Juha Lavikainen, Tom Fryers and Ville Lehtinen (Eds.)

Improving Mental Health Information in Europe

Proposal of the MINDFUL project

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PREAMBLE

The project, '**MINDFUL**', ("Mental health information and determinants for the European level") was co-funded for 27 months (15 March 2004 and 15 June 2006) by the European Commission from the 'health information and knowledge' strand of the Community action programme (2003-2008) in the field of public health. 'Co-funding' requires substantial contributions from each participating institution.

The work of the project was firmly based upon a number of previous projects funded through the Health Monitoring and Health Promotion Programmes of the EC, and linked to many other projects and developments within EC health monitoring initiatives.

This publication is the main product of the project.

The two principal goals of MINDFUL were:

> **(1) To improve the level of mental health information within the EU** and
> **(2) To produce a proposal for a comprehensive mental health information system for the EU.**

MINDFUL aimed at substantially widening the scope of contemporary mental health monitoring. The project consisted of seven **partnership projects** each with an independent leader and collaborators in different EU Member States. They were selected because they addressed perceived needs for further development in particular fields. The project's modular structure allowed parallel development in a group of different but related topic areas.

The partnership projects focused on the following issues, each described in detail in the following chapters (the responsible organisation is given in brackets):

> (1) Structural indicators of positive mental health (University of Deusto, Bilbao, Spain);
> (2) Childhood determinants of adult mental illness (University of Leicester, Leicester, England);

(3) Survey instruments and methods (Public Health Foundation MGEN, Paris, France);

(4) Monitoring service utilisation (Ludwig Boltzmann Institute for Social Psychiatry, Vienna, Austria);

(5) Quality indicators for mental health promotion and prevention (Radboud University Nijmegen, The Netherlands);

(6) Exploring and developing the relevant mental health information systems in the new Member States (Public Health Institute of the Republic of Slovenia, Ljubljana, Slovenia);

(7) Refining the existing set of mental health indicators and building the MINDFUL database (National Research and Development Centre for Welfare and Health STAKES, Helsinki, Finland).

Population health monitoring is an essential component of public health, and it is important that it encompasses mental health, but indicators for mental health, like psychiatric diagnoses, are less easily defined and measured in standard ways, and therefore much more problematic than for physical health. Because of problems of definition, standardisation of measurement, lack of routine data and real or perceived difficulties of collection in many Member States, previous work had inevitably left some indicators ambiguous and not fully developed, and left some obvious gaps in the provisional final list. The current suite of projects was intended to contribute to rectifying these inadequacies, as well as to contribute to mental health research in general.

This book presents a proposal for developing European mental health information systems. It also includes contributions from all the partnership projects in separate chapters written by the project leaders and their colleagues. Taken together, the importance of monitoring the mental health at the population level is strongly stressed in this publication.

This book is a joint undertaking of all the MINDFUL participants. The Editor-in-Chief has been the project manager, Juha Lavikainen (FI). He has been assisted by an Editorial Board, representing the leadership of all the partnership projects. The Editorial Board consisted of the following persons: Tom Fryers (UK), Eva Jané-Llopis (NL), Heinz Katschnig (AT), Tanja Kamin (SI), Viviane Kovess (FR), Ville Lehtinen (FI), and Agustin Ozamiz (ES).

The editors and authors hope that this publication will enhance the efforts to extend and improve the comprehensive health information systems of the EU, and especially to promote the fuller inclusion of mental health information as an integral and essential part of such systems and more widely in the thinking of personnel in the EU institutions and the planning of EU health activities.

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CONTENTS

1. Introduction

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1.1. Why monitor mental health?

The 1990`s witnessed an increasing interest in mental health issues. Mental ill-health has become a major public health concern mainly for two reasons: Epidemiological studies have shown 1) that up to one fifth or a quarter of the general population suffer from some sort of mental disorder at a given time and 2) that up to half of the population may be at risk of having a mental disorder at some point during their lifetime. Disability due to psychiatric disorders has received increasing attention since the Global Burden of Disease report attributed 25% of all morbidity to psychiatric illnesses[1]. The report projected that depression will be the second leading cause of disability worldwide by 2020.

Mental health information systems are needed for planning and decision making purposes. They permit cross-country and within country comparisons, monitoring, evaluation and development of services, including quality of care, health promotion and prevention, and they facilitate research. Well-functioning information systems should ultimately support all mental health activities that aim to improve the mental health status of EU citizens. To provide a comprehensive picture, multiple aspects of mental health work have to be covered. A strong case for making investments in mental health requires reliable data on use and benefit of services to evaluate cost-effectiveness and cost-benefits.

A broad definition of mental health work encompasses health promotion, prevention of morbidity, treatment of illness, rehabilitation, continuing care and prevention of excess mortality. This work can be directed at individuals, groups, local communities, or the wider society.

Effective planning is backed up by 1) information on needs and 2) information on the available resources. The goal of planning is to discover the best possible balance between these two issues: **how can the needs be met in the best way with available resources**. The planning phase will be followed by the decision-making process that is mainly the responsibility of health

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1   Global burden of disease estimates 2001. Geneva, World Health Organization, 2001–

Figure 1. The development circle
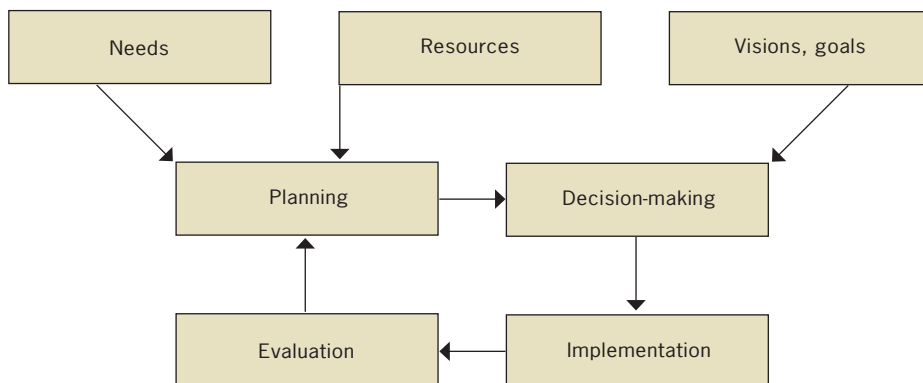
administrators and, ultimately, of politicians. Ideally, decision-making is guided also by goals and visions about the way to proceed. A very important issue is that evaluation should always follow implementation of an activity. The results of this evaluation will lead to a new round of the development circle (**Figure 1**).

