



MINDFUL - Mental health information and determinants for the European level

**MINDFUL-20**  
**Short list of MINDFUL mental health indicators**

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## *Order according to priority*

1. Psychological distress
2. Psychological impairment
3. EVI
4. Mental disorders among children and adolescents (generic)
5. Major depression
6. Any anxiety disorder
7. Hazardous and harmful drinking
8. Sense of mastery
9. Self-esteem
10. Social support
11. Negative life events
12. Childhood adversities
13. Suicide (Standardized mortality ratio)
- 14 Disability pensions due to mental disorders
15. Mental health promotion
16. Number of psychiatrists
17. Involuntary placements
18. Use of antidepressants
19. Use of anxiolytics
20. Alcohol related deaths

## 1. *Psychological distress*

### **Description**

- A non-specific dimension of psychopathology that indicates that something is wrong but does not yield diagnostic assessment, comprises usually of anxiety and depression related distress states. Distress is associated with high use of health services and is a predictor of mortality; important measure for public health matters.

### **Validity**

Provides estimate comparable to other measures of psychological distress, associated with service use and decreased level of functioning. A comparison between MHI-5 and GHQ-12 found that both instruments were equally sensitive to socio-economic characteristics and to levels of social support. The scores on the two instruments were highly correlated (Spearman rank correlation-0.73). A study of a random population sample found that the area under the receiver operating characteristics curve (AUC) of 0.72 in identifying any DSM-IV Axis I disorder using the MHI-5 (except substance use) was not satisfactory. The MHI-5 revealed best performance for mood (AUC: 0.88) followed by anxiety disorders (AUC: 0.71). Sensitivity and specificity were poor for somatoform and substance use disorders, especially in cases without comorbid mood or anxiety disorder. The power to detect mood and anxiety disorders of the MHI-5 was better for the 4-week compared with the 12-month diagnoses. The MHI-5 was recommended as a screen for mood disorders. Compared to Diagnostic Interview Schedule diagnoses the MHI-5 provided estimates of areas under curve ranging from 0.739 (for anxiety disorders) to 0.892 (for major depression).

### **Reliability**

Reliability estimates have exceeded 0.7 in diverse populations for all dimensions of the SF-36.

### **Definitions**

- A health interview survey indicator. Occurrence and extent of psychological distress during past month. Mean score of the Mental Health Index (MHI-5) from the RAND-36 questionnaire.

### **Availability and time coverage**

- DE, FI, FR, GR 2001;
- AT, BE, DE, DK, ES, FI, FR, GR, IE, IT, LU, PT, SE, UK 2002
- NL 1996, 2001-2004
- SE 1992
- UK 1992, 1996, 1999
- FI 1995
- IE 2000

**Rationale for choice:** Importance for prevention, public health perspective, good availability

## *2. Psychological impairment*

### **Description**

- Signifies a lowered level of ability to function. Psychological impairment substantially limits one or more major life activities. Impairment of function is an outcome of ill-health requiring monitoring.

### **Definition**

- A health interview survey indicator. Occurrence and extent of psychological impairment during past month. Age and sex adjusted mean score of the Role Limitations due to Emotional Problems -index from the RAND-36 questionnaire

### **Validity**

Associated positively with measures of disability and mental ill health.

### **Reliability**

Reliability estimates have exceeded 0.7 in diverse populations for all dimensions of the SF-36 (5).

### **Availability and time coverage**

- DE, FI, FR, GR 2001
- FI 1995
- SE 1992
- UK 1992, 1996, 1999
- IE 2000
- DE 2002

**Rationale for choice:** Importance for prevention, public health perspective, but fair availability

### *3. Energy Vitality*

#### **Description**

- The sense of energy and vitality is an important indicator of positive mental health. It is measured with questions about the degree of both energy and tiredness, as well as the overall degree of happiness.

#### **Definition**

- A health interview survey indicator. Occurrence and extent of energy and vitality during past month. Age and sex adjusted mean score of the Energy and Vitality Index (EVI) from the RAND-36 questionnaire.

**Validity:** Associated positively with other measures of quality of life and low level of symptomatology and negatively with mental health.

