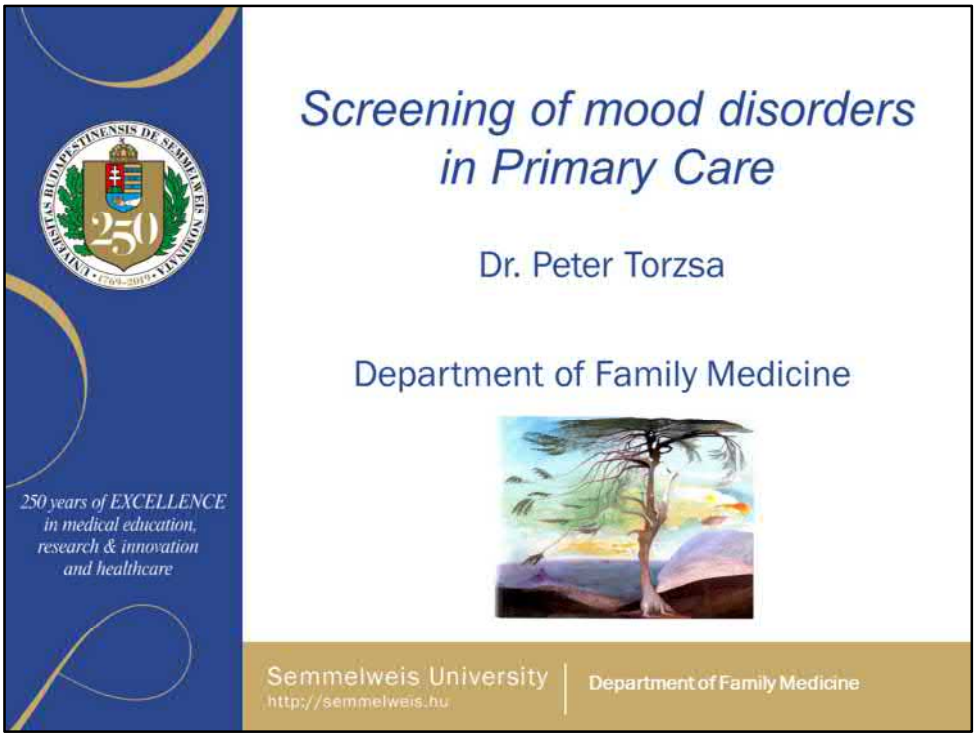
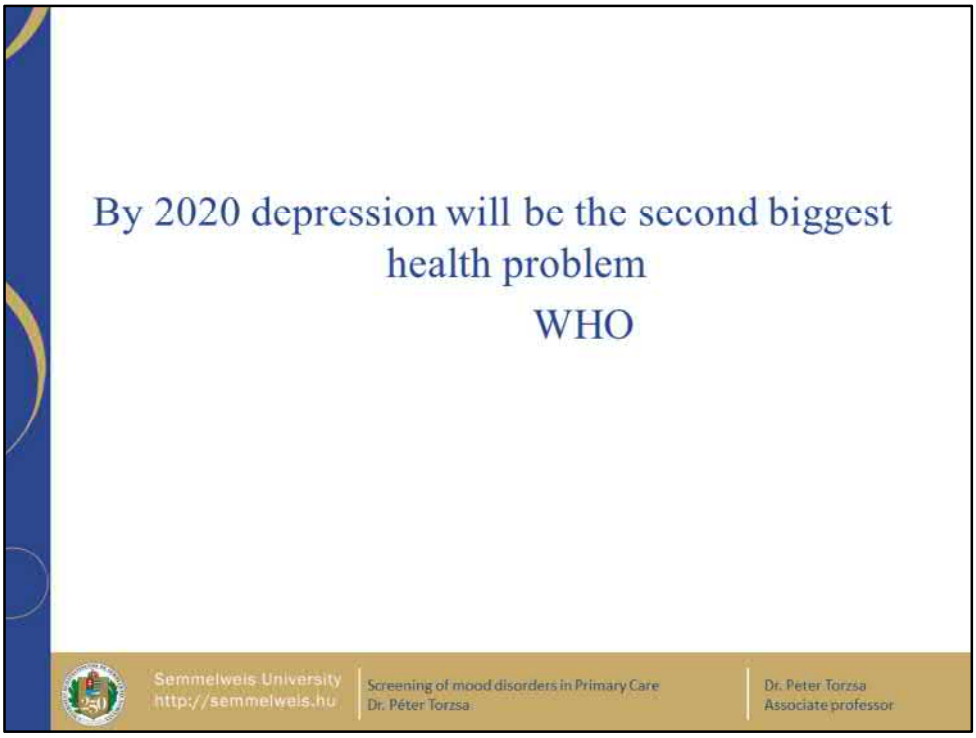


Depression is a common mental disorder, characterized by sadness, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, feelings of tiredness, and poor concentration.