1.2. Health information in the European Union framework

As outlined in the public health programme, the general objective of the health information and knowledge system is "*to collect, process, share and analyse data on human health at Community level in order to obtain objective, reliable, compatible and comparable information*". The overall aim of the programme is to "*contribute towards the attainment of a high level of physical and mental health and well-being*".

The first European Community action programme on public health was implemented between 1997 and 2002, and it consisted of six vertical (illness-oriented) and two horizontal programmes. One of these programmes focused on **Health Monitoring** with the aim of producing a system to monitor health status in the community, facilitate the planning, monitoring and evaluation of Community programmes, and to provide Member States with information to make comparisons and to support national policies. The activities of this programme have been described in a special edition of the European Journal of Public Health [2].

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2   The European Union Health Monitoring Programme, European Journal of Public Health, Volume 13, Supplement 1, 2003. Articles downloadable free of charge from http://eurpub.oupjournals.org/content/vol13/suppl_1/

The activities of the EU Health Monitoring Programme were conducted under three headings, or pillars:

Pillar A: Establishment of Community Health Indicators (indicator projects);
Pillar B: Development of a Community-wide network for sharing health data (HIEMS);
Pillar C: Analyses and reporting (health reports).

The European Community Health Indicator project (ECHI) devised the structure of the future Health Indicators Exchange and Monitoring System (HIEMS). A comprehensive application of the health indicators would enable the satisfactory follow-up of the health situation of populations within the EU.

These programmes have been replaced by a Programme of Community Action in the field of public health (2003-2008), which includes three "strands": 1) Health Information and Knowledge, 2) Responding to Health Threats, and 3) Addressing Health Determinants.

The general objective of Strand 1 of the programme, Health Information and Knowledge, is to improve information and knowledge for the development of public health. Hence, the activities under this strand lay the foundation for subsequent development of health monitoring and health information systems, as well as for their implementation and operation.

In the general framework of monitoring the health of the population, it is vital that mental health is included. MINDFUL, together with its predecessors, has been designed to fulfil this task at the European level.

1.3. What is mental health monitoring?

Monitoring mental health is defined as systematic, repeated measures of matters related to the mental health of the population. In addition to collecting data, monitoring health implies the follow-up of the measures with the purpose of interpreting the evolution of the mental health situation with regard to established policies and strategies, and taking relevant actions if necessary. Information is collected by using indicators relying on direct measures, proxy measures, or informed estimates.

A health indicator can be conceptualised as a bridge between health policy and scientific information (e.g. epidemiology). Proper guidelines should be provided to *interpret* the trends revealed by these indicators. Furthermore, one needs a conceptual model of health to facilitate that interpretation. Health care indicators reflect aspects of both individual health and health care in a community.

Mental health indicators, therefore, reveal problems or priorities in relation to mental health in a particular population. They may derive from

routinely collected data or items in health surveys, and are most useful if regularly repeated. Interpretation needs a broad understanding of health, health care and communities, and several indicators may need to be considered together, as many things may affect any one indicator.

A comprehensive **mental health monitoring system** must cover multiple aspects of mental health. Therefore, the following points have to be considered when outlining the comprehensive set of indicators:

a) The set of mental health indicators must have clear-cut definitions, and the indicators must describe the various important aspects of mental health (e.g. affective experiences and emotional resilience) as well as its interactional and societal pre-requisites or conse quences (e.g. social environment, level of well-being, quality of life).

b) The system must be sensitive to change over time and to cultural differences within populations.

c) Different mental health activities (promotion; primary, secondary and tertiary prevention; and prevention of excess mortality) must be covered by the system.

d) The set of mental health indicators has to be an integrated part of a comprehensive community health monitoring system.

e) The indicators must provide comparable and reliable data on mental health in different countries. As far as possible the indicators should be based on data already collected.

f) The system should include indicators to describe relevant and feasible aspects of the mental health service system.

g) The system must have relevance for planning and political decision-making.

h) Citizen-participation and user-views, which are increasingly important elements in mental health today, have to be taken into account if the needs of the population at large are to be served in the best possible way.

Figure 2. The measurement iterative loop
(adapted from Tugwell, Bennett, Sackett, Haynes, 1985).

Reassessment of burden of illness and assessment of mental health situation

Burden of illness: mental health status of the population

Ongoing monitoring of success

Analysis of determinants of mental health and related needs

Implementation comprising integration of feasibility, impact and efficiency

Analysis of potential interventions

Costs and benefits of intervention options

1.4. What is mental health?

1.4.1. General definition

Although no single generally accepted definition exists for mental health, the following scheme[3] is used in this context.

Mental health, as an indivisible part of general health, reflects the equilibrium between the individual and his/her environment. The determinants of mental health include:

1) individual factors and experiences (e.g, childhood events, recent trauma, etc.);
2) social interactions (e.g. family relationships, work relationships etc);
3) societal structures and resources (e.g. welfare and support systems); and
4) cultural values (e.g. transitional cultures; multi-cultural conflicts).

Mental health can also be seen as a bio-psycho-social *process* that comprises protective, predisposing, precipitating, restoring and supporting factors, together with various consequences and outcomes.

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3   Development and operationalization of key concepts for mental health promotion in Europe.

1.4.2. Dimensions of mental health

There are two main approaches toward mental health:

Positive mental health considers mental health as a resource. It is essential to general wellbeing as well as to our ability to perceive, comprehend and interpret our surroundings, to adapt to them or to change them if necessary, and to communicate with each other. Healthy mental abilities and functions enable us to experience life as meaningful, helping us to be, among other things, creative and productive members of society.

