



# Semmelweis University Faculty of Dentistry Department of Prosthodontic

head of department: Prof. Dr. Hermann Péter



# Gerostomatological aspect of complete edentulousness



Prof. Dr. Peter Kivovics  
Former Head of the Department of Community Dentistry  
DMD, BDS, MSc., C.Sc., Ph.D.  
Chief Dental Officer for Hungary

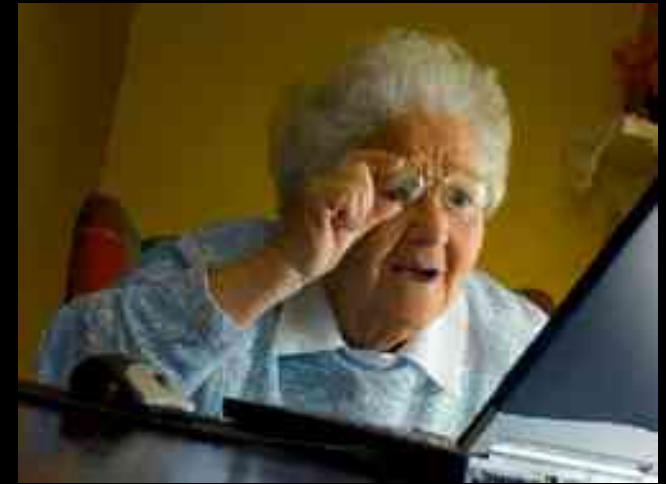


# The elderly patient



# Who's considered an elderly person?

- According to insurance companies, everyone over 65 years old
- In US literature they start to refer to patients as elderly over 70 years old
- In Germany, mostly patients over 70 years old are considered elderly



# Definition of elderly

- Ageing: physiological process, complex irreversible progression

- Old age:

- ❖ Chronological age

- ❖ Biological age

- ❖ Psychological age

- ❖ Social age



- WHO:

- ❖ Middle-aged: 45-59 y/o

- ❖ Ageing: 60-74 y/o

- ❖ Elderly : 75-89 y/o

- ❖ Antediluvian: over 90 y/o

- ❖ Methuselah: over 100 y/o

Székács B: Geriátria- az időskor gyógyászata. Semmelweis Kiadó, Budapest, 2005

Fejérdy P, Nagy G, Orosz M: Gerosztomatológia- az időskor fogászata. Semmelweis Kiadó, Budapest, 2007

[http://www.google.hu/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CC8QFjAA&url=http%3A%2F%2Fseniorcenter.hu%2Fletoltheto-anyagok%2Fdoc\\_download%2F58](http://www.google.hu/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CC8QFjAA&url=http%3A%2F%2Fseniorcenter.hu%2Fletoltheto-anyagok%2Fdoc_download%2F58)

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# Classification of the British Society of Gerontology

- Aging ( 45 to 59 years)
- Elderly ( 60 to 74 years)
- Old ( 75 years )
- Very old (from age 90 years)



# Discrimination or social aid



# Scientific fields dealing with elderly people

- Gerohygiene: methods to secure quality life for elderly people
- Gerontology: examines the physiological changes of ageing and elderly age
- Gerontological demography: ratios of elderly people in society
- Social gerontology: researches the interactions between the elderly and the rest of the society
- Geriatric care: treating patients with conditions connected with ageing



# GERONTOLOGY

The study of biological and other aspects of ageing. Exceeds beyond medicine.





# GEROSTOMATOLOGY

Discipline about dental care for elderly patients, which considers the particular anatomical, physiological, pathological and psychological aspects of treating elderly people.



# GEROPROSTHETICS

Science of prosthodontics for elderly patients, including both the remedial and the preventive care.



# Demography

- 21st Century – the „greying century”: booming population, increasing life span, growth in proportion of the elderly in the population
- By 2050.: an estimated 10-12 billions people will inhabit the Earth
- Life expectancy:
  - ❖ Europe: female: 83,2 y/o, male: 77,4 y/o
  - ❖ Hungary: female:78,7 y/o, male: 71,2 y/o



Székács B: Geriátria- az időskor gyógyászata. Semmelweis Kiadó, Budapest, 2005

[http://www.ksh.hu/docs/hun/eurostat\\_tablak/tabl/tps00025.html](http://www.ksh.hu/docs/hun/eurostat_tablak/tabl/tps00025.html)

[http://www.nfft.hu/dynamic/NFFT\\_muhelytanulmanyok\\_1\\_KSH\\_NKI\\_demografia\\_2011.pdf](http://www.nfft.hu/dynamic/NFFT_muhelytanulmanyok_1_KSH_NKI_demografia_2011.pdf)

