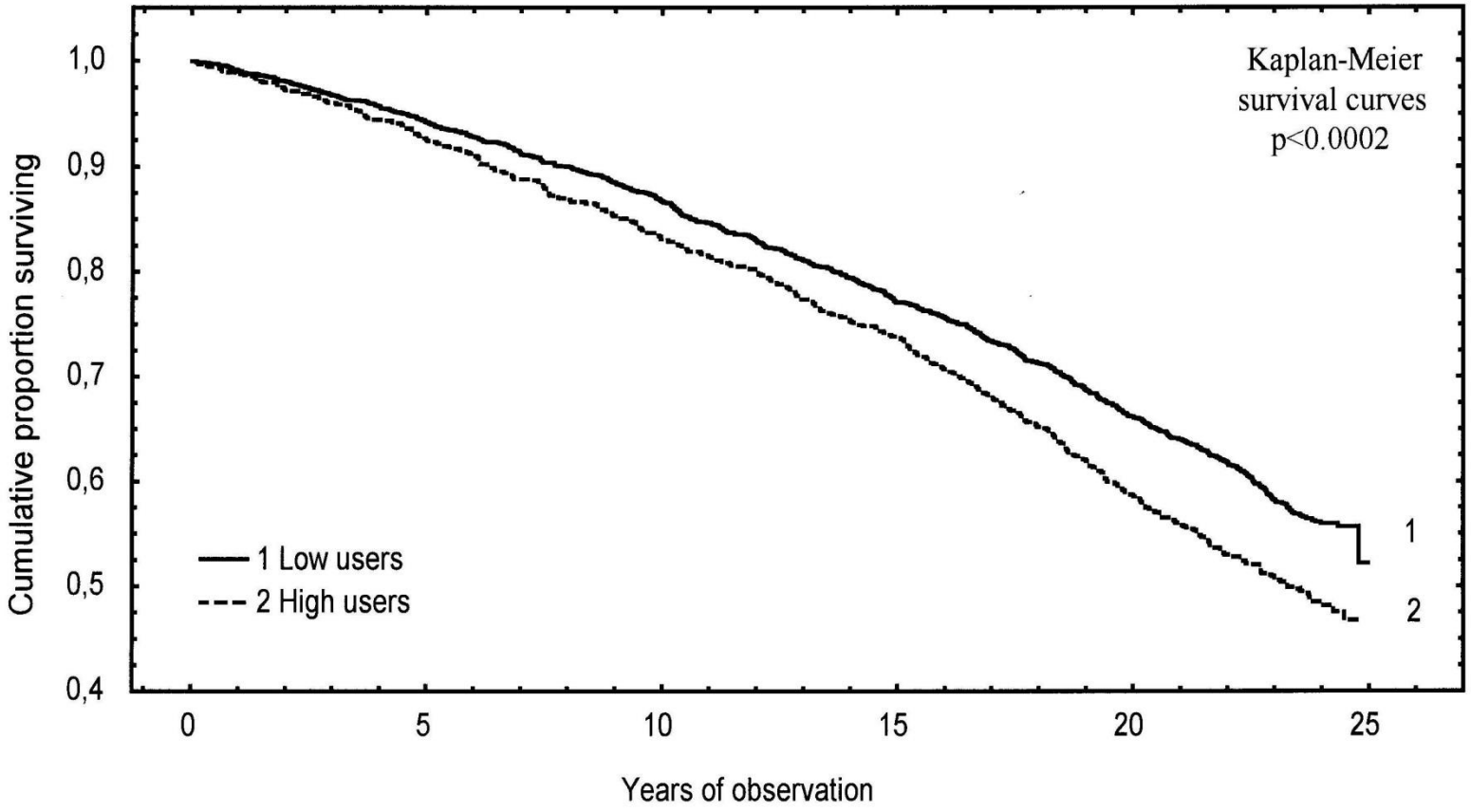


Proportion of subjects surviving in groups with different attitude towards smoking