Negative mental health deals with mental disorders, symptoms and problems. Mental disorders are defined in current diagnostic classifications by the existence of symptoms (with the exception of psycho-organic disorders and substance abuse disorders). A state is called disorder when symptoms are long-lasting, beyond the control of the individual, out of proportion to possible external causes, and reducing functional capacity. Mental symptoms and problems may also exist even though the criteria for clinical disorders are not met. These *subclinical* conditions are often a consequence of persistent or temporary distress. They can be a marked burden, but are not always recognised as mental health problems or presented for care.

1.4.3. Mental health needs

Perceptions of health needs include value judgements and, therefore, are not objective. They are affected by health knowledge, previous experience of health care, risk-taking propensity, the balance of perceived short-term and long-term benefits and disadvantages, the importance of autonomy, and various other personal and cultural factors. A need for health or social intervention exists when benefits can be expected from a medical or social viewpoint. Mental ill-health is associated with multiple needs: psychological, physical, and social. If protection or promotion of mental health is to be based on needs, agreement must be reached as to what constitutes a need, how it should be assessed, and how and when it should be addressed.

1.5. Data collection methods

Several questions of a conceptual and practical nature have to be answered in the assessment of mental health related needs:

1) what are the mental health needs in a population?
2) how can we quantify and measure them?
3) how can we carry out the assessment in a cost-effective and sufficiently comprehensive manner?

Mental health, mental health determinants, and mental health needs can be measured both at individual and population level. Indicators are concerned with population-level measures, but these often incorporate individual-level measures for whole or appropriately sampled populations.

Population level mental health monitoring cannot be restricted to a selected group, but must represent the whole population at risk. This calls for epidemiological studies, which are, however, expensive and time-consuming ways to estimate the mental health needs of a population. Data for some indicators can only be collected by population surveys using specific methods and measures. For monitoring purposes, the method considered should be brief and easy to administer, but should provide a reliable and valid picture of what is being measured. This limits the choice of measures, and implies that a reasonable balance between ease of use, and validity and reliability is a necessary requirement.

Population level assessments may also be conducted using analyses of routinely collected service-utilization data, and socio-economic data, sometimes in combination. A refined needs-index model combines utilization data with regional socio-demographic indicators of deprivation or social exclusion (e.g. unemployment rate; rate of disability pensions; people over 65 living alone; population single, widowed or divorced; households with no car; average illegitimacy index). Such a system would always necessitate local configuration and piloting of an outlined model.

Different methods are needed to collect data for health indicators:

1. Routine statistics. It should be kept in mind that routine statistics are usually collected for administrative purposes, and their use in (mental) health monitoring may be limited. Differences in national legislation, regulations, and administrative practices may cause significant bias in international comparisons. Most of the countries collect regular data on causes of death (including suicide and self-inflicted injuries, alcohol-related deaths and drug-related deaths) as well as the number of hospital beds and their utilisation, but even these reveal very different definitions. Fewer countries can provide data on psychiatric out-patient care or use of psychotropic drugs.

2. Disease- or condition-specific data collection. These data are most often collected for health surveillance, planning or epidemiological purposes. Differences in inclusion criteria, and in data collection, coding and diagnostic practices may cause significant bias and limit their use in international mental health monitoring. Population-based data are more likely to be comparable than institution-based data.

Data on severe mental and behavioural disorders, such as dementia/Alzheimer's disease, schizophrenia, severe depression, and alcohol dependence, may be available from some national or regional data collection systems. The features of each data collection system must be carefully examined to ensure comparability before the data can be used in international comparisons.

3. Health surveys (postal questionnaires, health interview surveys and health examination surveys). As in all surveys, the inclusion criteria and sampling techniques are crucial for the interpretation of results. In general, institutionalised people are excluded from these kinds of surveys, which lead to underestimated incidences and prevalence of severe (mental) health problems. Also the participation rates may be low among people with mental health or behavioural problems, which may enlarge the bias. International comparisons are very complicated if there are significant differences in inclusion criteria, sampling procedures and participation rates between countries. Health interview surveys may give more reliable data than postal questionnaires, but they are more expensive. Health examination surveys are even more expensive, but they can be performed so that all population - also children, elderly and institutionalised population - are included. The European level health surveys include the Eurostat-SILC data collection, EU-HIS survey, the European Survey on Working Conditions, and the European Health Survey System (EHSS). Comparisons are limited by differences in compliance as well as methods of collection.

4. Ad hoc data collection. Some of the suggested indicators can only be collected as ad hoc data. Examples of such mental health indicators may be the life time prevalence of suicide attempt, or equity of access to mental health services. Careful planning and design of ad hoc data collection is a prerequisite for their success, especially if applied to more than one country. This kind of activity should be strongly linked to scientific research to improve the utility of collected data.

1.6. Existing databases

Traditionally, health monitoring and collection of health statistics at an international level has been based on routine data, usually available at national level. Examples of such activities are the collection of causes-of-death statistics, hospital discharge statistics and health expenditure data. Also disease-specific data collection systems for conditions such as cancer, infectious diseases and congenital anomalies have been in place for decades in many European countries. Fewer data are available on non-communicable diseases (excluding cancer), and the collection of mental health data is even further exiguous. This has always been true for Western and Southern EU Member States (EU15), but the previously existing long-term data collections on mental and behavioural disorders in Central and Eastern European and Baltic countries have been variously discontinued since the early 1990s.

Existing international health data sources demonstrate the paucity of comparable mental health data in Europe. *The Health for All statistical database (HFA),* collected by the WHO Regional Office for Europe includes seven

indicators related to mental health. Most European countries and EU Member States can provide mortality data, which include also sex- and age-specific suicide rates. Also recent data on psychiatric hospital beds and the incidence of hospital discharges related to mental and behavioural disorders per 100 000 population are available for most of these countries.