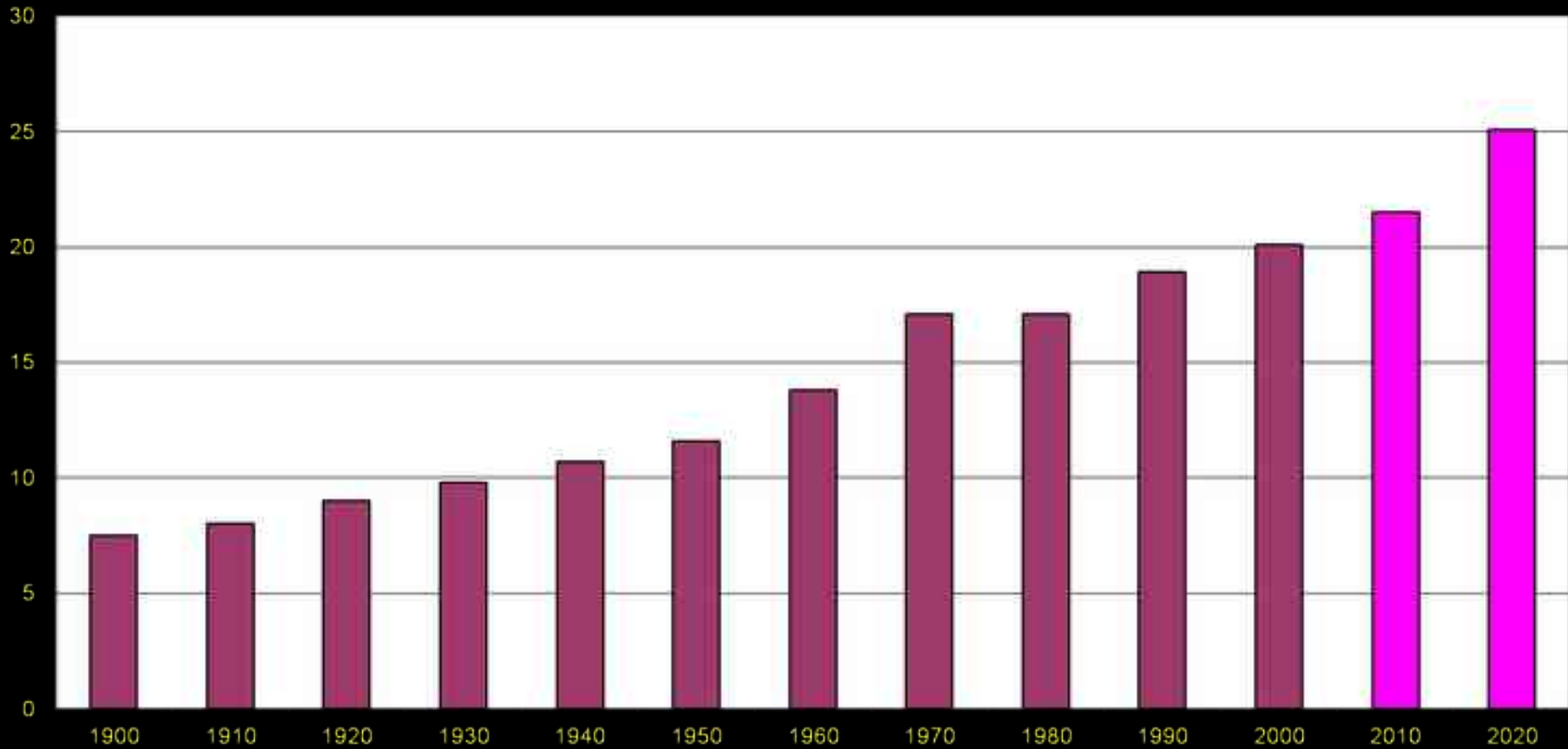
<http://www2.sci.u-szeged.hu/eghajlattan/baba/Szonoky.pdf>

<http://www.politicalcapital.hu/blog/?p=1937350>

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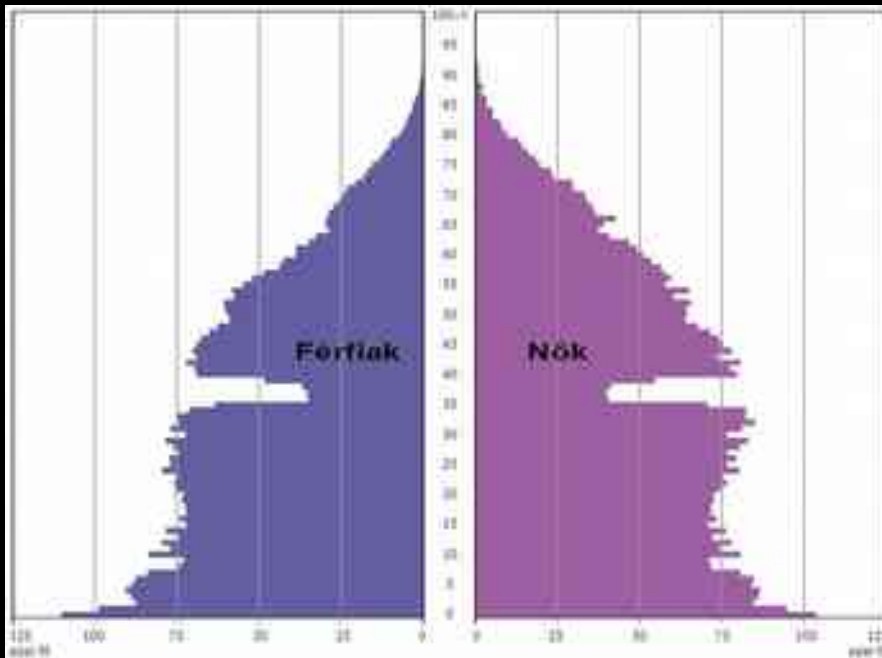
<http://fogalomtar.eski.hu/index.php/Korfa>