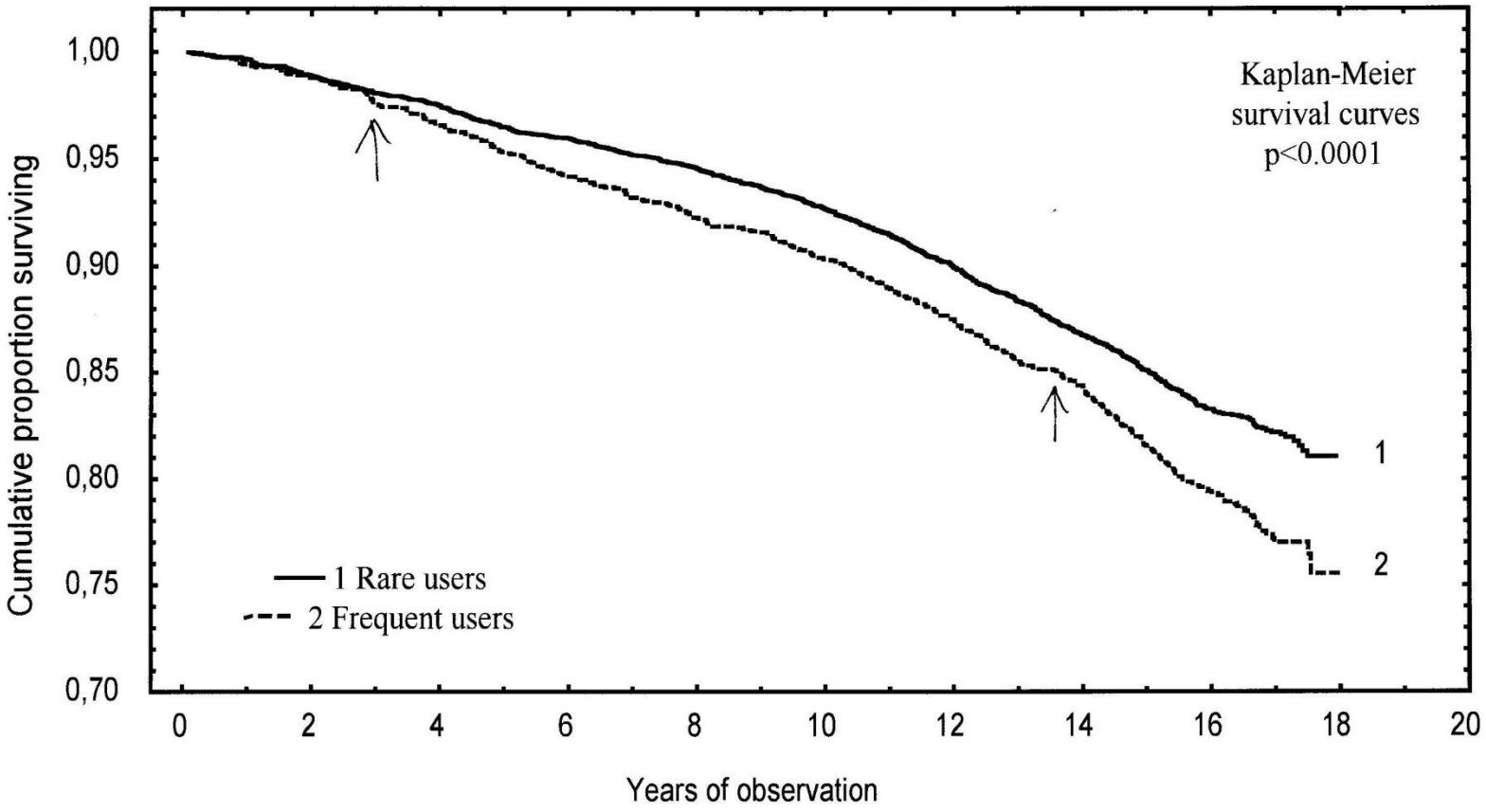


A. Goštautas. Materials for James E. Smith Midwest Conference on World Affairs March, 2001.

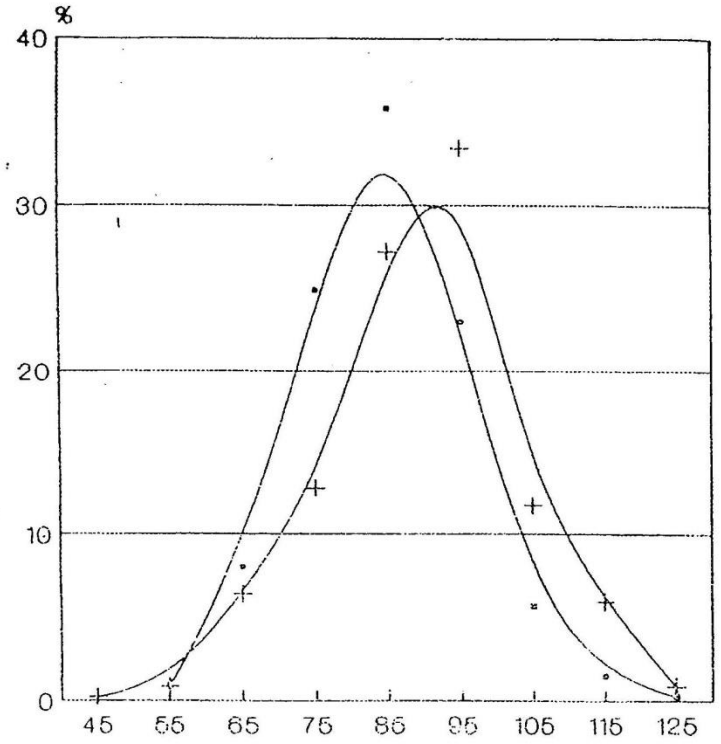
Proportion of subjects surviving in groups with different attitude towards alcoholic beverages



Proportion of subjects surviving in groups with different attitude towards alcoholic beverages