Less than half of European countries and EU Member States are able to provide data on the number of mental patients staying in hospitals more than one year, the incidence of mental disorders, the incidence of alcoholic psychosis, and the prevalence of mental disorders. These statistics are based on routine data collection from hospital discharge registers, annual data collections on mental health, or health insurance data. The comparability of these statistics, however, is limited; they give substantial differences between recent European maximum and minimum figures.

Another large international health data collection - *OECD Health Data* - has two indicators related to mental health. First, standardised mortality rate for intentional self-harm per 100 000 population: these data are available for all ages and separately for total populations, males and females. Unfortunately the data distributed by WHO and OECD are not comparable, even though OECD takes its data directly from the WHO Mortality Database, because different standard populations are used. While WHO uses the European Standard Population, OECD uses the total OECD population for 1980 as the reference population. This causes, for example, a minor, but irritating difference in the suicide figures from these two data sources. Second, OECD Health Data contains statistics on psychotropic drug use (antidepressants, anxiolytics and hypnotics), but for a few countries only.

The European Monitoring Centre for Drugs and Drug Addiction *(EMCDDA)* provides detailed information on drug use and drug related deaths. The otherwise extensive tables of drug related deaths include absolute numbers only, and for some reason, not the mortality rate. Furthermore, EMCDDA emphasise that the absolute numbers from different countries are not directly comparable because differences remain in case definition and recording methods.

Eurostat currently collects routine statistics on causes-of-death, hospital data and health personnel data, and it is also responsible for the *Eurostat-SILC* (Statistics on Income and Living Conditions) data collection and the forthcoming *Euro-HIS* (European Health Interview Survey). The annual mortality statistics include information on suicides, and these data are available for both sexes and by region. The hospital data collection includes information on hospital beds and hospital discharges, separately for psychiatric hospitals and mental disorders. These data are collected and distributed regionally. Health personnel data include information on the number of physicians with a speciality in psychiatry.

The Eurostat-SILC data collection includes the Minimum European Health Module (MEHM) with questions on prevalence of any chronic illness

and health-related limitations of usual activities during the past six months. Separate health modules are being designed for the Euro-HIS survey, and a mental health module is now recommended for the collection of mental health indicators in the EU.

The Directorate General for Health and Consumer Protection (DG SANCO) has developed a system to monitor health in the European Union. The *ECHI* (European Community Health Indicators) system includes a short-list as well as a possibility to create tailored user-windows. A user-window is needed for mental health. The current ECHI indicators related to mental health have been divided into three categories: health status, determinants of health and health interventions (health services). Most of the indicators are not yet available, and substantial developmental work is needed both to operationalise the indicators and to improve the international comparability of existing data.

1.7. Establishment of indicators for mental health monitoring in Europe

A two-year project, co-funded from the previous EU Public Health Programme, aimed to establish the indicators for mental health monitoring in Europe. It was co-ordinated by the Finnish National Research and Development Centre for Welfare and Health (STAKES). The project collected information on existing mental health and well-being indicators and information systems, and proposed a set of feasible mental health indicators with clear definitions, for inclusion in a comprehensive health monitoring system.

The proposal by the project followed the ECHI categories:

1. Demographic and socio-economic factors
2. Health status
3. Determinants of health
4. Health systems

The project suggested altogether 36 specific mental health indicators. Of these, 22 were based on statistical information, and 14 require survey data. The project report "Minimum data set of the European mental health indicators", including description of these indicators, is available on the European Commission and STAKES websites[4]. As many of the indicators feasible for mental health monitoring were included in the comprehensive ECHI list (for example the demographic and socio-economic factors) the proposal by the

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4 (http://europa.eu.int/comm/health/ph_projects/1998/monitoring/fp_monitoring_1998_annexe2_09_en.pdf; www.stakes.fi/mentalhealth).

project included only the additional indicators specific for mental health monitoring purposes.

The project noted that many of these mental health indicators, measures of determinants or mental health itself, are not in common use in the Member States. The project recommended that the implementation of the set of mental health indicators should further proceed in two stages, where the first stage refers to data currently collected and already usable, and the second stage to the most important mental health indicators that still require development. Data for these indicators should, in the future, be collected at least every third year, but preferably annually.

The Mental Health Indicators project conducted a pilot survey to test the feasibility and applicability of the 14 survey measures included in the Minimum Data Set: The five participating countries were Finland, France, Germany, Greece and Norway. The pilot survey was conducted by telephone interviews. The survey gathered about 400 successfully completed interviews in each participating country, representing as much as possible the general population. The samples were stratified by sex, age and urbanisation, and were randomly collected of persons older than 17 years of age and younger than 75 years.

The general conclusion from the pilot survey was that the set of these survey measures could be easily incorporated into general health surveys, as the interviews conducted were not very time-consuming (only 12 to 14 minutes). Furthermore, most of the respondents accepted the survey items without any major difficulty. The methods used seemed to function well, which supports the main conclusion that at least most of the measures were feasible.

2. Structural indicators of positive mental health

J.A. Ozamiz, A. Aguirregabiria, I. Loureiro, R. Harris, J. Nichols, A. Ortiz, E. Huemme, R. Luetjen, J.C. Gomes, S. Hulls, J. Schneider

2.1. Introduction

This partnership project examined European scientific literature over the last 20 years on Positive Mental Health and Mental Health Promotion, constructed a questionnaire of possible structural indicators that can inform the development of mental health promotion policy, and consulted mental health professionals throughout the EU, using the Delphi method.

"Structural" indicators of positive mental health are directly observed phenomena which can be used as quantitative measures of any of the dimensions that are included in the concept of positive mental health. In this project structural indicators were considered to be those related to the context, settings, environments, macro and ecological factors, objective circumstances, as well as statistics about observable human behaviour.

There are few validated quality measures of positive mental health and little published research relevant to structural indicators. Such indicators could offer national and international standards for monitoring and evaluating programmes and policies, and focus research on the most important issues.