# Ratio of people over 65 y/o in the population (WHO)

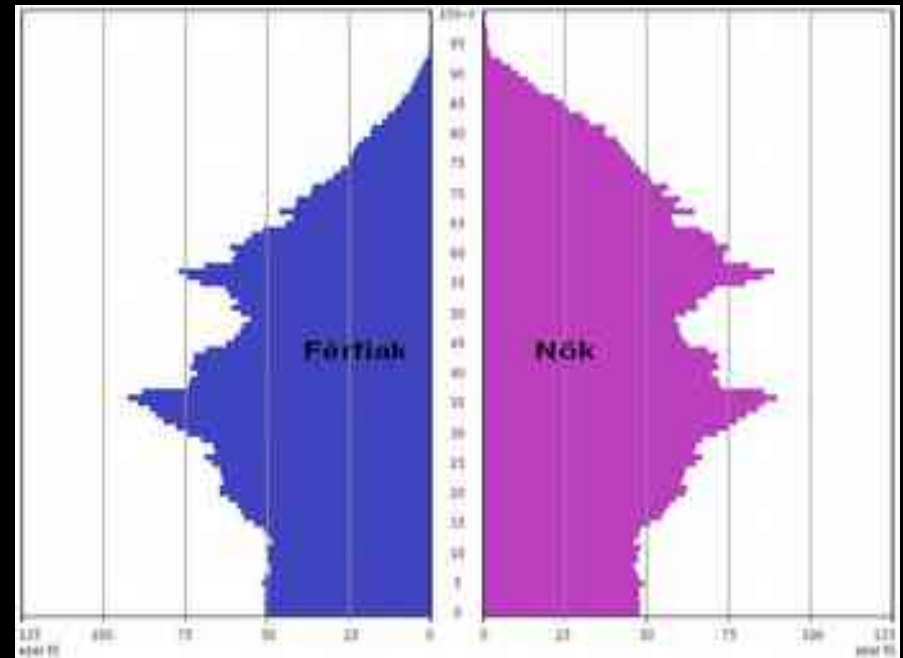


# Demography

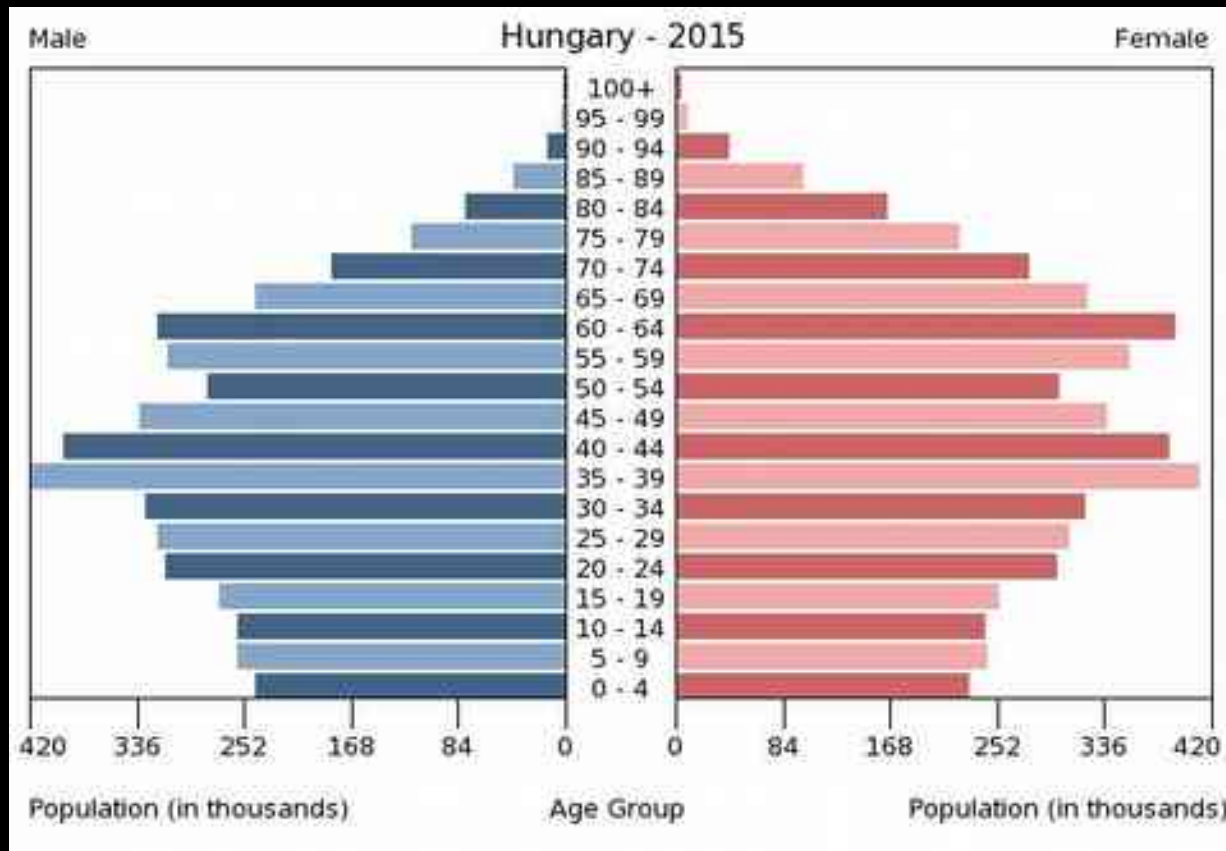
Population of Hungary in 1955.  
according to age



