Preventing the onset of depressive disorders

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Canberra
Overview

• What is prevention?
• Why is prevention important?
• Is it possible to prevent new incident cases?
• How can depression be prevented?
• Conclusions
What is prevention?
Intervention spectrum for mental disorders

(Mrazek & Haggerty, 1994)
Why is prevention of depression important?
Why is prevention of depression important?

- Huge burden of disease (fourth)
- Highest burden of disease in 2030 in developed countries
- High prevalence
- High incidence (almost 50% of prevalence)
- Huge economic costs
- Treatments can reduce burden of disease with not more than 35% (currently 15%)
## Illnesses with highest disease burden (Netherlands)

<table>
<thead>
<tr>
<th>Illness</th>
<th>% of disease burden</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coronary heart disease</td>
<td>7.6</td>
</tr>
<tr>
<td>Anxiety disorders</td>
<td>5.1</td>
</tr>
<tr>
<td>Stroke</td>
<td>4.9</td>
</tr>
<tr>
<td>Depression / dysthymia</td>
<td>3.9</td>
</tr>
<tr>
<td>COPD</td>
<td>3.2</td>
</tr>
<tr>
<td>Diabetes mellitus</td>
<td>3.2</td>
</tr>
<tr>
<td>Lung cancer</td>
<td>3</td>
</tr>
<tr>
<td>Alcohol dependence</td>
<td>2.5</td>
</tr>
<tr>
<td>Artrosis</td>
<td>2.5</td>
</tr>
<tr>
<td>Dementia</td>
<td>2.3</td>
</tr>
</tbody>
</table>

Source: RIVM, 2006
### Top 5 of diseases in The Netherlands with the highest disease burden, in different age groups

<table>
<thead>
<tr>
<th></th>
<th>0-14</th>
<th>15-24</th>
<th>25-44</th>
<th>45-64</th>
<th>65-74</th>
<th>75+</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Innate anomalies</td>
<td><strong>Alcohol</strong></td>
<td>Anxiety</td>
<td>Coron. Heart dis</td>
<td>Coron. Heart dis</td>
<td>Coron. Heart dis</td>
</tr>
<tr>
<td>2</td>
<td>Mental handicaps</td>
<td>Anxiety</td>
<td><strong>Depression</strong></td>
<td>Anxiety</td>
<td>Stroke</td>
<td>Stroke</td>
</tr>
<tr>
<td>3</td>
<td>Privat accidents.</td>
<td><strong>Depression</strong></td>
<td>Alcohol</td>
<td>Lung cancer</td>
<td>COPD</td>
<td>Dementia</td>
</tr>
<tr>
<td>4</td>
<td>Bronchial infections</td>
<td>Traffic accidents</td>
<td>Suicide</td>
<td><strong>Depression</strong></td>
<td>Lung cancer</td>
<td>COPD</td>
</tr>
<tr>
<td>5</td>
<td>Asthma</td>
<td>Mental handicaps</td>
<td>Traffic accidents</td>
<td>Diabetes</td>
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</tr>
</tbody>
</table>
Currently averted Years Lived with Disability (Andrews et al., 2004)

<table>
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<tr>
<th>Disorder</th>
<th>Current</th>
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<tbody>
<tr>
<td>Any mood disorder</td>
<td>15%</td>
</tr>
<tr>
<td>Major depression</td>
<td>16%</td>
</tr>
<tr>
<td>Any anxiety disorder</td>
<td>13%</td>
</tr>
<tr>
<td>Any Alcohol rel. dis.</td>
<td>2%</td>
</tr>
<tr>
<td>Schizophrenia</td>
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</tr>
<tr>
<td>Any disorder</td>
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</tr>
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</table>

Andrews et al., Br J Psychiatry 2004
### Averted YLD (current coverage and with EBMH)

<table>
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<td>20%</td>
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<td>5%</td>
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<td>22%</td>
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<tr>
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<table>
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<th>EBMH</th>
<th>Max</th>
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<td>23%</td>
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<td>34%</td>
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<tr>
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<td>13%</td>
<td>20%</td>
<td>49%</td>
</tr>
<tr>
<td>Any alcohol rel. dis.</td>
<td>2%</td>
<td>5%</td>
<td>34%</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>13%</td>
<td>22%</td>
<td>22%</td>
</tr>
<tr>
<td>Any disorder</td>
<td>13%</td>
<td>20%</td>
<td>40%</td>
</tr>
</tbody>
</table>
Consequences