The questionnaire resulting from this project contains items identified as useful indicators of positive mental health, which are derived from the assessment and measurement of environmental factors. They give an ecological perspective on factors which have an impact on social support and inter-personal safety throughout the life-cycle. They support strategies to enhance social competence and individual coping styles at transitional stages in life. Underlying these is the concept of social capital.

2.2. Aims and objectives

The overall aims were: (a) to devise and promote a system of structural indicators of environmental factors related to positive mental health in a variety of domains; (b) to create a system for monitoring the impact of policies and programmes promoting mental health.

To achieve these following objectives were defined:
- To identify structural indicators currently used in European countries for assessing positive mental health status (PMH) and mental health promoting programmes and policies.
- To select, in consensus with relevant professionals, a set of key indicators which could be used to monitor the positive mental health status of communities, and mental health promoting programmes and policies.
- To test the feasibility of the selected set of structural indicators.
- To create a process for monitoring and evaluating the selected indicators.
- To analyse mental health policy implementation in EU Member States.

The first two have been addressed in the present project; the others require continuing research.

2.3. Conceptual framework of the project

Mental health and mental ill-health experienced by individuals are products of a combination of many factors within the individual, the family and wider society.

"*Positive mental health can be conceptualised as a value in itself (feeling well) or as a capacity to perceive, comprehend and interpret our surroundings, to adapt to them and to change them if necessary; to think and to communicate with each other*"   Lehtinen (2004, p.5).

Positive mental health includes such qualities as self-esteem, the ability to manage change, the capacity actively to influence the social environment, assertiveness, enjoyment and a conscious state of well-being. These qualities, of course, have value in themselves, not only as signs of absence of illness or disorder. And, as the WHO Ottawa Charter asserts, promotion of health does not need to view health as a goal in itself, but rather as a means of enabling positive shaping of individual and social life.

To evaluate mental health promotion we need evidence to show which indicators of positive mental health status work best within our communities. But it is a complex field, as stated by WHO (2001) "promoting population's health is an enterprise whose complex and often subtle dimensions challenge scholars and practitioners from diverse disciplines: epidemiologists, social scientists, educators, policy scientists, economists, urban planners and biomedical scientists (…) all contribute perspectives that illuminate one aspect or another of health promotion".

Thus it is far from easy to determine the most useful indicators for different regions, countries, lifestyles, cultures and social organisations. However,

assuming the essentially social nature of human life, this project has tried to find indicators of contextual factors able to enhance social security, inter-personal support, mutual respect and trust in a world necessarily lived with others.

In doing so, several difficult questions have to be faced, such as:

- What measures could indicate the enhancement of positive mental health?
- What measures could indicate the re-distribution of power by which control is exercised over factors affecting individual mental health?
- What measures could indicate the negative impact on mental health of social, political and economic environments?
- What measures could indicate greater allocation of resources towards prevention?
- What measures could indicate aspects of health beyond the physical, including mental, social and possibly spiritual dimensions?
- What measures could indicate success in taking an ecological approach?
- What measures could indicate the recognition of community development and involvement as legitimate and effective strategies for improving mental health?

The work of the project became an attempt to answer these questions.

2.4. Methods

2.4.1. The Project Team

'The Team' consisted of twenty persons, representing the co-ordinator and partners from Germany, Portugal, Spain and UK (Deusto University, Bruecke Rensburg, University of Applied Sciences Kiel; Mental Health Matters, University of Durham, Mental Health Foundation; Escola Nacional de Saude Publica of Lisbon; Black Water Valley, and Hart Primary Care Trust.) each initially focussing upon one of six themes: 'elderly people', 'leisure time', 'adolescence', 'working settings', 'urban environments', and 'children under ten'. However, as work progressed, these were modified to become the eight 'domains' described later. Initially, possible areas of interest were identified by searching the literature.

2.4.2. Literature review

Literature on factors associated with positive mental health is rapidly increasing. The search used Dialog Datastar to access 'Medline', 'Psychlit',

'Cochrane' and other databases, supplemented by data from the WHO and EU internet sites as well as sites from non-governmental organizations such as UNICEF and independent voluntary organizations, and information stored, in local university libraries, and also larger database resources such as the British Library and specialist libraries within the public health sector. The Team formed the network that compiled the bibliography and analysed and summarised the available information, identifying areas to be covered by indicators, and suggesting possible means of measurement. The total number of references in the bibliography was 412 (Available on the web of the Project: *http://questionnaire.deusto.es/mpmh*).

In order to better systematize the literature search, it was divided as were the research teams, along the life span: From infancy, adolescence, adults to older adults. To these topics we added "healthy cities" and "social capital" as essential to understand, to anchor, and to contextualize our search.

Each measure proposed for consideration as an indicator was identified because there was strong evidence in the literature that it had an impact on mental health in the community, and that it was likely to be available in most, or at least many countries of Europe. This evidence for the validity of each proposed INDICATOR is available on the project web-site.

In selecting *areas of interest* from the literature, the principles defined by WHO (2001) were followed, to find indicators of positive mental health that would:

- be open to evaluation approaches,
- be consistent with health promotion principles, in particular empowering individuals and communities by emphasising participation, address collective as well as individual accountability, applying to both institutional and individual factors,
- be flexible in application, appropriate to changing circumstances and a variety of cultures and communities.

The provisional set of areas of interest was selected so that they might lead to indicators of positive mental health according to the following criteria:

- Evidence-based indicators related to positive mental health according to the goals and objectives of the project;
- Indicators that are likely to be available, and thus have a chance of being used;
- Indicators applicable in different regions, cultures and social organisations;
- Indicators applicable at different levels of organisation and policy;
- Indicators susceptible to qualitative measurement and statistical analysis whilst being consistent with the principles of the project. (Creswell, 1994)

2.4.3. Identifying possible indicators

From the literature review, the team suggested several indicators. Then items were reduced to 100, eliminating via consensus those that were repeated, deemed to be supported by less available evidence or not available data from census, population reports or other governmental sources.