Depression is the most common psychiatric disorder in the general population and the most common mental health condition in patients seen in primary care. Although symptoms of depression are prevalent among primary care patients, few patients discuss these symptoms directly with their primary care clinicians. Instead, two-thirds of primary care patients with depression present with somatic symptoms (eg, headache, back problems, or chronic pain), making detection of depression more difficult. It is estimated that only 50 percent of patients with major depression are identified.

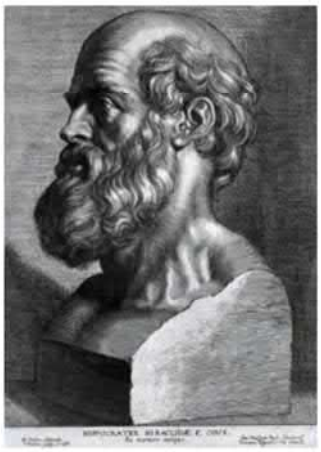


The prognosis of the WHO was too optimistic, depression has already the second biggest health problem since 2017

Hippocrates (460-377 B.C.)

The body humor hypothesis:

- Black bile – melancholia
- Yellow bile – mania
- Hysteria – disease of uterus
- Paranoia
- Sacred disease - epilepsy



Rubens' Hippocrates

Artists who had depression

Depression in Famous People

- Many famous people have suffered from depression.
- In fact, one scientific study of the lives of almost 300 world famous men, found that over 40% had experienced some type of depression during their lives.
- Famous writers are particularly prone to the problem (72%), but others also suffer high rates of depression (artists 42%; politicians, 41%; intellectuals 36%, composers 35%, scientists 33%).

Post F, Brit J Psychiat, 1994; 161: 22-34

Untreated depression is associated with....

- Increased risk of suicide[1]
- Decreased quality of life[2]
- Increased risk of mortality (relative risk [RR] 1.81)[3]
- Poor physiological outcomes when depression co-occurs with chronic medical conditions[4]

1. Rihmer Z, Gonda X. Prevention of depression-related suicides in primary care. Psychiatr Hung 2012; 27:72.
2. Daly EJ, Trivedi MH, Wisniewski SR, et al. Health-related quality of life in depression: a STAR*D report. Ann Clin Psychiatry 2010; 22:43.
3. Cuijpers P, Smit F. Excess mortality in depression: a meta-analysis of community studies. J Affect Disord 2002; 72:227.
4. Moussavi S, Chatterji S, Verdes E, et al. Depression, chronic diseases, and decrements in health: results from the World Health Surveys. Lancet 2007; 370:851.

Epidemiology (%)

	Lifetime	*1 year*	*1 month prevalence*
International data			
Major depression	4.6-15.7	3.4-5.2	1.5-5.2
Bipolar depression	0.5-5.5	0.3-1.7	0.1-0.6
National data			
Major depression	15.1	7.1	2.6
Bipolar depression	5.1	1.1	0.5

Szádóczky et al, J Affect Disord 1998, 50: 153-162.
Rihmer és Angst, Compr Textbook of Psychiatry, 2005.

The prevalence of MDE

The prevalence of MDE and percentage of treated MDE:

