How to measure mental health in the general population?

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Why we need good measurements of mental health in public health research

• To determine the prevalence of specific mental disorders in the whole population and in subgroups
  - e.g., unipolar depression, anxiety, somatoform disorders, substance abuse

• To analyse whether specific exposures predict onset of specific mental disorders
  - e.g., socioeconomic position, life events, traumatic experiences, chronic adverse working and living conditions
The example of depression
The two clinical diagnostical tools

  American Psychiatric Association (APA)

- ICD-10: International Statistical Classification of Diseases and Related Health Problems, 10th Revision
  World Health Organization (WHO)
Mood disorders in the DSM-IV-TR

Å Depressive disorders
  ï Major depressive disorder
    Å Major depressive disorder, single episode
    Å Major depressive disorder, recurrent
  ï Dysthymic disorder
  ï Depressive disorder NOS

Å Bipolar disorders
  ï Bipolar I
  ï Bipolar II
  ï Cyclothymic disorder
  ï Mood disorder
Mood (affective) disorders in ICD-10

- **Depressive episode (F32)**
  - Mild, Moderate, Severe episode
  - Severe depressive episode with psychotic symptoms
  - Other depressive episodes/episode unspecified

- **Recurrent depressive disorder (F33)**
  - Current episode mild, moderate, severe
  - Current episode with psychotic symptoms
  - Currently in remission

- **Manic episode (F 30)**

- **Bipolar affective disorder (F 31)**

- **Persistent mood (affective) disorder (F 34)**
  - Cyclothymia
  - Dysthymia

- **Other mood (affective) disorder (F 38)**

- **Unspecified mood (affective) disorder (F 39)**
Diagnoses of Major Depression according to DSM-IV-TR

For at least 2 weeks, at least 5 of the following 9 symptoms have to be present, including at least 1 of the first 2 symptoms

1. Depressed mood
2. Loss of interest
3. Increase or decrease in appetite; weight gain or loss
4. Insomnia or hypersomnia
5. Agitated or slowed down behavior
6. Fatigue or loss of energy
7. Feelings of worthlessness or guilt
8. Problems to concentrate
9. Thoughts of suicide or death

Reservation: Major Depression should not be diagnosed, if the symptoms can be explained by bereavement
What do we know about the prevalence of depression in the population and where is our knowledge coming from?
Her og nu har ca. 200.000 danskere en depression. Heraf har ca. 125.000 mennesker en moderat-svær depression, mens ca. 75.000 har en lettere depression. Ca. 15% af den danske befolkning vil på et eller andet tidspunkt i livet få en depression. Det er ca. hver sjette dansker. Kun angst og misbrug forekommer lige så hyppigt.ø

http://www.psykiatrifonden.dk/Forside/Psykiske+sygdomme/Depression

5-20% får på et eller andet tidspunkt depressive symptomer, og ca. 2/3 får tilbagefald en eller flere gange.ø

http://www.psykiatrifonden.dk/Forside/Psykiske+sygdomme
How prevalent is Major Depression? The National Comorbidity Survey Replication (NCS-R) in the USA

Sample: Household residents, age:18+, N=9090 (73% response rate)
Measurement: DSM-IV Criteria of Major Depression assessed by the Composite International Diagnostic Interview (CIDI)

Kessler RC et al. JAMA 2003; 289(23):3095-3105
How prevalent is Major Depression?
A review of 27 European Studies (17 measuring depression)

Sample: 17 Studies from different European countries, Combined N=152 044
Different measures: Clinical interviews, questionnaires

(Range: 3.1-10.1)
6,9

Lifetime-prevalence of major depression
Substantial underestimation in retrospective assessment?

NCS and NCS-R: Retrospective measurement (CIDI)
Dunedin Birth Cohort: Repeated measurement (Diagnostic Interview Schedule, DIS)
at the age of 18, 21, 26, 32 (Response rate: 96% at age 32)
NZMHS=New Zealand Mental Health Survey

Moffitt et al. 2010, Psychological Medicine;40(6):899-909
Cumulative lifetime prevalence of common mental disorders in the Dunedin Cohort

Birth cohort of 1037 Children, born in 1972/1973 in Dunedin, New Zealand (91% of eligible births) Diagnostic Interview Schedule at ages 18, 21, 26, 32 (Response rate at age 32= 96% of the 1015 study members who were still alive)

Moffitt et al. 2010, Psychological Medicine;40(6):899-909
Some remarks from the authors of the Dunedin study

If lifetime prevalence is this high, researchers might begin to ask, what does this mean

- for etiological theory
- for the construct validity of the DSM
- service-delivery policy
- economic burden of disease
- public perception of the stigma of mental disorder
How prevalent is Major Depression? The Danish contribution to the review by Wittchen & Jacobi

Sample: Random sample of Danish residents, age: 20-79, N=1205 (60% response rate)
Measurement: DSM-IV Criteria of Major Depression assessed by the Major Depression Inventory (MDI), a self-rating scale

13.2% of cases were currently treated by a doctor for nervous/mental disorders

Prevalence of Major Depression in Denmark in 2000 according to different measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDI-Scale</td>
<td>2.7</td>
</tr>
<tr>
<td>In- and out-patients</td>
<td>0.18</td>
</tr>
<tr>
<td>In-patients only</td>
<td>0.09</td>
</tr>
<tr>
<td>Anti-depressants</td>
<td>5.04</td>
</tr>
<tr>
<td>Anti-depressants DDD&gt;6 months</td>
<td>2.81</td>
</tr>
</tbody>
</table>

Random sample of 7378 Danish residents, age 40 or 50

Differential misclassification for antidepressants

Random sample of 7378 Danish residents, age 40 or 50

Danish studies on risk factors of depression using different measures for depression
Adverse life events and first time hospitalization for depression in Denmark (register-based study)

- Mother suicide: 2.0*
- Father suicide: 1.7*
- Spouse suicide: 3.4*
- Mother other dead: 0.8
- Father other dead: 1.0
- Spouse other dead: 2.5*
- Recent divorce: 2.2*
- Recent unemployed: 1.3*

* Adjusted for age, gender, calendar time and other life events

* p<0.01

Kessing LV. Psychological Medicine 2003;33(7):1177-1184
Hazard ratios calculated by Cox regression. Adjusted for gender, age, cohabitation, education, income, social support from colleagues, social support from supervisor, influence at work, quantitative demands at work.

Depressive symptoms, measured with a self-rating scale (MDI) and risk of long-term sickness absence

Hazard ratio

How should we label the condition of those with 10-19 points:
- Distress?
- Depressive symptoms?
- Subclinical/Subthreshold depression?
- Reduced psychological health?

Adjusted for previous LTSA, socio-demographics, health behaviors, and occupational group

Hjarsbech PU et al. Journal of Affective Disorders 2011;129(1-3):87-93
Thank you!

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