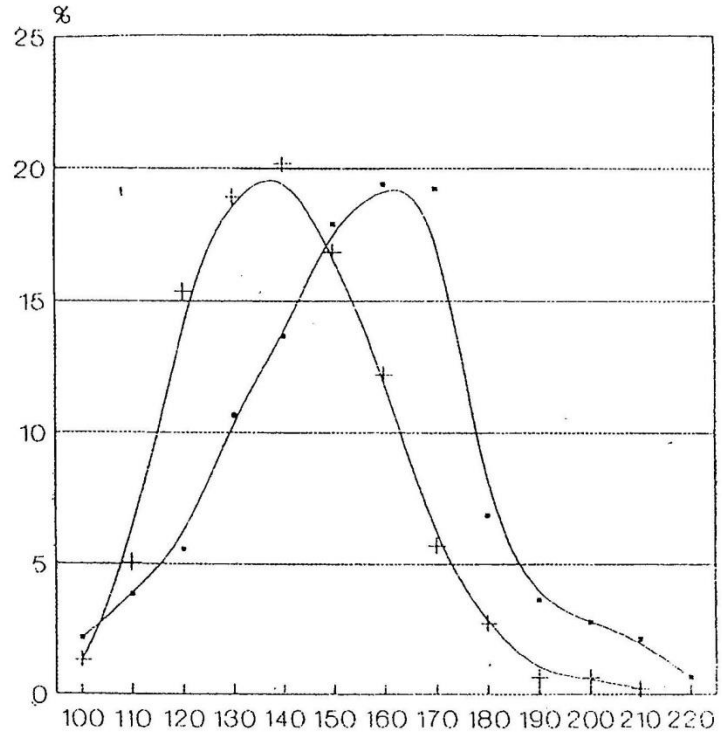


Arterial blood pressure changes during relaxation



Diastolic (mm Hg) changes

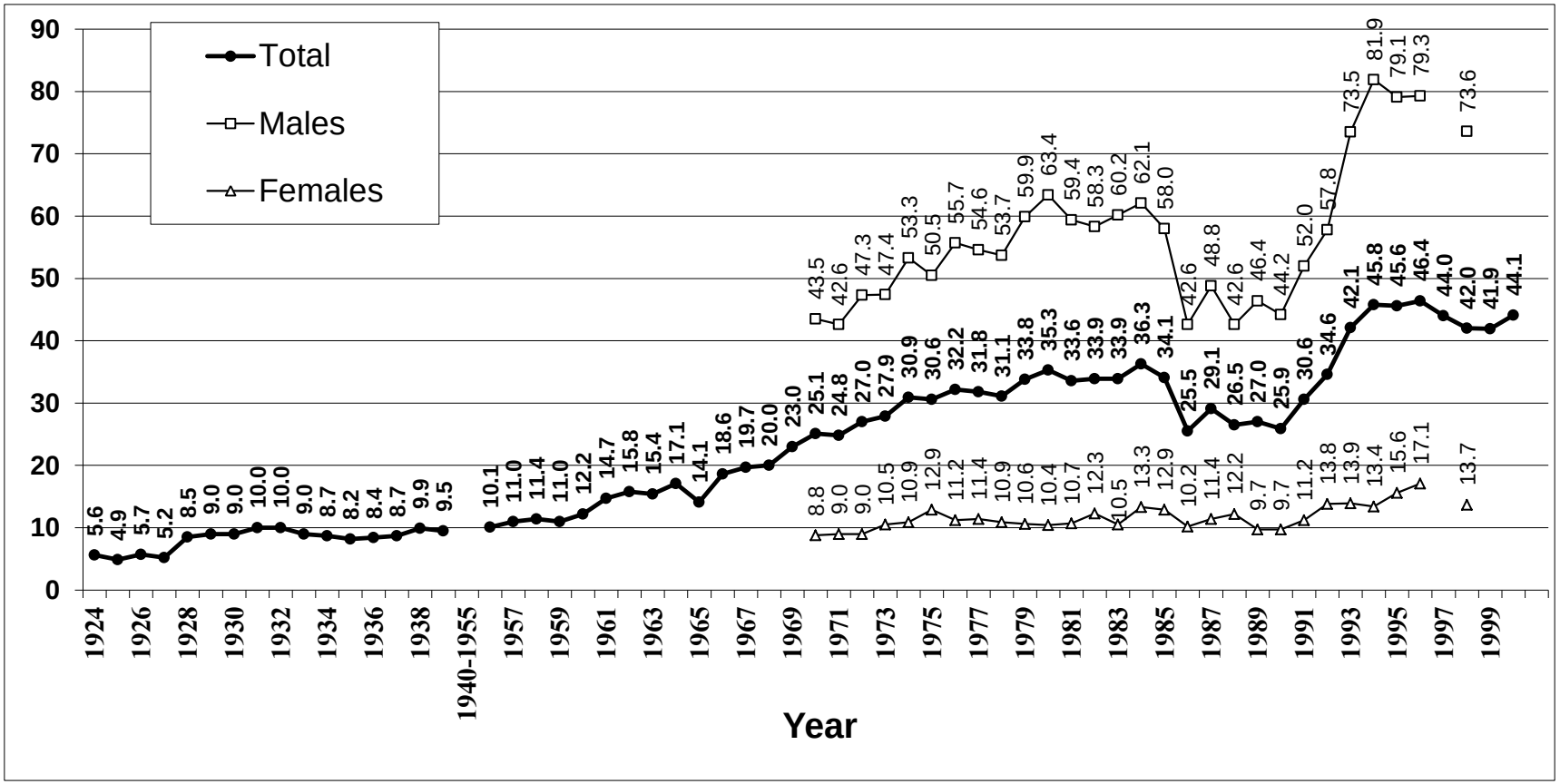
Šaltinis: L. Grinevičienė, A. Goštautas, M. Beresnevaitė. Psichologinis padidėjusio kraujo spaudimo reguliavimo aspektas. Kn.: Išemičeskaja bolezn serdca, Kaunas –1989, p. 79.