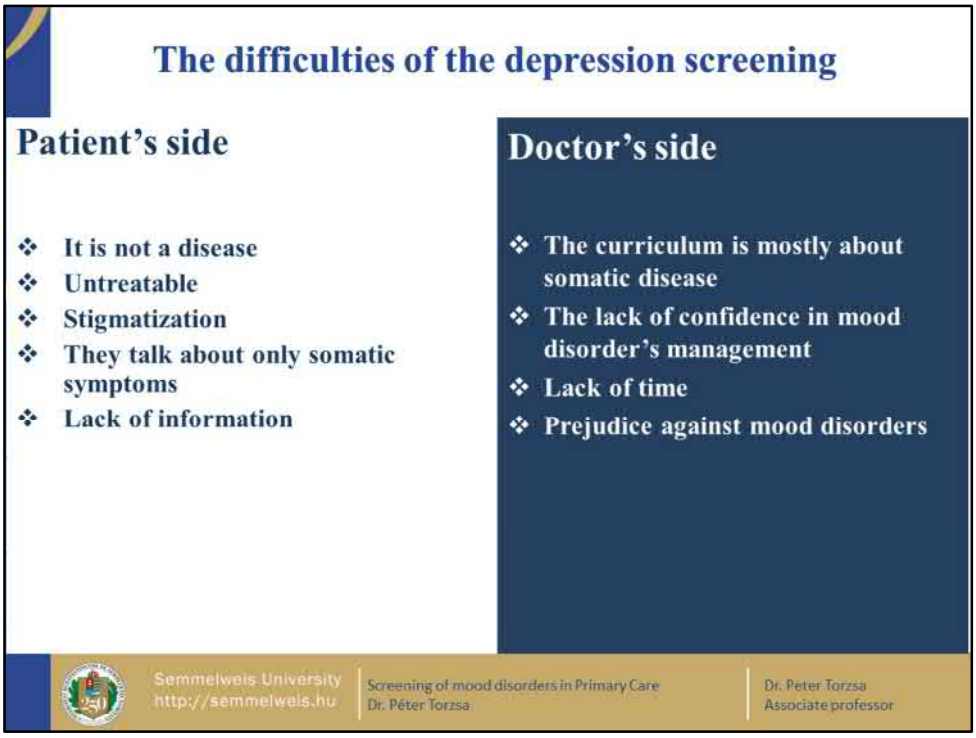
- Before 1991

  10 - 15 % and 5 - 7 %

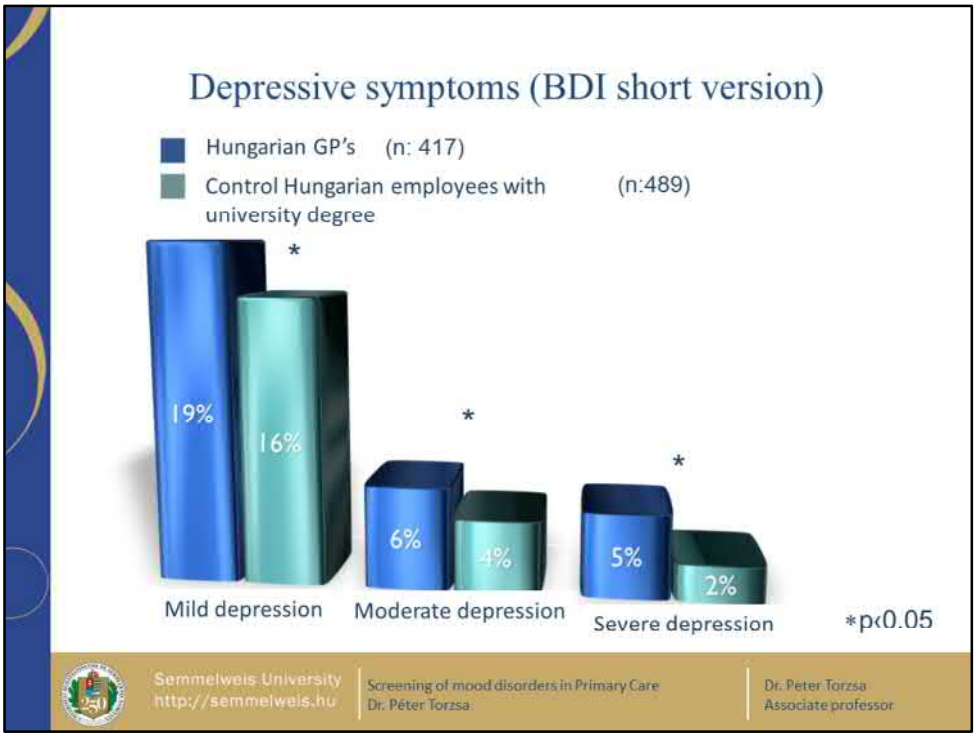
- After 1996

  62 - 85 % and 33 - 50 %

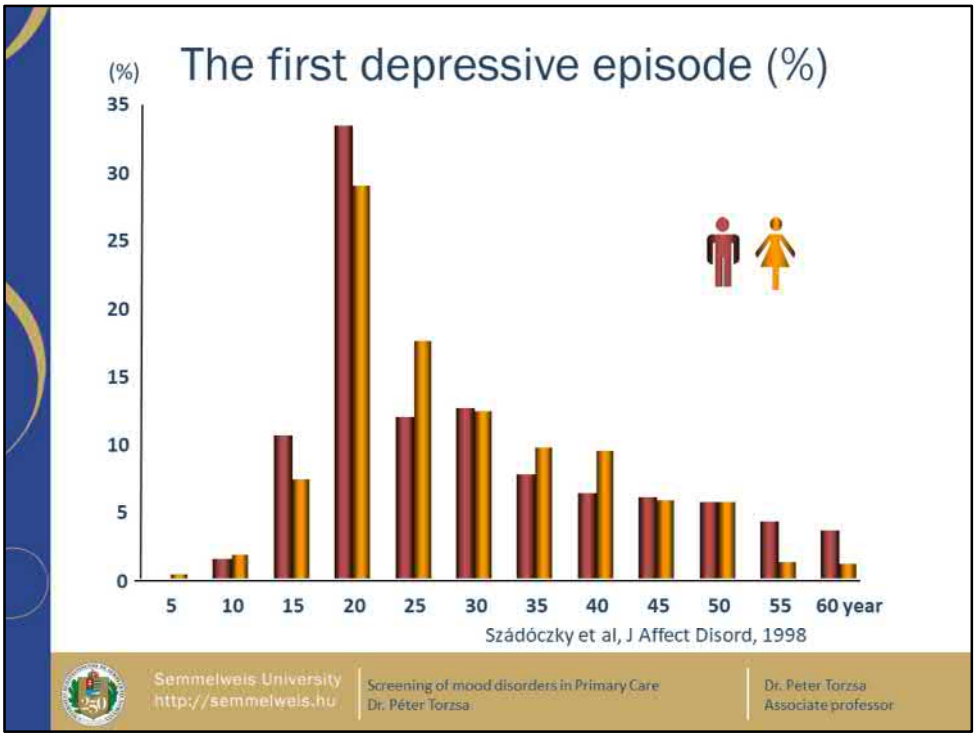
Lecrubier, Int J Psychiat Clin Pract, 2001; 5 (S-1) 3-10.
Berardi et al, Psychother Psychosom, 2005; 74: 225-230.