**Reliability:** Reliability estimates have exceeded 0.7 in diverse populations for all dimensions of the SF-36.

#### **Availability and time coverage**

- DE, FI, FR, GR 2001;
- AT, BE, DE, DK, ES, FI, FR, GR, IE, IT, LU, NL, PT, SE, UK 2002
- FI 1995
- NL 1996
- SE 1992
- UK 1992, 1996, 1999
- IE 2000

**Rationale for choice:** Importance for prevention, public health perspective, good availability

## *4. Mental disorders among children and adolescents (generic)*

### **Background:**

Psychiatric disorders in childhood and adolescence are common in the population. SDQ screens for internalizing, externalizing, conduct and attention deficit disorders. The SDQ is a brief behavioural screening questionnaire about 3-16 year olds and it can be completed in 5 minutes. It exists in several versions to meet the needs of researchers, clinicians and educationalists.

### **Description:**

In more detail those at risk for developing psychiatric disorders can be detected by the scores on the instrument. Most authors conclude that the instrument seems to present an efficient and economical screening instrument for preventive research on large community samples. The SDQ seems to have made a rather quick entrance into psychiatric epidemiological research. There are self-report, teacher and parent versions of the scale. The SDQ is a behavioural screening questionnaire measuring four behavioural symptoms: emotional symptoms, conduct problems, hyperactivity/inattention, and peer relationship problems. It includes 25 items (emotional, conduct, hyperactivity/inattention, and prosocial behavior) and assessment of 5 domains of functioning. The predictive algorithm generates "unlikely", "possible" or "probable" ratings for psychiatric disorders described above.

### **Validity**

SDQ-self report scores have the comparable AUC-values (area under curve) to YSR/CBCL-scores in predicting clinical diagnosis. The SDQ has been validated in a number of studies and in a number of countries, i.e. Germany, UK, the Netherlands, Australia, Norway, Sweden, Italy, Spain, Portugal, Croatia, and France.

### **Reliability**

Reliabilities of the different scales are (considerably better findings have been reported):

- Emotional symptoms:  $\alpha=0.68$
- Conduct problems,  $\alpha=0.52$
- Hyperactivity-inattention,  $\alpha=0.68$
- Peer problems,  $\alpha=0.44$

### **Availability:**

Use in population surveys: has been used in several European population surveys

**Rationale for choice:** Importance for prevention, public health perspective, important to include a measure of mental morbidity among minors, fairly good availability

## *5. Major depression*

### **Description**

- Major depression is a serious medical illness; unlike normal emotional experiences of sadness, loss, or passing mood states, major depression is persistent and can significantly interfere with an individual's thoughts, behaviour, mood, activity, and physical health. Depression is a major public health issue in all Member States.

### **Definition**

- A health interview survey indicator. Age and sex adjusted prevalence of cases fulfilling the criteria of major depression for an episode of depression for at least two weeks during past 12 months; instrument: CIDI-SF.

### **Validity**

Validity of CIDI has been found to be good using Present State Examination, Schedules for Clinical Assessment in Neuropsychiatry, clinician's checklists or LEAD (longitudinal, expert, all data) as a gold standard.

### **Reliability**

CIDI gives good test-retest reliability and an excellent inter-rater reliability. Overall classification of the CIDI-SF accuracy ranged from a low of 93% for major depressive episode to a high of over 99% for generalized anxiety disorder. Probability of CIDI major depression caseness using CIDI-SF was between 0.8895 and 0.9083 if the score was from 5 to 7, respectively.

### **Availability and time coverage**

- DE, FR, GR 2001; NL 1996, FI 1996, 2001

**Rationale for choice:** Importance for prevention, public health perspective, but only fair availability

## *6. Any anxiety disorder*

### **Description**

- Anxiety is an emotion that can be either normal or pathological. Anxiety disorders are characterised by anxiety that manifests an intensity and/or duration inappropriate to the stimulus which triggers it, and when it becomes a cause of suffering and dysfunction for the individual. They are common mental disorders which can seriously affect individual's ability to conduct normal and socially active life including work and leisure time activities. Anxiety disorders include generalised anxiety disorder, different phobias, panic disorder, and obsessive-compulsive disorder.