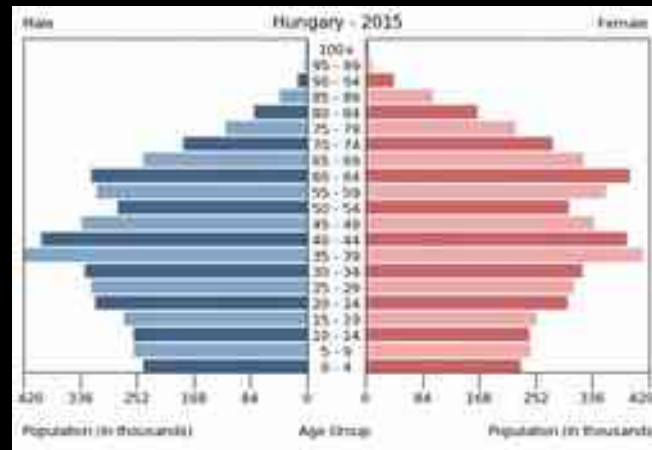
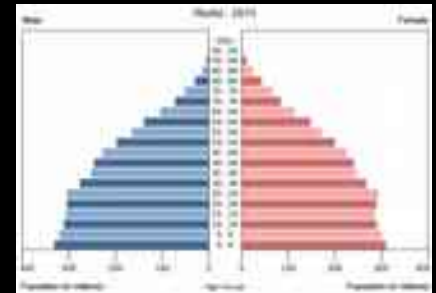
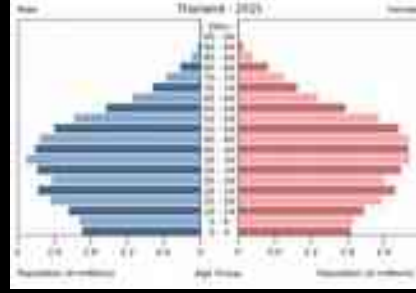
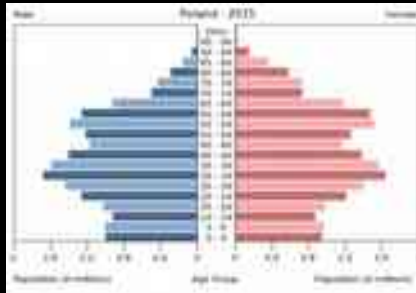
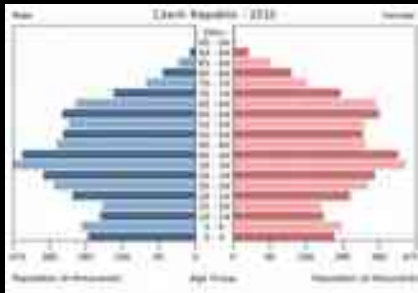
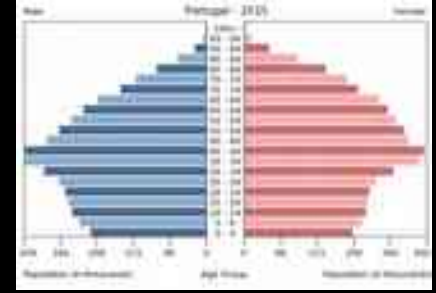
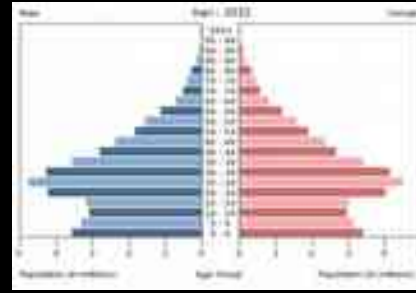
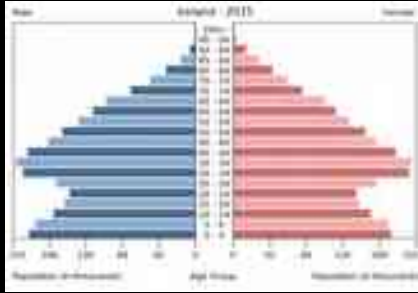
Population of Hungary in 2012.  
according to age



# Population pyramid (age-gender pyramid): Graphical illustration that shows the distribution of various age groups in a population