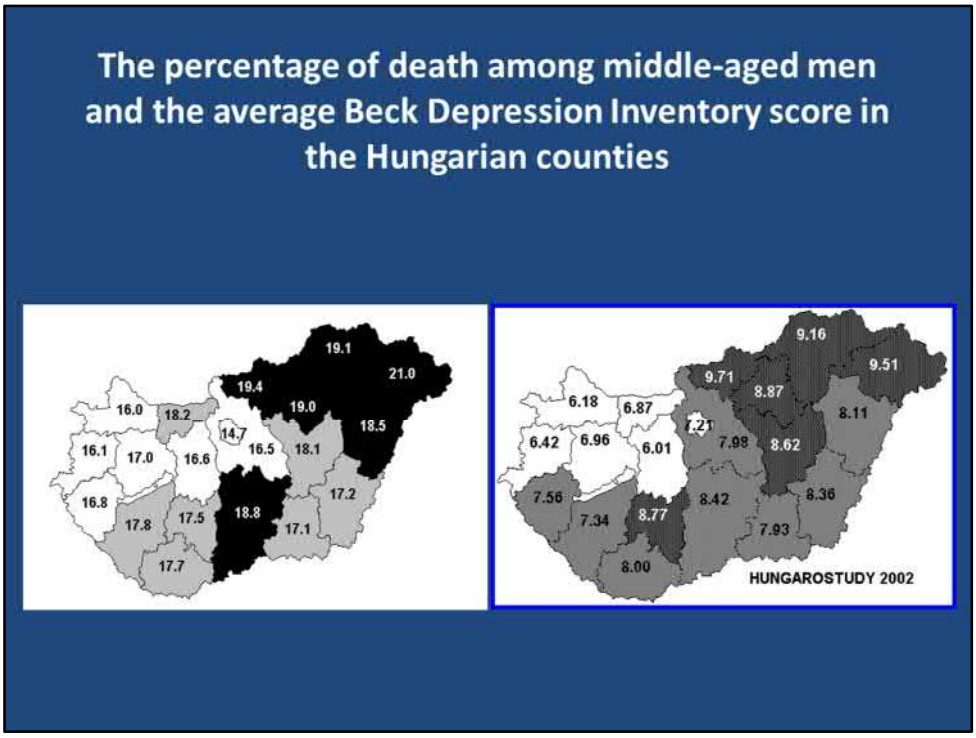
It is really difficult to screen depression. In this table you can see the patient's and the doctor's side of this problem.



Depressive symptoms were significantly more prevalent among Hungarian GP's compaire Hungarian employees with university degree



The peak of the first depressive episode is in the early 20s. We have to be cautious with this age group.



In this left table you can see the percentage of death among middle-aged men in the Hungarian
counties. In the right table you can see the average BDI score in the Hungarian counties. You can see the similarity between the 2 tables.
The death rate is higher in counties where the average BDI score is higher. It showes the connection between mood disorders and cardiovascular death.

Possible mechanisms whereby depression confers elevated cardiac risk

The efficasy of the depression screening

The complains of the patient

psychiatric — somatic

Diagnosis of depression

81% — 10%

Szádóczky és mtsai., 2003

Genetics, enviroment, depression

Genetic	Early event	Late event	Possibility of depression
+	+	+	80%
+	+	–	50%
+	–	+	50%
+	–	–	30%
–	+	+	30%
–	+	–	10%
–	–	+	10%
–	–	–	0%