The process of selection continued until 89 indicators were identified and grouped in eight different domains, with several areas in each domain. They were:

1. **The context of mental health practice:** national mental health service framework; social care infrastructure.
2. **Pre-school experiences and family support / childcare:** access to support during pregnancy; programmes of promotion of positive parent-baby interaction; access to pre-school facilities and services; the availability of pro-social networks (those promoting social behaviours in children).
3. **Promotion of mental health through schools and education:** curriculum-based activity promoting positive mental health; activities to promote a mentally healthy school culture; related demographic and legislative measures.
4. **Employment and workplace mental health:** flexible working practices; mentally healthy work environments; related demographic and legislative measures.
5. **Social capital and mentally healthy communities:** positive networking; social inclusion; related demographic and legislative measures.
6. **Physical environment:** safety and security; access to public amenities; housing conditions; related demographic measures.
7. **Leisure activities:** physical activities;cultural activities.
8. **Mental health and older adults:** levels of participation; services for people in later life; related demographic and legislative measures.

The pilot draft of the questionnaire was sent to 10 independent experts as well as to the team (20 people) seeking their opinion. Once relevant feedback was gathered and small but pertinent modifications made, the questionnaire was ready to be sent to all the experts in the sample.

2.4.4. The Delphi study

Delphi is "..... *a method for structuring a group communication process so that the process is effective in allowing a group of individuals, as a whole, to deal with a complex problem.*"   (Linstone & Turoff 1975).

Our proposal was to search the consensus of relevant people in the field of mental health, about a monitoring system. Delphi method was selected

because its goal is to achieve consensus in complex issues among a group of experts.

Delphi is a survey where the respondents consist of a group of experts. The technique comprises a series of questionnaires used to pool experts' responses in order to resolve a difficult problem. Each expert's informed opinion is shared with the others by using results of one questionnaire to construct the next questionnaire.

The expert panel was selected in this case to represent a variety of expertise and interests related to the topic. Their professional background was mainly medicine, including psychiatry. There were also psychologists and sociologists. Experts were selected according not only to their relevant area of expertise but also to their position in the field of mental health planning or promotion in national programmes and geographical area of residence. The distribution of the 100 experts in the European Union has been quite regular. We asked at least 3 panel members from each EU Member State. Statements (definition and short description) about each possible indicator were created by either the researchers or panel members. Each panel member was then asked to 'rate' (to give a relative value) to the statements in the questionnaire. The results were fed back between rounds as an iterative process.

Each panel member was personally and individually approached either via telephone contact or the internet. Consent to participate in the study was requested to start with. Following this, a letter was sent explaining the researcher's affiliation, purpose of the study and basic aim of the project. They were asked to read the document uploaded in the web and indicate "how relevant are in your opinion, the following as an indicator of an environment that supports Positive Mental Health". Space was offered for experts to comment after each domain. Each item within each domain included a definition and a list of supporting papers was offered for further information.

A website was uploaded with all the information regarding the literature review and the questionnaire. The questionnaire was also sent as a Word document both by post and e-mail during the second round of the enquiry. The responses were analysed both **quantitatively and qualitatively in order** to prepare the questionnaire for the next stage in **the Delphi process. The** quantitative analysis consisted of calculating **the mean and the standard** deviation obtained by each item of the questionnaire where the difference between the average score of each item provides the limit of the punctuation for the selected indicators. Then were selected the highest scored 41 indicators. **However, it was decided that at least one indicator would be re**tained in each domain.

In the qualitative analysis, suggestions and comments received in the responses were analyzed, leading to either the addition of a new indicator to the questionnaire, or a refinement of an existing item.

On the basis of this analysis, the number of items in the questionnaire was reduced from 89 to 41.

In summary, the Delphi process consisted of:
- identifying, selecting, and contacting potential participants to achieve an 'expert panel' of 100 members.
- sending the first questionnaire (89 items) to the 100 panel members. (Response rate 51%)
- collecting and analyzing responses from the first questionnaire;
- designing the second questionnaire;
- sending the second questionnaire (41 items) to the same 100 panel members;
- collecting and analysing the responses from the second questionnaire. (Response rate 53%).

Figure 1. Scheme of the process
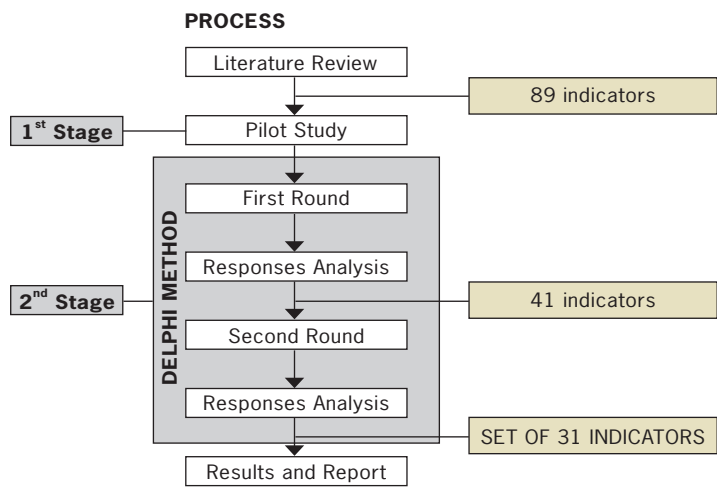
2.5. Results

Of 100 panel members to whom the second questionnaire was sent, 53 responded. **Table 1** shows the distribution by profession and region of Europe.

Table 1. Geographical and professional distribution of respondents.

ZONE IN EUROPE	AREA OF EXPERTISE
20.4% South West	40% Psychiatrist (21)
22.4% South East	22.5% Psychologist (12)
32.7% North West	12.5% Sociologist (7)
24.5% North East	25% Medical doctor other than psychiatrist (13)

From the responses to the second questionnaire, ten items were eliminated because of their low relative score (**Table 2**). (The lowest rated item had a mean of 4.83, SD 0.36.)