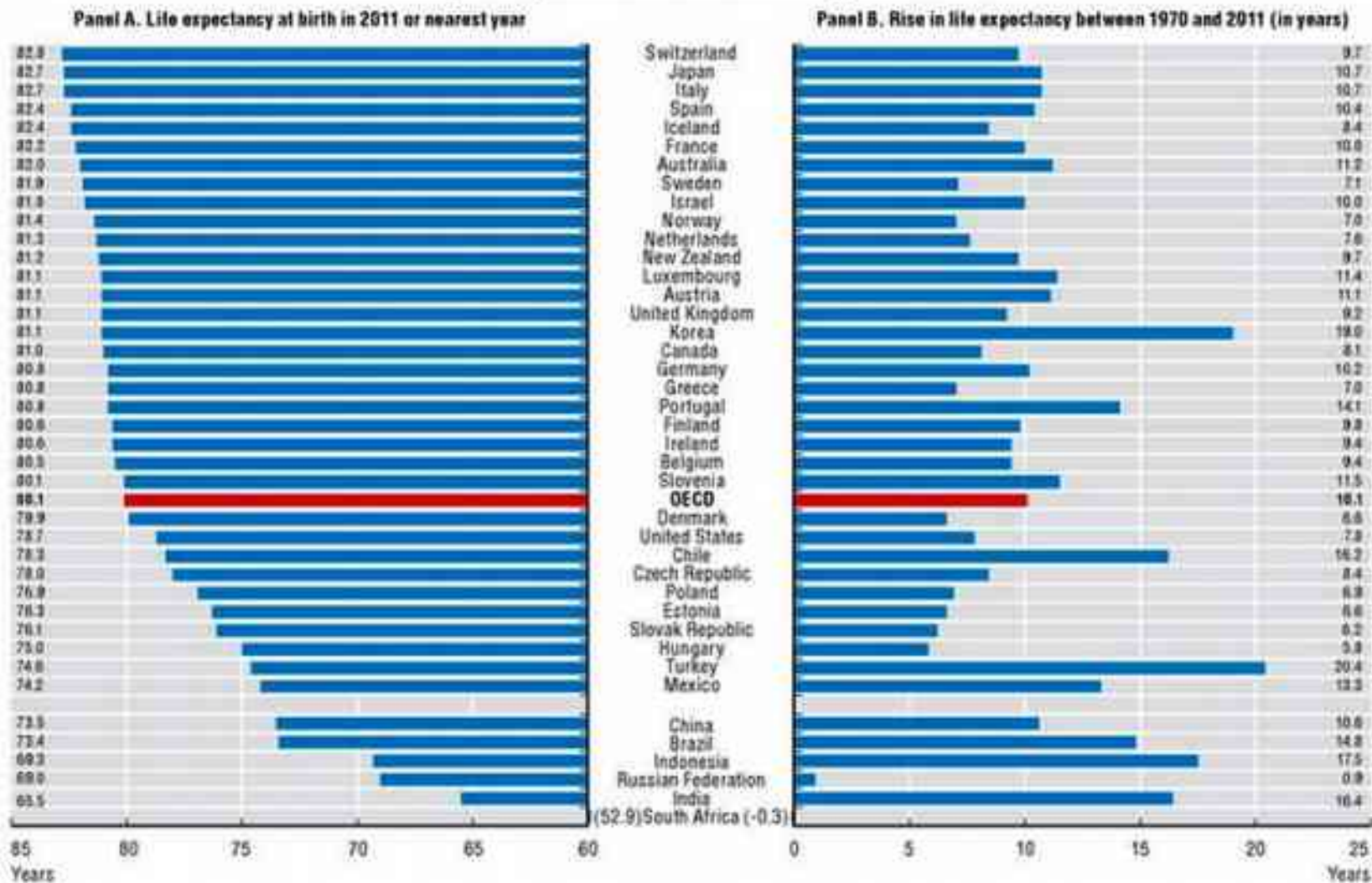


# Population pyramids



# Life expectancy

## 6.1. Life expectancy has increased remarkably in OECD countries

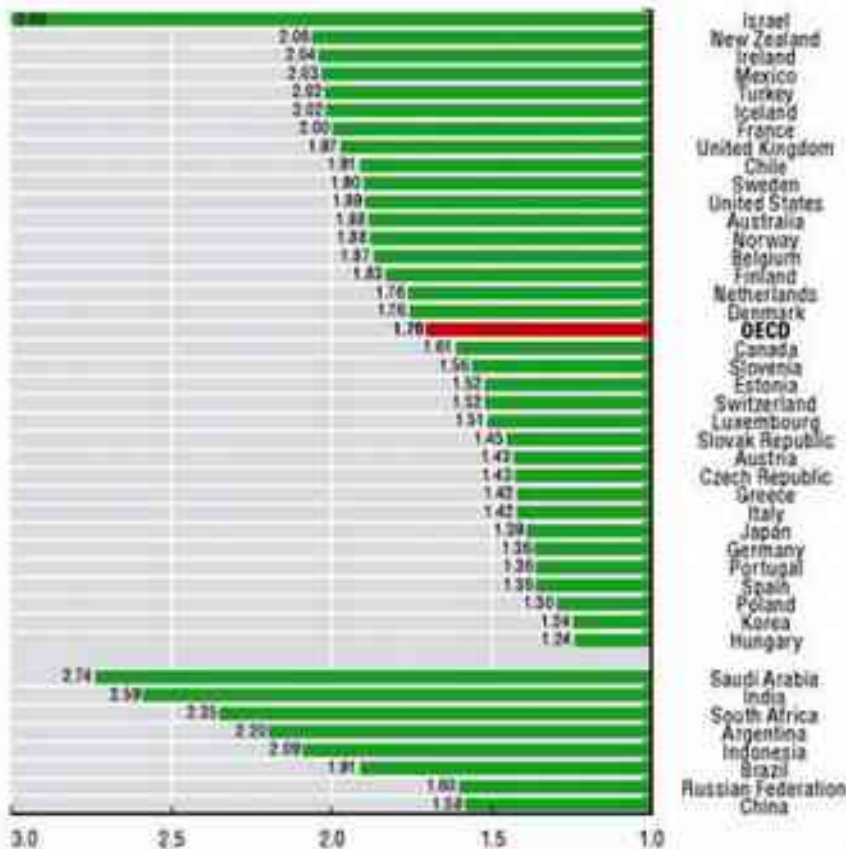




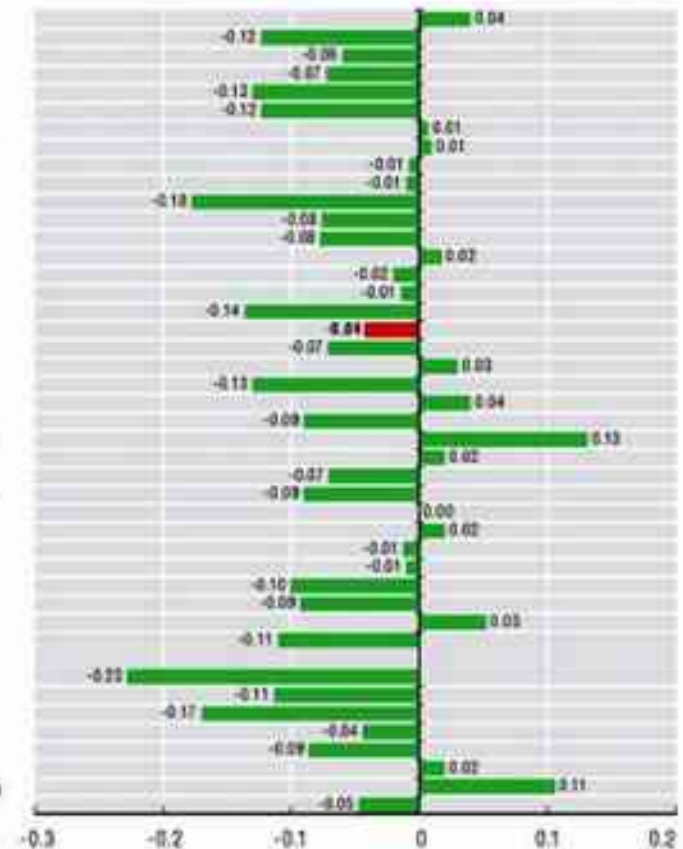
# Fertility rate (nr. of children/woman)