Systolic (mm Hg) changes

A. Goštautas. Mokymo medžiaga Sveikatos psichologijos kursui, 1999 m. Mokomoji lentelė Nr. 36

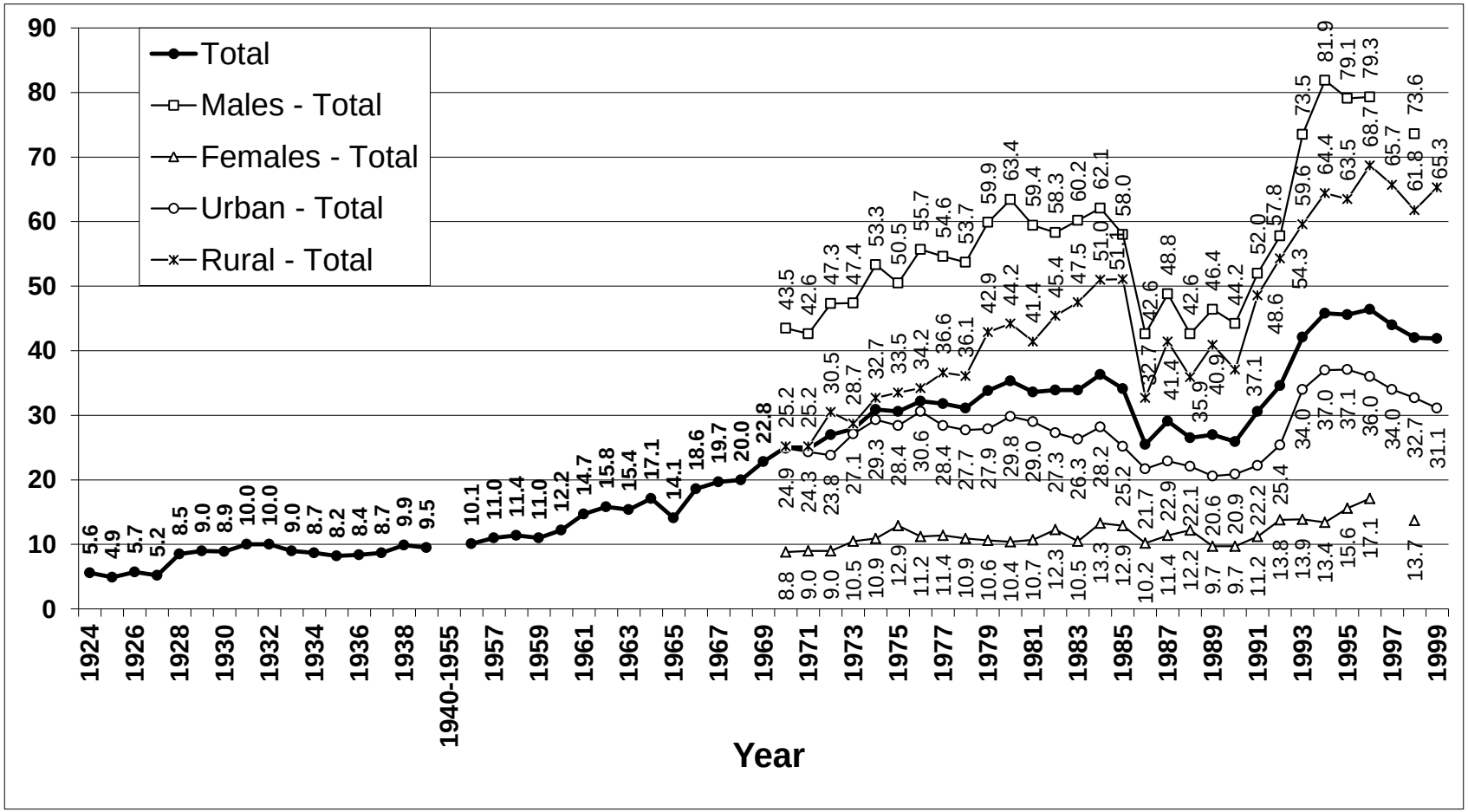
Health indicators in Lithuania: suicides and self-inflicted injury (X60-X84) rate per 100 000 population among males and females from 1970 through 2000 years with special attention to two periods: 1986-1990 and 1994-1996



Source: Statistical yearbook of Lithuania – 2000, Vilnius, 2000, p. 43.
P. Adlys. Mortality from suicides. Analysis. Statistical Department to Government of Lithuania Republic. Vilnius, 1995
Statistical yearbook of Lithuania. Department of statistics to the Government of the Respublic of Lithuania. Metodical publishing centre Vilnius, 1997, p. 45.

A. Goštautas. Materials for James E. Smith Midwest Conference on World Affairs March, 2001

Health indicators in Lithuania: suicides and self-inflicted injury (X60-X84) rate per 100 000 population among males and females in rural and urban regions from 1970 through 1999 years



Source: Statistical yearbook of Lithuania – 2000, Vilnius, 2000, p. 43.
P. Adlys. Mortality from suicides. Analysis. Statistical Department to Government of Lithuania Republic. Vilnius, 1995
Gyvenimo lygis ir žmogaus pasirinkimo galimybės 1997. Pranešimas apie žmogaus socialinę raidą Lietuvoje. Jungtinių tautų vystymo programa, Vilnius, 1997, p.30-31.