Depression severity criteria

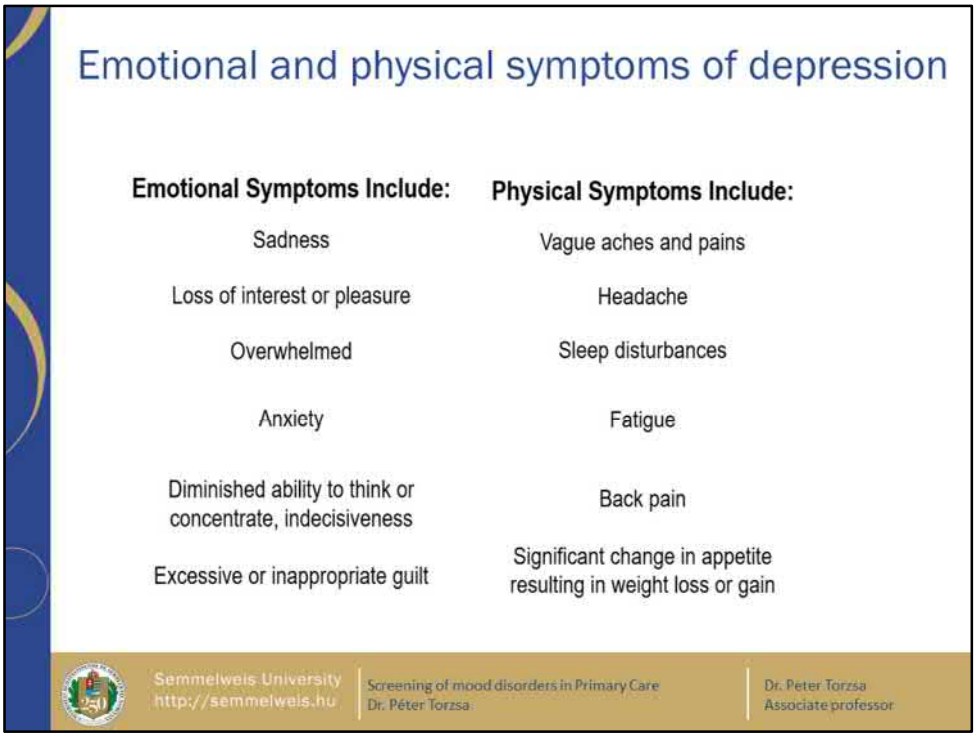
A	B
Depressed Mood	Reduced self esteem and confidence
Loss of interest and enjoyment in usual activities	Ideas of guilt and unworthiness
Reduced energy and decreased activity	Pessimistic thoughts
	Disturbed sleep
	Diminished appetite
	Ideas of self harm

Severity of Depressive Episode:

Mild: > 1 from column A plus 1-2 from column B. Or 5-6 sx but mild in severity and functional impairment.

Moderate: > 1 from column A plus 2-3 from column B. Or 7 – 8 sx but moderate functional impairment.

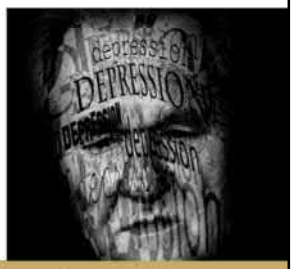
Severe: All 3 from column A plus > 3 from column B. Or fewer sx but any of these: severe functional impairment, psychotic sx, recent suicide attempt, or has specific suicide plan or clear intent.



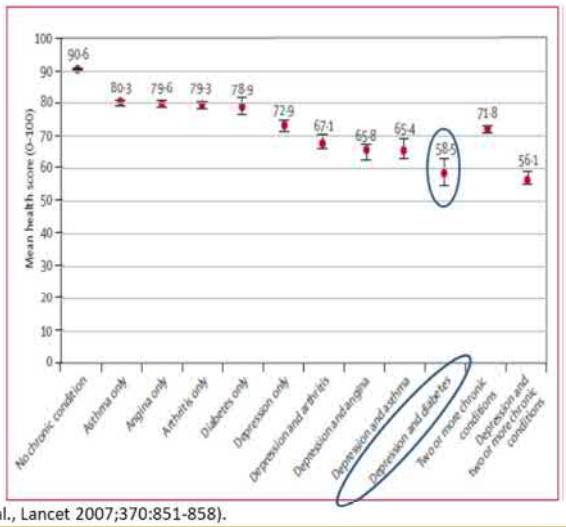
69% of diagnosed depressed patients reported unexplained physical symptoms as their chief compliant. The emotional and physical symptoms of depression can see in this Table

Causes of Depression: Whole Person

- Stressful event, life change
  - Death, divorce, job loss, major illness
  - Even happy events can be stressful
  - Marriage, parenthood, new job
- Chronic stress
  - Poverty, war, sexual abuse, anxiety
  - Chronic disease (diabetes)