## 3.3. Fertility rates across the OECD are typically below replacement level with a moderate decline since the crisis

Panel A. Total fertility rate in 2011 (x)  
Number of children per woman



Panel B. Difference in TFR (number of children per woman)  
between 2008 and 2011



# Marital status

## 3.8. Large differences in households composition

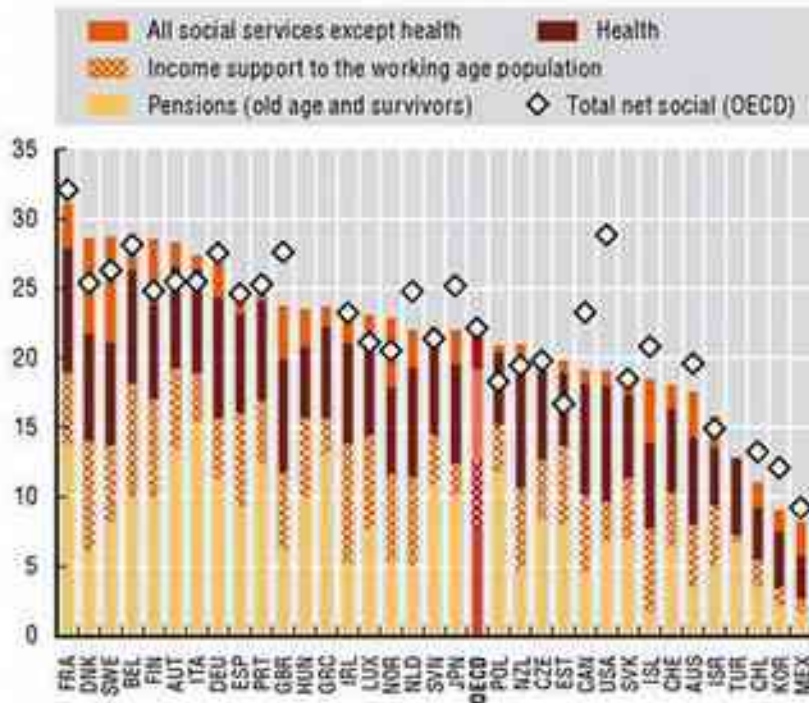
Proportion of respondents aged 15 and over by relationship status, 2012, percentages sorted by married



# Spending and satisfaction in the health and social sectors

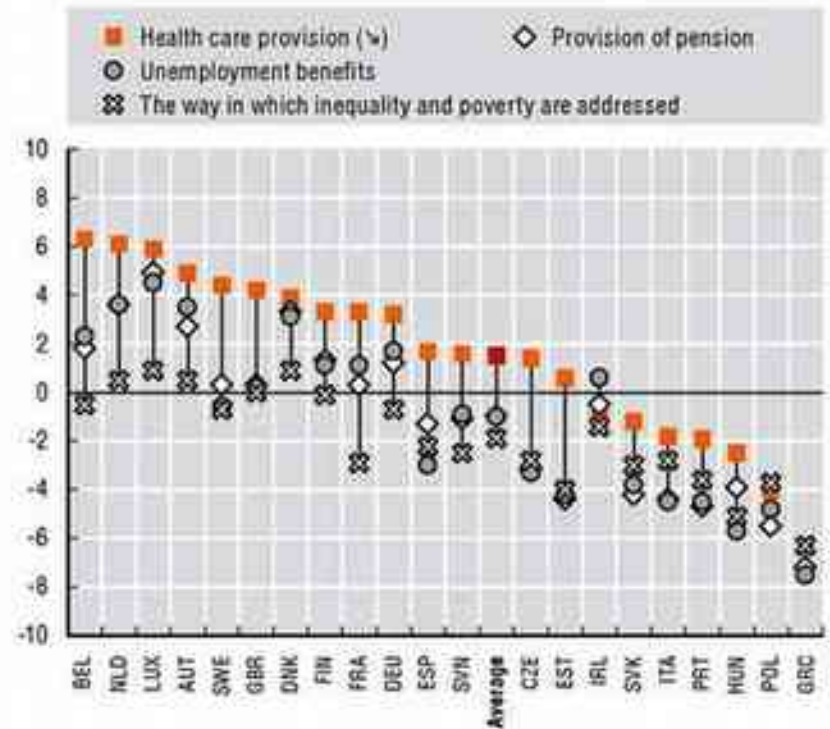
## 5.8. Most spending goes to pensions and health

Public social spending by broad policy area and total net social spending, in 2009, in percentage of GDP



## 5.9. Satisfaction with welfare state performance varies across European countries

Eurobarometer index on satisfaction for selected areas, 2012 (a neutral index is an index score close to 0 on a scale from -10 to 10)



# Common health-related conditions of elderly people

- Locomotor diseases
- Cardiovascular diseases
- Gastrointestinal diseases
- Cerebrospinal diseases
- Immunologic diseases



# Organ functions in the age group of 75-80-year-olds in percentage compared to 30-year-olds

W.J. Spitzer, T. Binger: The elderly patient

- Weight of the brain 56%
- Number of neurofibers 63%
- Number of taste buds 35%
- Mineral content of the bones 70-85%
- Muscle strength of the arms 55%