A. Goštautas. Materials for James E. Smith Midwest Conference on World Affairs March, 2001.

Changes in senior students (Girls) with suicidal ideation from 2000 through 2010

Year of investigation	Participants (abs. n, perc.) Risk of suicidality			Total
	Low	Medium	High	
2000	56(29,5%)	88(46,3%)	46(24,2%)	190(100%)
2001	136(33%)	182(44,2%)	94(22,8%)	412(100%)
2002	106(32,1%)	168(50,9%)	56(17%)	330(100%)
2006	222(44,4%)	217(43,4%)	61(12,2%)	500(100%)
2010	394(68,2%)	151(26,1%)	33(5,7%)	578(100%)
Total	914(45,5%)	806(40,1%)	290(14,4%)	2010(100%)

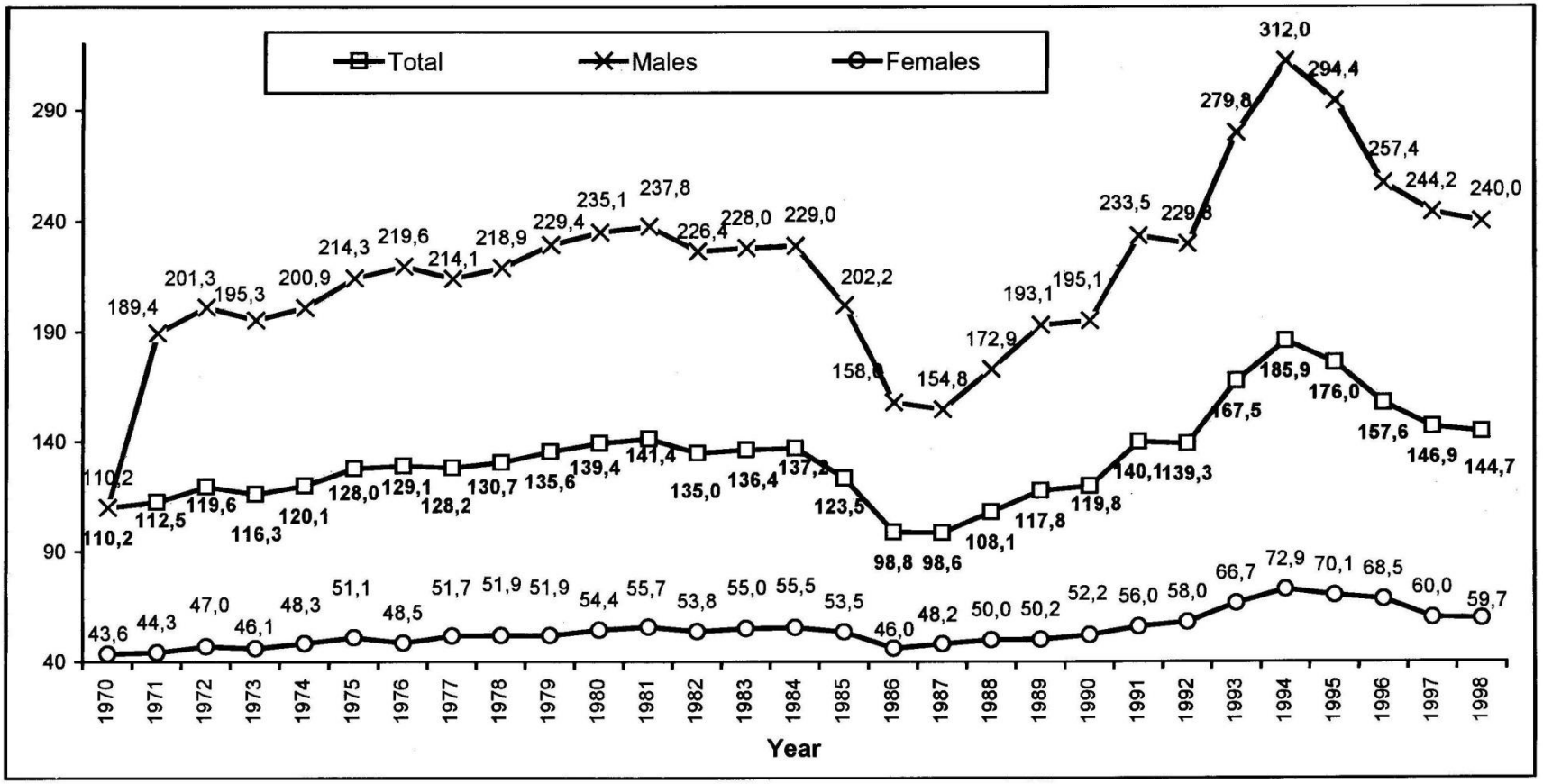
X^2 - 212,296ª; df – 8; $p < 0,01$

Changes in senior students (Boys) with suicidal ideation from 2000 through 2010

Year of investigation	Participants (abs. n, perc.) Risk of suicidality			Total
	Low	Medium	High	
2000	51(38,6%)	60(45,5%)	21(15,9%)	132(100%)
2001	176(55,3%)	116(36,5%)	26(8,2%)	318(100%)
2002	165(55,9%)	108(36,6%)	22(7,5%)	295(100%)
2006	216(56,1%)	130(33,8%)	39(10,1%)	385(100%)
2010	325(71,3%)	100(21,9%)	31(6,8%)	456(100%)
Total	933(58,8%)	514(32,4%)	139(8,8%)	1586(100%)

X^2 - 59,765ª; df – 8; $p < 0,01$

Mortality by gender from external causes in Lithuania from 1970 through 1998 year per 100 000 average population (V01-Y89)



Source: Statistics Lithuania. Causes of death, 1998.
Department of Statistics. Vilnius, 2000, p. 9.