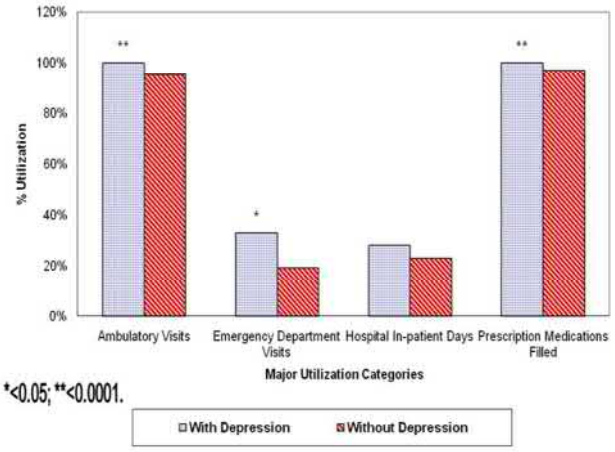


Mean health score of the diabetic patients with different chronic illnesses



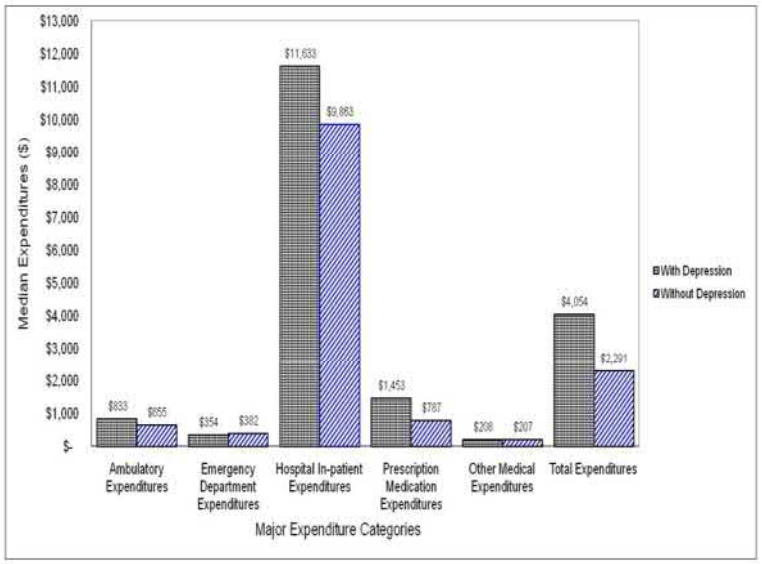
(Moussavi et al., Lancet 2007;370:851-858).

Utilization among diabetic patients with or without diabetes



From Egede LE. Medical costs of depression and diabetes. In: Depression and Diabetes. Katon W, Maj M, Sartorius N (eds). Chichester: Wiley, 2010

Medical costs of depression and diabetes



From Egede LE. Medical costs of depression and diabetes. In: Depression and Diabetes. Katon W, Maj M, Sartorius N (eds). Chichester: Wiley, 2010

Causes of Depression: Whole Person

- Stressful event, life change
  - Death, divorce, job loss, major illness
  - Even happy events can be stressful
  - Marriage, parenthood, new job
- Chronic stress
  - Poverty, war, sexual abuse, anxiety
  - Chronic disease (diabetes)
  - Chronic pain
  - Social defeat stress

Other Causes of Depression

- Genetic: depression runs in families
- Gender/hormones: women are more likely to get depressed
- Child birth
- Head injury
- Endocrine disorders (hypothyroidism)
- AIDS

Frontal lobe:
- Higher cognition (lateral part)
- Emotional and social functions (bottom part)
- **Schizophrenia**

Basal ganglia:
- Movement regulation
- Skill and habit learning (feedback and reward)
- **Parkinson`s disease**

Amygdala:
- Emotion, fear, anxiety
- **Depression**

Hippocampus:
- Remembering facts and events (explicit memory)
- **Alzheimer`s disease**

Cellular & Molecular Causes of Depression

- Neurotransmitter abnormalities
  - Monoamine hypothesis
  - Serotonin, norepinephrine, dopamine
- Hormonal abnormalities
  - Hypothalamic-pituitary-adrenal axis (HPA)
  - Elevated cortisol
- Brain structure abnormalities
  - Neuronal loss in:
    - hippocampus
    - prefrontal cortex
  - Decreased activity in:
    - Amygdala
    - Cingulate gyrus
    - Prefrontal cortex

Criteria for Major Depressive Disorder

Symptoms should be present for at least two weeks in a persistent fashion. Five symptoms are needed.

At least one must be one of the two main features:

1. Persistent sad mood (most of the day, on most days)
2. Loss of interest or pleasure (anhedonia)
   (Either by subjective report or observations of others)

The remainder can be from the following symptoms (on most days)

a) Increase or decrease in appetite or weight
b) Increase or decrease in sleep duration
c) Psychomotor agitation or retardation
d) Fatigue
e) Worthlessness or guilty feelings
f) Difficulty concentrating or indecisiveness
g) Recurrent thoughts of death or suicidal thoughts or plans

“Spontaneous” Depression

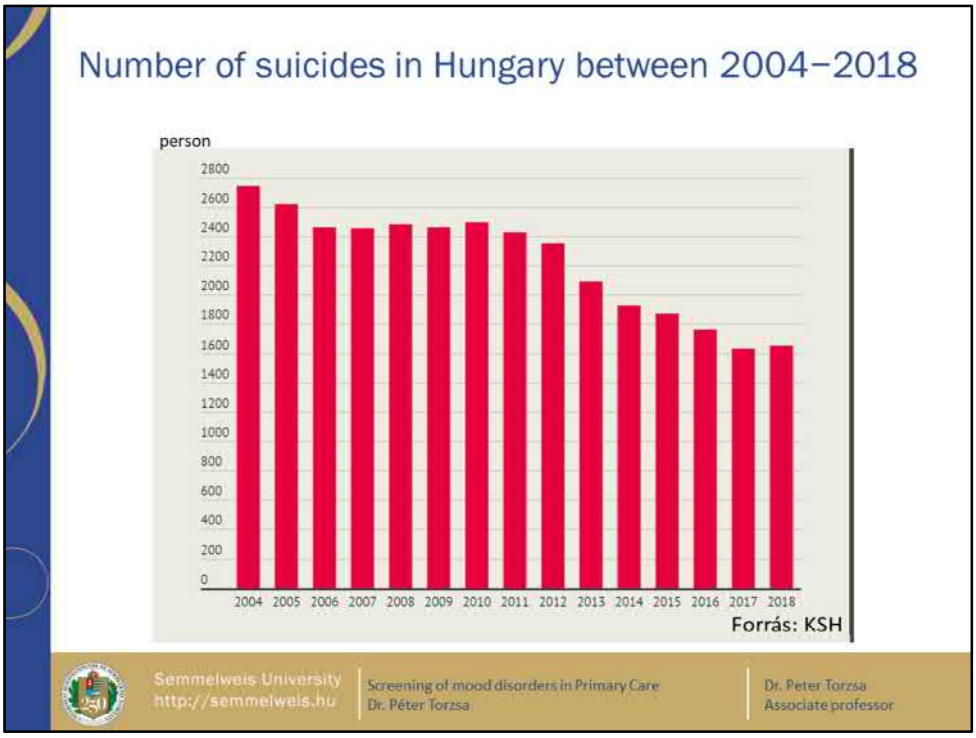
- First depression is usually triggered by stress of some sort.
- After several depressions (usually >4), new episodes may occur without any obvious trigger.
- The more depressions, the more likely this will occur.