As a final result a set of 31 indicators of social and environmental indicators of positive mental health in a community is proposed. All of them arose from the scientific literature, and have achieved consensus among the experts consulted in this project. Most of the indicators (25) can be measured numerically in populations; the other six relate to the existence of some specific law or plan. Ten need search for description of quite common studies, made in the specific regions.

Table 2. The second questionnaire sent to 100 experts showing the items eliminated according to the 53 responses received.

INDICATORS OF PSYCHO-SOCIAL AND ENVIRONMENTAL FACTORS THAT IMPACT POSITIVE MENTAL HEALTH

Instruction: Please indicate with an **x** in the boxes below how relevant are in your opinion, the following as an indicator of environmental factors that supports Positive Mental Health (one answer only):

1. Very irrelevant (VI)
2. Irrelevant (I)
3. Slightly irrelevant (SI)
4. Slightly relevant (SR)
5. Relevant (R)
6. Very relevant (VR)

Table 2.

1. National Mental Health Framework	Score average in the second round
1.1. % of national budget of the Health System that is destined to mental health promotion	**5,13**
1.2. Interaction of systems of health care, social care, educational system, handicapped care, police, justice, youth care	**5,21**
1.3. Training programs in mental health for professionals in educational and social services fields	**5,27**
1.4. Existence of Mental Health Promotion Policy in some of the main 4th TV national channels *(Eliminated)*	**4,33**
2. Pre school experiences and family support/childcare	
2.1. Proportion of mothers who undergo a simple check soon after giving birth, to ensure they are capable of meeting the infant's basic needs	**4,75**
2.2. Proportion of women who breastfeed their infant for a minimum of 4 months or longer *(Eliminated)*	**4,45**
2.3. Access to child centred services for pre-school children	**5,04**
3. Promotion of mental health through schools and education	
3.1. Proportion of schools with mental health promotion activities in their curriculum	**5,11**
3.2. Proportion of schools offering counselling and emotional support to children aged 5-16 years	**5,25**
3.3. Mental Health Support in Schools	**5,00**
3.4. Proportion of population that complete secondary education *(Eliminated)*	**4,47**
3.5. Proportion of children (aged 8-16years) who are members of a team club *(Eliminated)*	**4,23**
4. Employment and workplace Mental health	
4.1. Access to part time working *(Eliminated)*	**4,29**
4.2. Prevalence of programmes to promote mental health and address psychosocial risk factors in the workplace	**4,96**
4.3. Satisfaction with the work environment (Could be assessed through Quality Insurance strategies)	**4,92**
4.4. Existence and extension of supported employment programmes for people with long term mental problems	**5,19**
4.5. Proportion of people without work	**5,27**
4.6. Stability of employment (Levels of temporary employment)	**4,85**
4.7. Statutory income for long term sickness / disability as a % of average income	**4,85**
4.8. Rate of signed agreements between unions and sectorial employers *(Eliminated)*	**3,92**
4.9. Existence of Mental Health Promotion as part of Health and Safety at Work Legislation	**5,02**

5. Social capital: Mentally healthy communities		Score average in the second round
5.1.	Proportion of people who volunteer in non-profit organisations and community groups	**4,48**
5.2.	Social support networks	**5,25**
5.3.	Self help groups to cope with adversities and transitional situations	**4,87**
5.4.	Society's knowledge of and attitude towards mental health	**5,21**
5.5.	Respect for diversity and tolerance	**5,21**
5.6.	Proportion of population living in poverty	**5,25**
5.7.	National development of human rights	**5,15**
5.8.	Existence of legislation and policies promoting social inclusion	**5,25**
6. Physical Environment		
6.1.	Promotion of safety in vulnerable population	**5,02**
6.2.	Proportion of green spaces with public access	**4,63**
6.3.	Level of noise *(Eliminated)*	**4,47**
6.4.	Proportion of households with heating *(Eliminated)*	**4,46**
6.5.	Average of household density *(Eliminated)*	**4,38**
7. Leisure Activities		
7.1.	Frequency of participation in sporting activity	**4,53**
7.2.	Number of hours spent in cultural activities (cinema / theatre / dancing, etc.) *(Eliminated)*	**4,27**
8. Mental Health and older adults		
8.1.	Access to social clubs, centres, etc for older adults	**4,94**
8.2.	Proportion of people over 65 engaged in training or education	**4,57**
8.3.	Access to home visits to support older people	**5,25**
8.4.	Adequacy of pensions	**5,06**
8.5.	Rate of large families including old people	**4,94**

After the first round items 1.4, 3.4, and 4.4 were added and items 2.2, 3.4, and 4.8 were modified according to suggestions received. One of the new indicators received a particularly high score in the second round (4.4).

A certain consistency was maintained between the two rounds; most respondents ranked each indicator quite highly, few giving very low scores.

The difference between domains can be represented by the mean of the scores for each indicator:

Figure 2. Scoring of the domains.
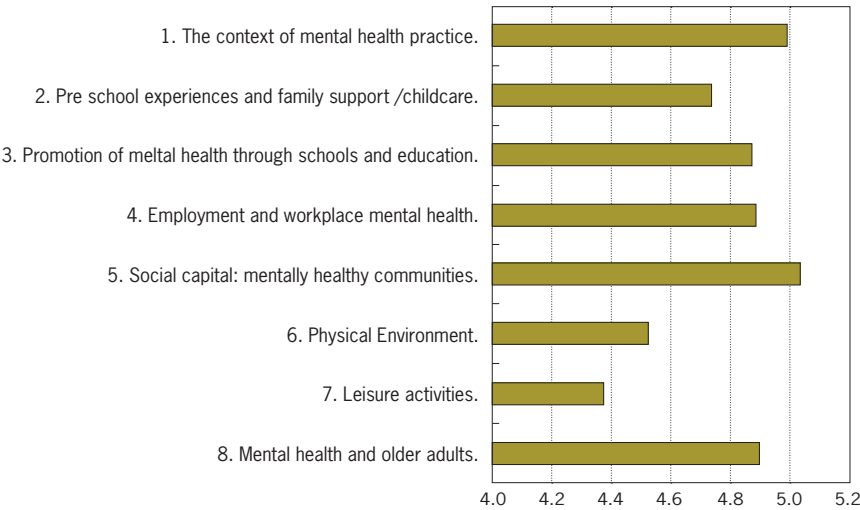
The lowest score is for the domain 7, 'leisure activities' (domain 7) with a mean of 4.37. The highest mean score (5.04) was for domain 5, 'social capital: mentally healthy communities', which is interesting given the predominance of medical respondents (65%) One of the highest ranked individual indicators (4.5) belongs to the field of working life.