Respondents who participated in health screening in 1972 and 1976 years and deceased until 1994 year

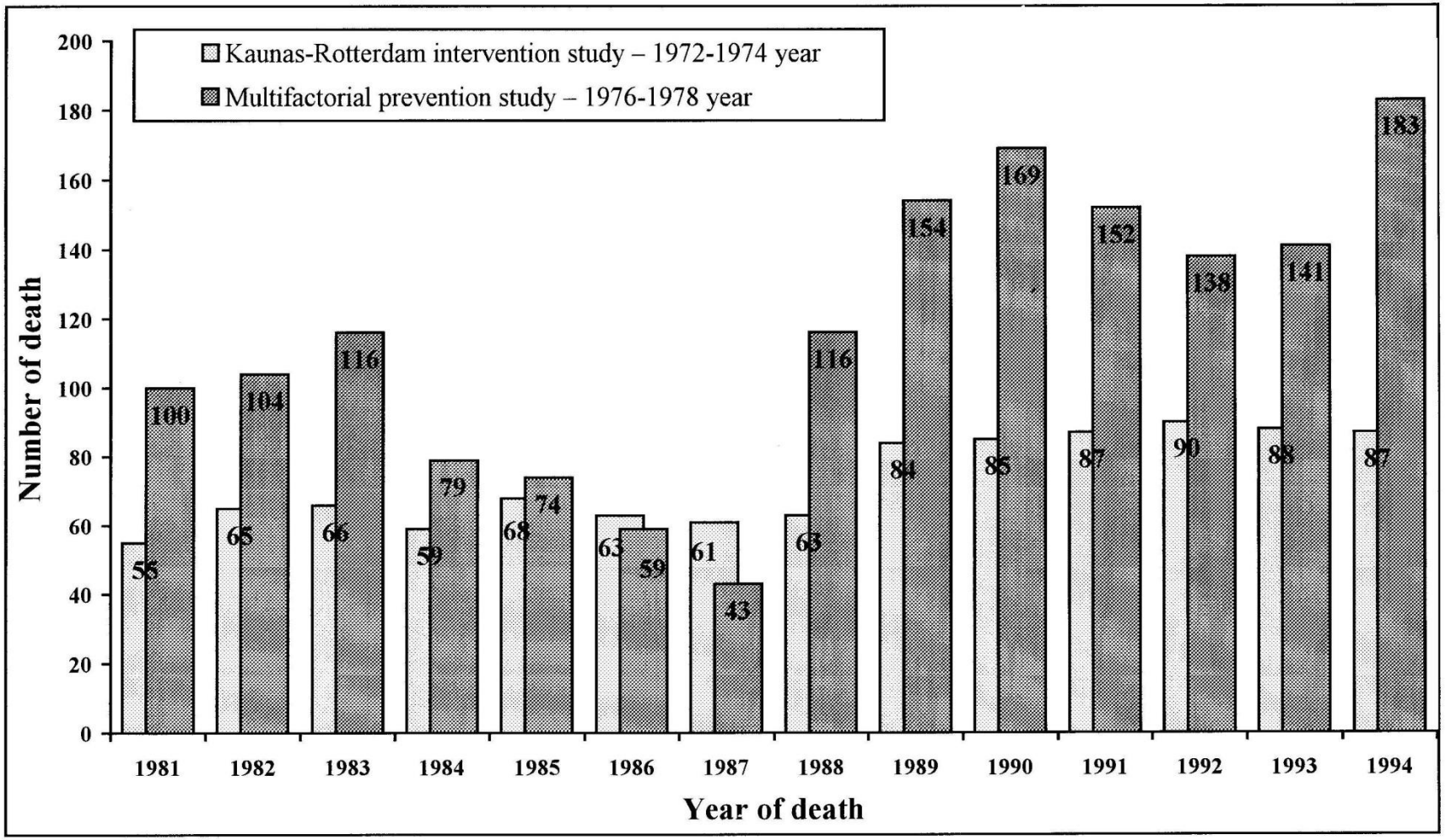
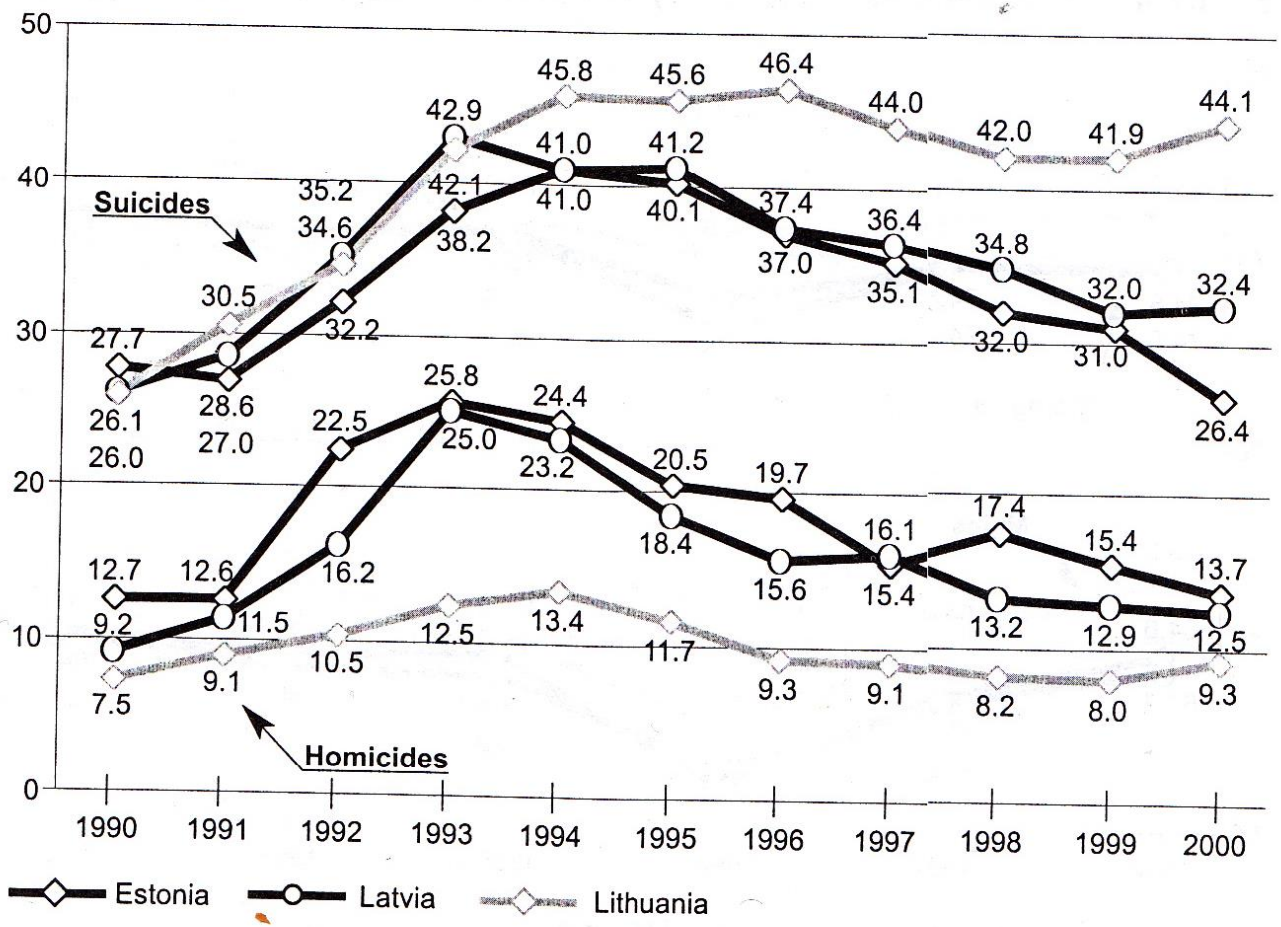