Suicide Rate By Country by Population 2019

Source: World Health Organization (Suicide Rates 2018)

* Rates are per 100,000 people

Flag	Name	Suicide Rank	Total Suicide Rate	Male Suicide Rate	Female Suicide Rate	Total Per Year
	Lithuania	1	31.9	56.1	9.5	894
	Russia	2	31	55.9	9.4	45,178
	Guyana	3	29.2	43.7	14.4	227
	South Korea	4	26.9	38.4	15.4	13,765
	Belarus	5	26.2	46.9	8.2	2,477
	Suriname	6	22.8	34.7	10.9	131
	Kazakhstan	7	22.5	38.3	7.6	4,122
	Ukraine	8	22.4	41.1	6.3	9,911
	Latvia	9	21.2	37.6	7.3	409
	Lesotho	10	21.2	17.8	24.4	447
	Belgium	11	20.7	27.8	13.8	2,377
	Hungary	12	19.1	29.7	9.6	1,854
	Slovenia	13	18.6	30.4	6.9	386
	Japan	14	18.5	26	11.4	23,532
	Uruguay	15	18.4	29.2	8.3	635
	Estonia	16	17.8	30.6	6.6	235
	France	17	17.7	23.9	11.7	11,503
	Switzerland	18	17.2	22	12.4	1,466

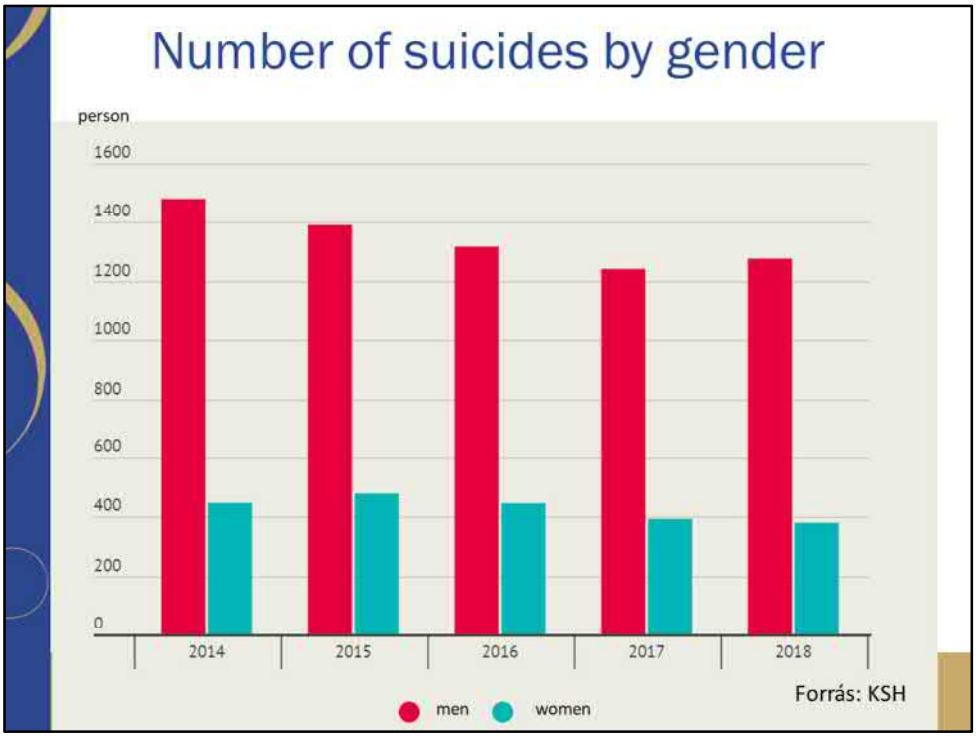


Number of suicides in Hungary rapidly decreased from 2011 but there was an increase in 2018 because risk factors and lack of psychiatrists

List of risk factors for suicide

- Elderly (>60 year)
- Male (female-male, 2-2,5:1)

Note: Older males are at higher risk for suicide than any other demographic group, and they tend to use violent methods (such as a gun) that often result in completed suicide