• Currently avoided in major depression (MDD): 16%, maximum 34%

• Consequences:
  – Better treatments
  – Dissemination (low-income countries!)
  – Prevention!
Epidemiology of depression in The Netherlands

Prevalence: 738,000

Influx: 357,000

Treatment

Prevention

Relapse

Recovery

Mortality
Costs of depression

- €132 million per million adults (210 AU$)
- Of which 47% is related to the incidence
- About the same costs in minor depression
- About twice as much in dysthymia
- Total costs about € 600 million (AU$ 975), per million adults

- Smit et al. (2006) Journal of Mental Health Policy and Economics
- Cuijpers et al. (2007). Acta Psychiatria Scandinavica
So why is prevention necessary?

• Because of high
  – Prevalence
  – Incidence
  – Costs
  – Burden of disease

• Limited possibilities of treatment

• But: Prevention for whom?
Is it possible to prevent the onset of depressive disorders?
Prevention of incidence of new cases of mental disorders

- Meta-analytic review: statistical integration of all available studies
- 19 controlled studies
- Results:
  - IRR = 0.78 (95% CI: 0.65~0.93)
  - Universal prevention is not effective
  - No significant subgroups (type, target population)
  - IPT may be somewhat more effective than CBT

Cuijpers et al., Am J Psychiatry 2008
Effects of prevention of depression

- Depression: –22%
- IPT: –86%
- CBT: –16%
- PPD: –35%
- School: –17%

% chance of getting a depressive disorder
## Cost-effectiveness plane

<table>
<thead>
<tr>
<th>More costs, Less health</th>
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<tbody>
<tr>
<td>Less Costs, Less Health</td>
<td>Less costs, More health</td>
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</table>

- More costs, Less health
- More costs, More health
- Less costs, More health
- Less Costs, Less Health
Guided self-help as prevention of major depression

How can depression be prevented?
Different methods

• By offering “Coping with depression” course to those with subthreshold depression
• Through the Internet
• In primary care
• To patients with somatic disorders
• To pregnant women
• At schools
Interventions

- Cognitive behavior therapy
- Problem-solving therapy
- Interpersonal psychotherapy
- Based on evidence-based treatments
The “Coping with depression” course

- Available for 80% of Dutch population
- Psychoeducation in groups of 8-12 participants
- Mood management skills
  - Learn to think differently
  - More pleasant activities
  - Social skills
- Reduction of incidence with 38% (Cuijpers et al., Clin Psychol Rev 2009)
- Specific versions for adolescents, older adults, minority groups, guided self-help, internet
Internet-interventions

- Indicated prevention
- No studies examining the effects on the incidence of depressive disorders yet
- Easy access, low threshold, less stigma
- Effective in reducing depressive symptoms
- In Australia: Moodgym, e-couch are very promising
In primary care

- Stepped-care for older adults with subthreshold depression
- 4 steps: watchful waiting, guided self-help, brief psychotherapy, medication
- 1 study: 50% reduction of incidence
- Van ‘t Veer et al., Arch Gen Psychiatry 2009
To patients with somatic disorders

• Increased risk for depressive disorders
• Several studies show that prevention of depressive disorders is possible:
  – Age-Related Macular Degeneration (Rovner et al., 2007)
  – Stroke patients (Robinson et al., 2008)
  – Rheumatology/diabetes (de Jonghe et al., 2009)
  – Head and Neck Cancer patients (Lydiatt et al., 2009)
Pregnant women

• Prevention of Postpartum depression
• Several studies, few examined prevention of depressive disorders
• In our meta-analysis: trend that it may be effective
At schools

- Universal interventions have small effects on depressive symptoms
- No evidence that prevention of MDD is effective
- Individual prevention through the Internet is very promising
- Indicated prevention
Conclusion

- Prevention of depressive disorders is important
- It is possible
- More research is needed to examine methods and target groups in which it is effective
- Implementation!