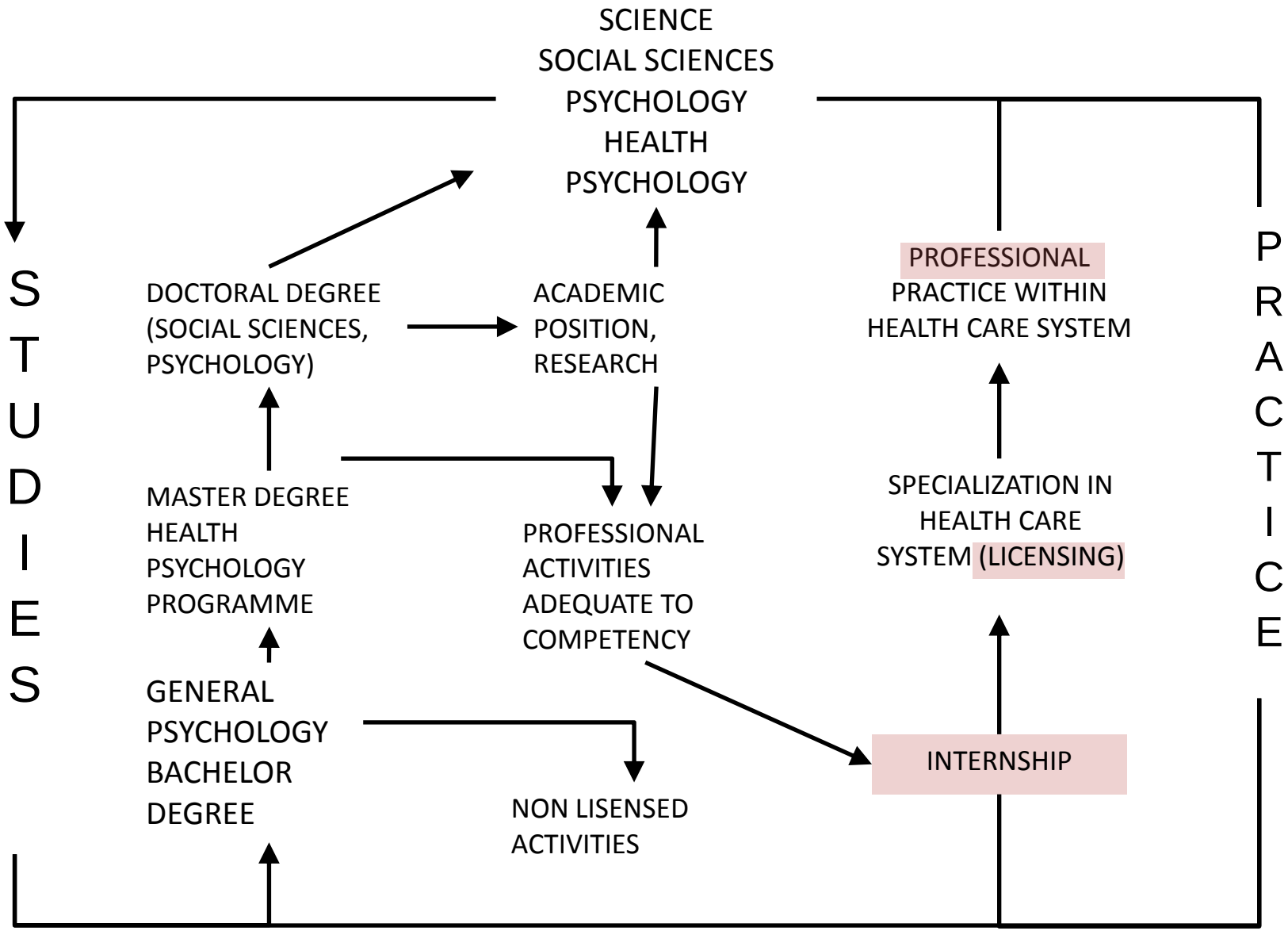
Figure 6. Suicides and homicides in the Baltics, 1990–2000