### **Definition**

- A health interview survey indicator. Age and sex adjusted prevalence of a disorder fulfilling the criteria of any anxiety disorder during past 12 months; instrument: CIDI-SF.

### **Validity**

Validity of CIDI has been found to be good using Present State Examination, Schedules for Clinical Assessment in Neuropsychiatry, clinician's checklists or LEAD (longitudinal, expert, all data) as a gold standard.

### **Reliability**

CIDI gives good test-retest reliability and an excellent inter-rater reliability. Overall classification of the CIDI-SF accuracy ranged from a low of 93% for major depressive episode to a high of over 99% for generalized anxiety disorder. Probability of CIDI major depression caseness using CIDI-SF was between 0.8895 and 0.9083 if the score was from 5 to 7, respectively.

### **Availability and time coverage**

- BE, FR, IT, ES 2002; DE, NL 2003; DE 1999, NL 1996; FI 2001

## *7. Harmful and hazardous drinking*

### **Description**

- Description: Five item measure that can be administered as a self-report scale or used in an interview. AUDIT-5 is derived from Alcohol Use Disorders Identification Test. AUDIT-5 is a screening instrument for hazardous and harmful alcohol consumption. The five item version was developed based on a survey study among primary care attendees and it includes items 1, 2, 4, 5 and 10 from the original version.

### **Validity**

In the validation study CIDI alcohol use module was administered by an investigator. The study did not mention whether the assessments were conducted in a blinded manner or not. Additionally, the primary care physician on a form a list of clinical signs often associated with alcohol consumption noted drinking behaviour during the previous 12 months and noted the intake of psychotropic drugs during two weeks before examination. Area under receiver operating characteristic (ROC) curve was 0.931 (95%CI: 0.919 – 0.944).

A comparison of AUDIT, AUDIT-5 and CAGE among elderly people referred to mental health service the ROC of AUDIT was 0.961, of AUDIT-5 was 0.964 and of CAGE 0.780. The AUDIT-5 performed as well as AUDIT. AUDIT-5 performed best of the three scales with a sensitivity of 75 %, specificity of 97.2 % and positive predictive power of 83.3 % when the previously suggested cut-off point.

A recent systematic review found that AUDIT was most effective in identifying subjects with at-risk, hazardous, or harmful drinking (sensitivity, 51%-97%; specificity, 78%-96%), while the CAGE questions proved superior for detecting alcohol abuse and dependence (sensitivity, 43%-94%; specificity, 70%-97%).

### **Reliability**

Test-retest data are not available. Using five points as a cut-off point gave sensitivity of 0.79 and a specificity of 0.95. The positive predictive value was 0.73. The probability of a subject scoring less than five having alcohol problems was less than 4 %.

### **Availability and time coverage**

None available

**Rationale for choice:** Importance for prevention, public health perspective, but not available

## *8. Sense of mastery*

### **Description**

- Sense of mastery is a form of perceived personal control. Predictor of health outcomes (both for mental health and general health).

### **Definition**

- A health interview survey indicator. Current occurrence and extent of sense of mastery. Age and sex adjusted mean score of the 7-item version of the Sense of Mastery -questionnaire, in which score less than 20 indicates low sense of mastery, and score less than 12, indicates pessimism.

### **Validity**

Low level of mastery has been shown to have a positive correlation with mental and general ill-health (1,2,3,4,5). High level of mastery is positively associated with measures of social support and coping.

### **Reliability**

Cronbach's alpha = 0.76, correlations (LISREL) between sense of mastery scores at time 1 and at time 2 four years later was 0.44.

### **Availability and time coverage**

- DE, FI, FR, GR 2001

**Rationale for choice:** Measure of psychological protective factor, strongly associated with general and mental health, public health perspective, but only fair availability

## 9. *Self esteem*

### **Description**

- Self-esteem is defined as one's sense of worthiness as a person and it functions as an anxiety buffer. It is universally quantifiable human characteristic. Self-esteem is associated with measures of temperament and it has a negative correlation with neuroticism and a positive correlation with extraversion. Self-esteem acts as an anxiety buffer and low level of self-esteem is associated with depressed mood. Self-esteem has additionally described as an ingredient of the affective link between oneself and others. SES has been also included in the European School Survey Project on Alcohol and Drugs (ESPAD) survey covering 30 countries.