Number of suicides by gender
person
1600
1400
1200
1000
800
600
400
200
0
2014
2015
2016
2017
2018
men
women
Forrás: KSH

List of risk factors for suicide

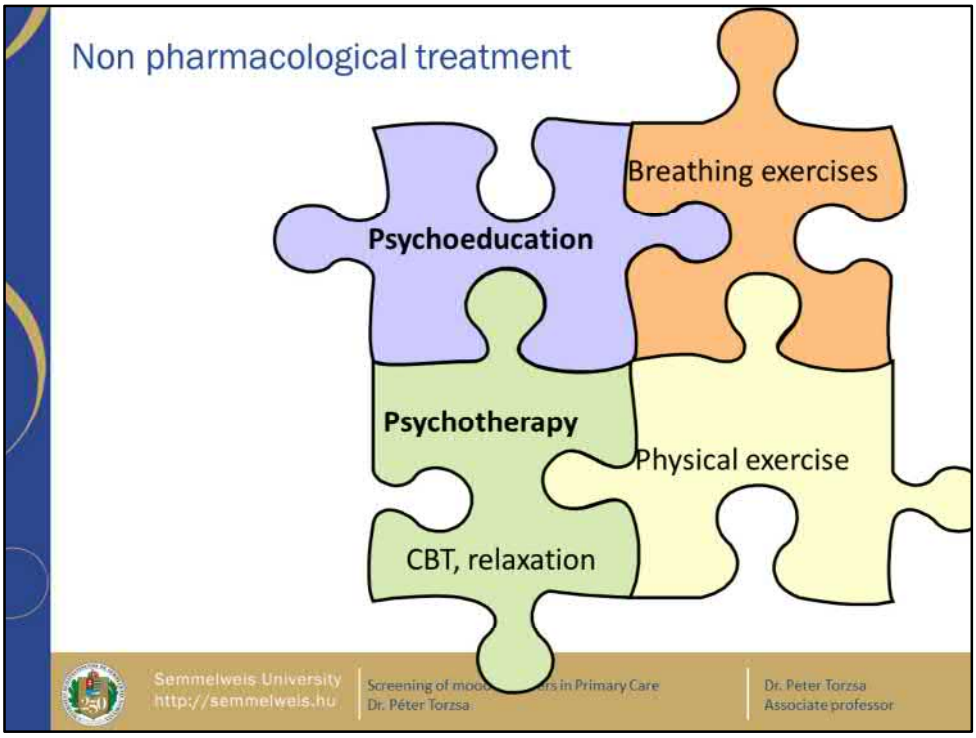
- Elderly (>60 year)
- Male (female-male, 2-2,5:1)
- Caucasian
- Living alone, low pension
- Prior suicide attempt
- Family history of suicide
- Medically illnesses
- Psychosis
- Alcohol or other substance abuse
- Hopelessness

Note: Older males are at higher risk for suicide than any other demographic group, and they tend to use violent methods (such as a gun) that often result in completed suicide

- Although suicide and attempted suicide are relatively rare events, depression, the major cause of suicide, is common in primary care.
- Up to 60% and 40% respectively of suicide victims contact their GPs 4 weeks and 1 week before the death. Many attenders consult for other reasons (cry for help).
- Many people do not readily present depression or suicidal ideas or intent in primary care, so a high index of suspicion is needed, especially in high-risk groups.
- There is some evidence that mental health training for GPs may be linked to the reduction of depressive suicides.

Protective factors for suicide

Good family and social support
Pregnancy and post partum period
Large number of children
Active (non-formal) religiosity
Reducing lethal suicide methods
Hypersomnia and increased appetite
Hypertensive temperament
Psychotherapeutic and pharmacological treatment of patients with affective temperament


Non pharmacological treatment
Breathing exercises
Psychoeducation
Psychotherapy
Physical exercise
CBT, relaxation
Semmelweis University
http://semmelweis.hu
Dr. Péter Torzsa
Dr. Peter Torzsa
Associate professor

Lifestyle- Self-care

- Regular exercise
- Healthy regular meal
- Stress management strategies
- Sleep hygiene
- Avoiding substance use
- Keeping a daily mood chart

Modern psychotherapy

1. Focusing on abnormal thinking (e.g. extreme pessimism and hopelessness in depression) – COGNITIVE-BEHAVIOR THERAPY
2. Focusing on human relationships (e.g. dispute, role changes, grief, communication skills) – INTERPERSONAL PSYCHOTERAPY

Modern social therapy

Instead of large institutions to “store” the patients:

1. Case manager that helps the patient in everyday activity
2. Sheltered houses
3. Supported employment
4. Daytime “hospitals” and clubs
5. Social skill training

Currently available antidepressants and their recommended dosage

SSRI	Initial dose (mg/day)	Maximum dosage (mg/day)
Fluoxetine	20	60-80
Paroxetine	20	50
Citalopram	20	40-60
Escitalopram	10	20
TCAs		
Amitriptyline	25	300
Imipramine	25	300


Thank you for your attention!