Rates per 100,000 inhabitants



Sources: Statistical Yearbooks of Estonia, Latvia and Lithuania 2001; Rahvastik 2000 Population; The Baltic and the Nordic Countries 1996, 2000

Teaching Health Psychology



A.Gostautas. Coordinator of HP Programme committee in VMU. Kaunas

Objective of the study programme

- Health psychology master programme is designed to prepare specialists capable to apply theories and methods of psychology in health promotion and disease prevention, recognizing and influencing psychological-behavioural and social factors related to health and disease, participating in all stages of treatment of chronic disease and rehabilitation, doing research and striving for the better individual and community health related quality of life.

Learning outcomes:

Upon completion of the programme the students will have acquired the following competencies:

1. To know the background of health psychology development, linkages to core psychology and medicine, scientific and practical concepts relating health psychology to health care practice.

2. To know neuroendocrinological mechanisms as biological basis for health, psyche, behaviour and psychopharmacological treatment of disorders within a context of bio-psycho-social model,

3. To understand and be able to make assessment of cognitive-emotional reactions to illness and its bio-psycho-social consequences. Working within multidisciplinary teams in health care system to apply consultation, health education and other psychological methods for health promotion, maintenance, prevention of non communicable diseases, disability and premature death, and evaluate effectiveness of psychological interventions.

Learning outcomes:

4. To know mechanism of addictive diseases, its consequences to the well-being of the person, family and community; to know possibilities for psychological prevention, treatment and rehabilitation of addicted patients.

5. To be able to recognize psychological-behavioural-social risk factors for non communicable disease mechanisms of its genesis, changes through the life span, interrelationships and prevalence within different social groups depending on age, gender and education level; to be able to evaluate effectiveness of psychological interventions for diminishing risk factors.

6. To know principal mechanisms of the development of non communicable diseases within the context of bio-psycho-social model. To be able to differentiate: a)behaviour adequate to medical, hygienic, social or health norms from problematic behaviour b) symptoms from syndromological pattern and c) disease's features from its psychosocial consequences to health.

Learning outcomes:

7. To know methods of psychological assessment of life style, risk factors and psychosocial consequences of diseases and to be able to fulfil the objectives for health promotion, prevention, treatment and rehabilitation within health care systems.

8. To know methodology of science for research and investigations in health psychology; be able to plan, organize and accomplish scientific research of psychological-behavioural-social factors as related to health promotion, disease prevention and rehabilitation within the multidimensional team in health care system.

9. To know requirements settled in health care system of biomedical, psychological ethics, law and legislation and be able to follow it within the multidisciplinary team. To understand consequences of social policy to health, morbidity, mortality and fulfilment of health care mission.

Resume of the subject of health psychology PSS 5001

- The course of health psychology is organized according to biopsychosocial paradigm. This approach conceptualizes the whole person as a dynamic system of interrelated biological psychological and social phenomena in health and disease. Origins of health psychology and other disciplines of psychology as related to medicine are disclosed. Course materials cavers the field of psychological – emotional (stressogenic) – behavioural and social risk factors, life-styles as related to health promotion and maintenance, disease prevention treatment and recovery. The courses and interplay of these factors are analysed as models for health promotion and disease prevention through all stages of illness development, diagnostics, treatment intervention and rehabilitation. Psychological – social consequences of the disease and psychological methods of aid are analyzed stressing health psychologist as being a member of the interdisciplinary clinical or research team of specialists within health care system. Specificity of ethics, law and health legislations are analyzed according to requirements of health care system.

Conclusions

1. Women self–rated health and related emotional tension (Stress) indicators are substantially worse than in men population
2. Quality of self rated health in population decline from 15 to 80 years. In women SRH worsens faster than in men through all stages of age.
3. The initial differences in self-rated health assessments starts early during school years – within the group of girls it is observed faster decrease of highest ranks of SRH than in boys population

Conclusions (2)

4. Respondents with university education women and men assess their health more positively than respondents with other than university education. These differences in SRH depending on education is more expressed in older respondents
5. Use of ethanol and tobacco in population, is common and more prevalent in men than in woman. It starts early in school years reaches its peak in age of 30-40 and decline until age of 80 years.
6. The interconnections between mortality from chronic diseases, SRH, emotional tension (stress), use of alcoholic beverages, tobacco were confirmed in long term follow-up studies.