### **Definition**

- A health interview survey indicator. Current occurrence and extent of self-esteem. Age and sex adjusted mean score of the 10-item Self Esteem Scale (SES).

### **Validity**

Factor structure has been fairly well replicated across many nations and several cultures (average Tucker's congruence = 0.987). Negatively associated with neuroticism (negative emotionality) and positively associated with extraversion (positive emotionality).

### **Reliability**

Mean reliability across several nations  $\alpha = 0.81$ . Guttman split-half reliability = 0.73.

### **Availability and time coverage**

- AT, BE, CY, CZ, DE, EE, ES, FI, FR, GR, IT, LT, LV, MT, NL, PL, PT, SI, SK, UK 2004.

**Rationale for choice:** Measure of psychological protective factor, strongly associated with general and mental health, public health perspective, fairly good availability

## *10. Social support*

Indicator for social support: Determinant, social and cultural environment

### **Background:**

Social support is a protective factor in times of stress, low levels of social support have been linked to increased rates of depression, somatic illnesses and mortality.

### **Description:**

Social support has been proposed to buffer against stress outcomes and depression. Prospective studies do not provide much support to the stress-buffering hypothesis, but indicate that social support has an independent influence on mental health (i.e. chronic strain hypothesis).

Oslo-3 is a composite scale measuring both perception of support and social network.

### **Validity**

Oslo-3 is negatively associated in a statistically significant manner with anxiety and depression measures.

### **Reliability**

Internal reliability: Cronbach's  $\alpha = 0.6$ .

### **Availability:**

Use in population surveys:

BSSQ has been used e.g. in several Finnish population surveys (e.g. Health and Social Support study, 10-town study) (2,3).

**Rationale for choice:** Measure of social protective factor, strongly associated with general and mental health, public health perspective, but not available

## *11. Negative life events*

### **Description**

- Negative life events are associated with ill-health - both mental disorders (e.g. depression) and somatic diseases. Negative life events can be defined as major occurrences in one's life that require psychological adjustment to certain degree.

### **Definitions**

- A health interview survey indicator. Age and sex adjusted prevalence of cases having experienced two or more events during the past 6 months according to the 12-item Threatening Life Events (LTE) questionnaire.

### **Validity**

Concurrent validity: for events prior 6 months to the data collection the sensitivity was 0.89 and specificity 0.74 using Bedford College Life Events and Difficulties Scales (LEDS) as a gold standard, for events 3 months to the data collection the sensitivity was 0.89 and 0.74 respectively (1).

### **Reliability**

Cohen's  $\kappa$  values ranged between 0.78 and 1 for the 12 items. Agreement ratings with other informants on the events reached Cohen's  $\kappa$  values ranging from 0.7 to 0.9. Agreement of LEDS interview with relative informants' LTE ratings at 3 months was 0.84 and at 6 months 0.66 (1).

### **Availability and time coverage**

- DE, FI, FR, GR 2001

**Rationale for choice:** Risk factor strongly associated with general and mental health, public health perspective, but only fair availability

## *12. Childhood adversities*

Indicator domain: Determinant, Determinant, social and cultural environment

### **Background:**

Childhood adversities are significantly associated with both physical and mental ill health.

### **Description:**

Childhood adversities are associated with depression and its prognosis in adulthood as well as increased somatic morbidity and mortality in both childhood and adulthood. Childhood adversities are strongly associated with vulnerability and background several factors (such as personality and genotype) moderate the outcome of the adversity. Adversity is defined here a major negative event in childhood or adolescence challenging seriously one's ability to cope.

### **Definition:**

National Comorbidity Survey: Life event history section, four items inquiring sexual abuse (rape and sexual molestation), physical abuse and serious neglect before the respondent was 18 years old, The measure of childhood adversity using these items is based on retrospective recollection.