## Frequency of several diseases in the age group over 65 y/o

- Hypertonia 42%
- Cardiac diseases 34%
- Hard of hearing (HoH) 40%
- Decreased power of vision 23 %
- Decreased ability of coordination 40%



# Possible psychologic characteristics of elderly people

- Depression
- Aggression
- Exaggerated expectations
- Problems with the sensory organs
- Inflexible thinking



# Possible social characteristics of elderly people

- Disintegration of the classic family model
- Disintegration of horizontal connections
- Increasing loneliness
- Transforming vertical connections
- Addiction





# Possible dental characteristics of elderly people

- Missing teeth
- Shrinkage of the mucosal-layer, which can cause pain and vulnerability
- Significant shrinkage of the submucosal layer, which causes difficulties in load-bearing
- Deterioration of the periodontium
- Involutio (senile, retrograde metamorphosis) of the salivary glands

# Characteristics in the oral health of elderly people in Hungary

1. Multiple missing teeth
2. Anodontia (completely toothless)
3. Poorly replaced missing teeth
4. Early tooth-loss (by pathological reason)
5. Large-scale periodontal involvement

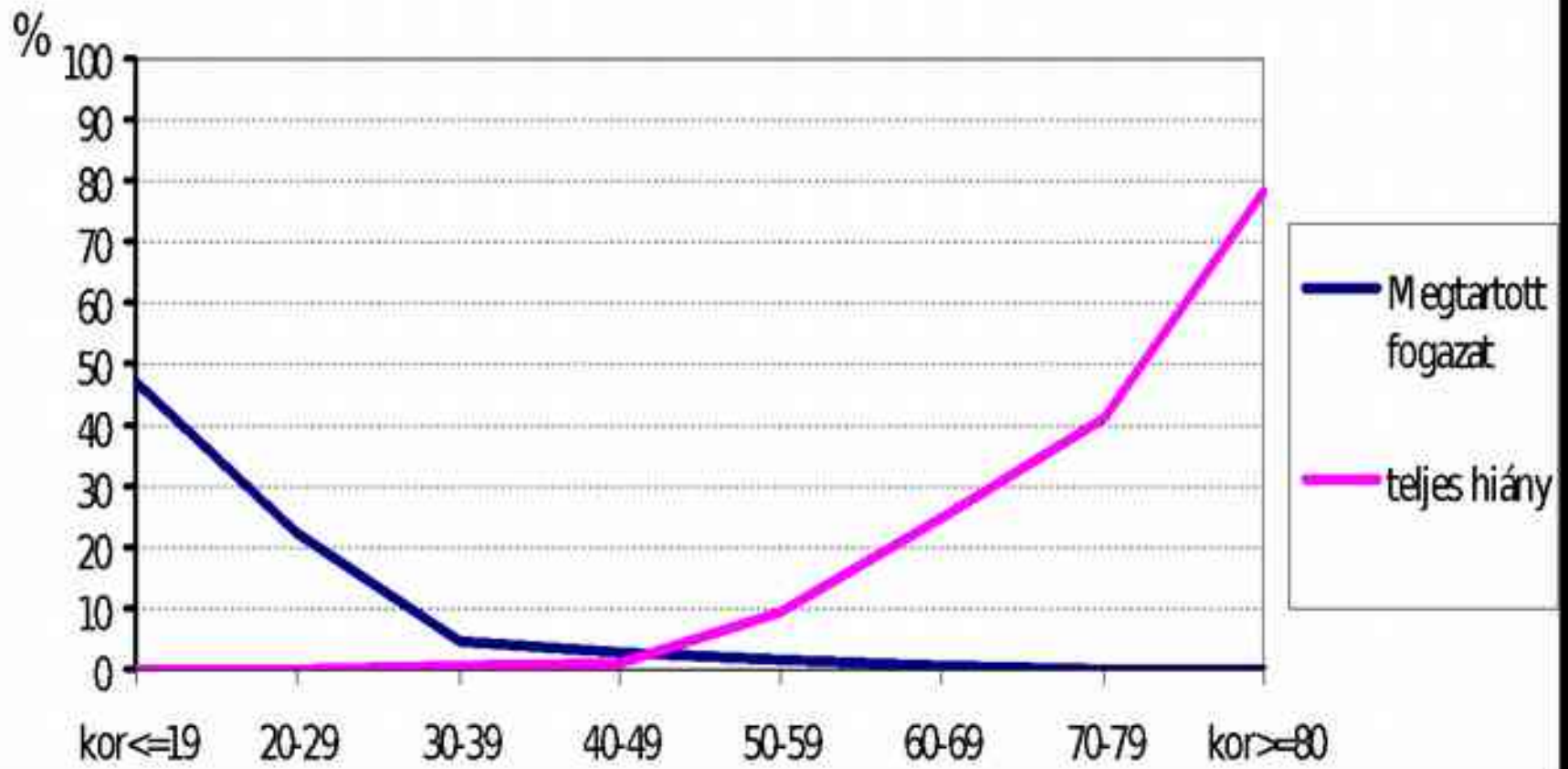


# Large-scale periodontal involvement



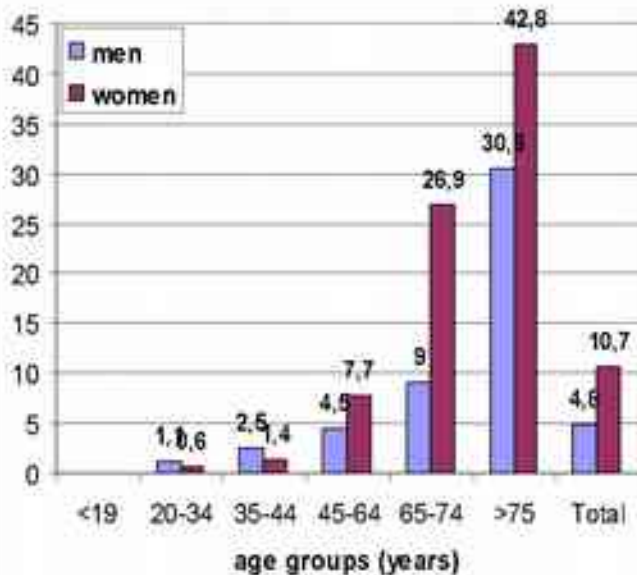
# Retained teeth and anodontia according to age

Fejérdy és mtsi: A felnőtt lakosság fog elvesztési dinamikája Magyarországon  
Fogorvosi Szemle 1998.

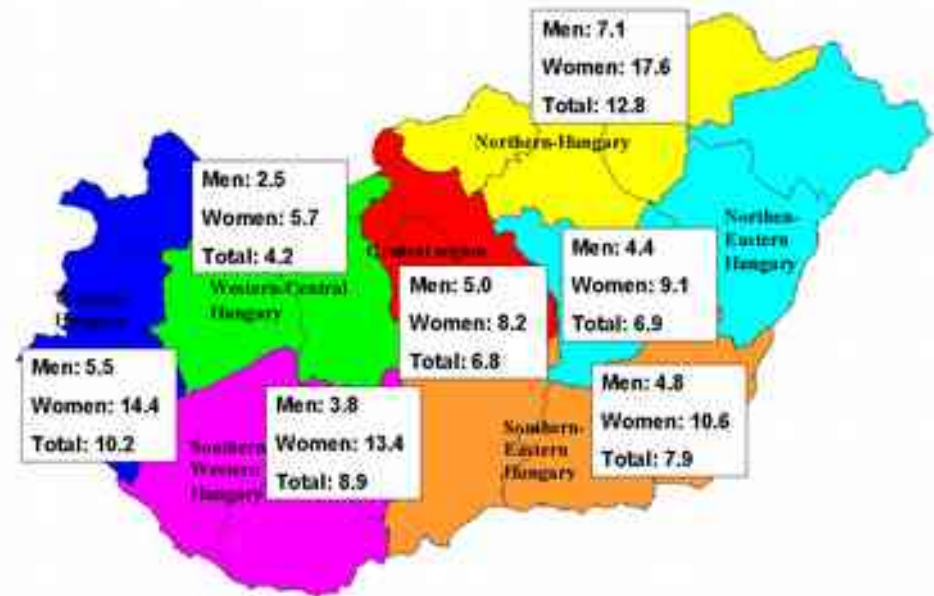


# Prevalence of edentulous people among the „over 65” age group: 24.1%

The prevalence of edentulous persons in different age groups by gender in Hungary (%)

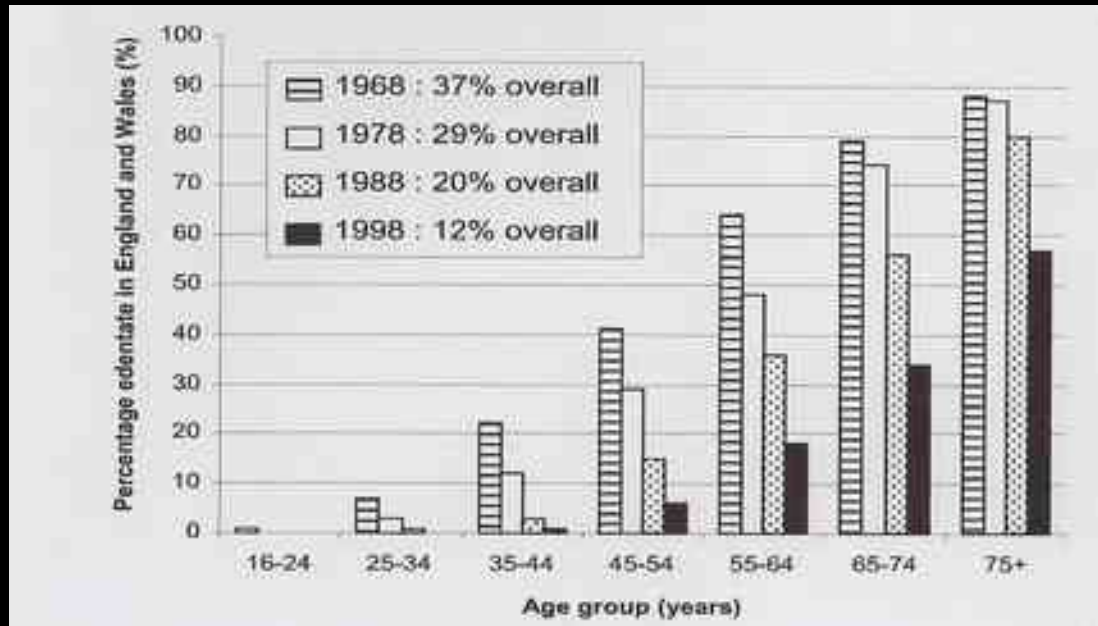


The prevalence of edentulous persons in statistical regions by gender in Hungary (%)



# Percentage of edentate people in England and Wales

## Wales



# Specific aspects of gerostomatology in treatment planning

- **Consideration of the general state of health**
- **Consideration of the psychological state**
- **Consideration of the sociological state is of especial importance**