1. You were raped (someone had sexual intercourse with you when you did not want to by threatening you or using some degree of force) (<18 years of age)
2. You were sexually molested (someone touched you or felt your genitals when you did not want them to) (<18 years of age)
3. You were physically abused as a child
4. You were seriously neglected as a child

### **Validity**

Significantly associated with major depression among men and women (OR= ca. 3) and cardiovascular diseases among omen (OR= ca. 9).

### **Reliability**

No studies reporting reliability are available.

### **Availability:**

Data not available

**Rationale for choice:** Risk factor, strongly associated with general and mental health, public health perspective, but not available

### *13. Suicide (Standardized mortality ratio)*

#### **Description**

- Deaths caused directly by intentional self-harm, including purposely self-inflicted poisoning or injury, completed suicide.

#### **Definitions**

- Cause of death: ICD-10 codes X60-X84
- Standardised death rate per 100000 inhabitants, total population (SDR, European Standard Population) for the whole Member State

#### Availability and time coverage

COUNTRY	TIME COVERAGE
Austria	1990-2003 1
Belgium	1990-1997 1
Cyprus	1990-1999 3
Czech Republic	1990-2003 1
Denmark	1990-2001 1
Estonia	1990-2003 1
Finland	1990-2003 1
France	1990-2002 1
Germany	1990-2003 1
Greece	1990-2003 1
Hungary	1990-2003 1
Ireland	1990-2003 1, 2
Italy	1990-2002 1
Latvia	1990-2003 1
Lithuania	1990-2003 1
Luxembourg	1990-2003 1
Malta	1990-2003 1
Netherlands	1990-2003 1
Poland	1990-1996, 1998-2003 1
Portugal	1990-2003 1, 2
Slovakia	1990-2002 1
Slovenia	1990-2003 1
Spain	1990-2003 1, 2
Sweden	1990-2002 1, 2
United Kingdom	1990-2002 1, 2

#### **Data sources**

- WHO, European Health for All Database
- Eurostat, Dissemination Database (2003)
- CY: Zacharakis CA et al. Suicide in Cyprus 1988-1999. *European Psychiatry* 20 (2005) 110–114 (only males and females separately, no totals)

**Rationale for choice:** Importance for prevention, public health perspective, good availability

## *14. Disability due to mental disorders*

### **Description**

- Proportion of disability pensions due to all mental and behavioural disorders

### **Definition**

- Percentage of people (16-64 years old) receiving disability pensions due to mental disorder (ICD-10 codes F00-F99) out of all disability pensions at the end of the year.

### **Validity and reliability**

There are difficulties in comparison of the data between countries due to the differences in legislature and social insurance systems.

### **Availability and time coverage**

- AT 1999-2000; DE 1998-1999; FI 1990-2004; GR 1994, 1996-1999; IE 1999; NL 1999; PT 1999; SE 1998; UK 1998-1999

**Rationale for choice:** Measure of outcome related to mental disorders, important from the public health perspective, fair availability

## *15. Mental health promotion*

### **Description**

- Current activities focusing on promoting mental health for children and adolescents. These activities include parenting support interventions (e.g., home based, parent management training, etc.), and/or school approaches for mental health promotion (e.g., social skill building, bullying prevention, changing the school ecology, etc.). A national/regional mental health promotion activity that utilizes defined methods in order to achieve specified goals and objectives in different settings.

### **Definition**

- Countries with above mentioned activity are marked in numbers 1-2; parenting=1, school mental health promotion=2. Should a country have both activities, it would be marked 12.

### **Availability and time coverage**

- Whole EU surveyed in 2004

### **Groupings of available data**

### **Notes**

### **Data sources**

- IMHPA Country stories

## *16. Number of psychiatrists*

### **Description**

- Registered medical specialists in psychiatry/neuropsychiatry

### **Definitions**

- Rate per 100000 inhabitants

### Availability and time coverage

- AT 1990, 1992-2003; BE 1990-2002; CY 1995, 2000; CZ 1990-2003; DE 1990-2004; DK 1990-2003; EE 1990, 1992-2003; ES 1992, 1996; FI 1990-2003; FR 1990-2004; GR 1990, 1995-2001; HU 1999; IE 1993, 1995-2004; LT 1990-2003, LU 1995-2003; LV 1990, 1992-2003; NL 1990-1999, 2001, 2002; PT 1990, 1992-2002; SI 1993-2002; SK 1994-2003; SE 1996, 1998, UK 1992-2004

### **Validity and reliability**

Provides a robust, proxy estimate of availability of services. Comparability of data in national sources is questionable due to various reasons.

### **Rationale for choice:**

Measure of resource of services, fairly good availability

## *17. Involuntary placements*

### **Description**

- Patients committed to involuntary psychiatric hospital treatment

### **Definitions**

- Commitment rates (annual number of compulsory admissions per 100,000 population)

### **Validity and reliability**

Provides a robust, proxy estimate of use of services. Comparability of data in national sources is questionable due to various reasons.

### **Availability**

- AU, BE, DE, FI, FR, IE, LU, NL, PO, SE, UK

**Rationale for choice:** Measure of use of services, important from policy and human rights aspects, fairly good availability

## *18. Use of antidepressants*

### **Description**

- A class of drugs used primarily to treat depression but also anxiety. Some of these drugs have also been found to be useful in the prevention of headache, even when headaches are not associated with depression.

### **Definition**

- Average number of defined daily doses (DDD) of antidepressants (ATC class NO6A) per day during a year per 1000 inhabitants. Calculation is based on the volume of sales to pharmacies and hospitals by wholesalers.

### **Validity and reliability**

Provides a robust, proxy estimate of use of treatment. There may be some difficulties in comparability of data.

### **Availability and time coverage**

- AT 1999/2000; BE 1997-2002; CZ 1990-2002; DE 1998, 2000; DK 1996-2003; ES 2000; FI 1990-2005; FR 2000; GR 1995; HU 1995-2002; IE 2000; IT 2000; PT 2000-2002; SE 1990-2005; UK 2000

**Rationale for choice:** Measure of treatment use, related to morbidity important from the public health perspective, fair availability

## *19. Use of anxiolytics*

### **Description**

- A class of drugs used to reduce serious anxiety, tension, and agitation. They used to be known as minor tranquillisers.

### **Definition**

- Average number of defined daily doses (DDD) of anxiolytics (ATC class NO5B) per day during a year per 1000 inhabitants. Calculation is based on the volume of sales to pharmacies and hospitals by wholesalers.

### **Validity and reliability**

Provides a robust, proxy estimate of use of treatment. There may be some difficulties in comparability of data.

### **Availability and time coverage**

- AT 1999/2000; CZ 1990-2002; DE 1998; DK 1995-2003; FI 1990-2005; GR 1995; HU 1995-2002; PT 2000-2002; SE 1990-2005

**Rationale for choice:** Measure of treatment use, related to morbidity important from the public health perspective, fair availability

## *20. Alcohol related deaths*

### **Description**

- Deaths caused by use of alcohol. The definition refers to those deaths that are caused by long-term use, as well as sudden poisonings directly related to the use of alcohol.

### **Definition**

- Cause of death: the following ICD-10 codes: Mental and behavioural disorders due to use of alcohol (F10), degeneration of nervous system due to alcohol (G31.2), Alcoholic polyneuropathy (G62.1), Alcoholic myopathy (G72.1), Alcoholic cardiomyopathy (I42.6), Alcoholic gastritis (K29.2), Alcoholic liver disease (K70), Alcohol-induced chronic pancreatitis (K86.0), Maternal care for (suspected) damage to fetus from alcohol (O35.4), Fetus and newborn affected by maternal use of alcohol (excludes: fetal alcohol syndrome) (P04.3), Accidental poisoning by and exposure to alcohol (X45).
- Crude death rate (CDR) per 100000 inhabitants

### **Availability and time coverage**

- AT, FI 1990-2004; DE 1991-2004; ES 1999-2003; LU 1999-2004; NL 1996-2004; SE 1997-2003

**Rationale for choice:** Importance for prevention, public health perspective, fairly good availability