In addition, other indicators with high ranking were:
1.3.   Training programs in mental health for professionals in educational and social services fields.
3.2.   Proportion of schools offering counselling and emotional support to children aged 5-16 years.
4.5.   Proportion of people without work.
5.2.   Social support networks.
5.6.   Proportion of population living in poverty.
5.8.   Existence of legislation and policies promoting social inclusion.
8.3.   Access to home visits to support older people.

2.6. Discussion and conclusions

The final result of the project is the proposal of a set of 31 indicators of social and environmental factors. These were originally selected from the scientific literature and achieved consensus of opinion of a sample of experts in the field of mental health throughout Europe.

The project aimed to find indicators within legislative, organisational, educational, cultural, and leisure fields which could be readily understood as relating to positive mental health. For example, some pedagogical aspects may be useful in understanding how social support and empowering inter-subjectivity helps in those transitional phases of life were people are more vulnerable. Social support and policies and strategies related to them help in the readjustment to new phases in life.

Health policies should encompass all phases of the life cycle. The 8 main domains described were shown to be relevant in identifying indicators of positive mental health throughout life.

It is hoped that the 31 structural indicators explored through the Delphi procedure may help both policymakers and professionals.

Mental health promotion is not well understood throughout the European Union, and throughout professions dealing with mental health problems. Even though the European Green Paper on Mental Health emphasises the need to implement mental health promotion policies, the concepts and practical consequences expressed within it might be further enhanced by concepts suggested in this project.

This might be particularly true in relation to mental health and social capital; mutual trust, self-confidence, resilience, and many environmental factors influence people at critical stages in their lives, thus affecting their capacity to cope with the stresses which life inevitably brings.

 A new strategy may be needed to assess and implement MHP programmes. Perhaps, more work is needed following the way outlined in this project. This work can not be considered just another kind of research that can be done in short time. It is positioned on the field of social programmes and the building of the welfare society. Even if it is rooted in scientific research, this activity needs a will and a vision for middle and long term, about the society's structure and the positive mental health.

More work is needed, especially to collect data about factors which not only indicate levels of mental health in the community, but can be shown to influence mental health in the community. Perhaps at the regional level, it may be most appropriate to collect data and implement policies that optimize the environmental factors which have a positive impact on mental health.

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3. Childhood determinants of adult mental illness

T. Fryers, T. Brugha

3.1. Background

Recent years have seen increasing professional interest in mental health research, including seeking possible causes of serious mental illness in adults. Most of this work has focussed upon proximal factors in adulthood, necessarily using cross-sectional or short-term follow-up data, and commonly recorded demographic, family and personal information. Such retrospective data have often been from relatively small samples, or clinical series not representative of the general population. What has emerged is an understanding of the 'cause' of serious mental illness as extremely complex, varied and multi-factorial, encompassing elements of genetic constitution, childhood experience, characteristics of personality, significant life events, the quality of relationships, economic and social situations, and aging. Some of these factors are now generally acknowledged as risk factors for specific forms of mental illness or for mental illness in general, such as familial genes, relative poverty, significant life-events, poor education, and long-term unemployment.

It is more difficult to relate childhood experience to adult mental illness because of the time interval involved, especially if reliant upon data from cross-sectional, retrospective, and short-term clinical follow-up studies. In particular, the reliability of adult recall of childhood experience is a major source of uncertainty. The scientific literature, in so far as it is dependent upon such studies, cannot readily provide definitive results relating features of childhood to adult mental illness anything from 10 to 50 years later.

However, despite the huge problems involved in funding and managing long-term prospective studies through childhood into adult life, there are major studies, mostly birth-cohorts, some of very large national samples, some continuing now into adult middle-age. They can link data from observations made in childhood with later measures of mental health and manifestations of mental disorder in the same individuals within a large and representative population sample. However, their potential is not realised with regard to specific issues unless appropriate data were collected at particular ages, now long since past, and, sadly, many relevant data were not collected. In many cases, at that time, they were not considered important or of sufficient research interest to justify the expense and effort of collection.

A good example would be parenting style and quality, barely conceived as an issue until relatively recently.

There are also inherent difficulties with respect to some important issues in collecting contemporaneous data. For example, it is not possible to collect direct data on child abuse in most families around the time it occurs unless there has been legal intervention. Researchers are necessarily reliant upon retrospective data no earlier than mid-teens, though the cohort context may give greater credibility and more supporting data than in stand-alone retrospective samples.

However, in the great extent and range of published work, and in further analysis of their person-based data as yet unpublished, the large-scale, long-term cohort studies offer the best hope of elucidating the degree to which childhood factors are predictive of adult mental illness, and to what extent they might be susceptible to intervention in order to reduce the risk.

Not all childhood variables proven to be associated with adult mental illness are causes. Some of those studied have substantial evidence that they are associated with an increased risk of later mental illness, but conceptually they are not *determinants*, that is not *causal factors,* but *precursors*, or *early manifestations* of mental illness – the prime example is childhood mental health problems. Others may be merely *indicators* of underlying problems which might or might not be true determinants – for example, neurological deficits in childhood. Some may very well be true *determinants*, but require other factors for expression – perhaps, for example, certain gene combinations. Some may increase the risk of later mental illness to only a small degree when examined separately, but, in combination with others with which they are frequently associated, they may be part of an important causal process – for example the individual measured factors which constitute 'multiple childhood disadvantage'.

Overall, in simplified terms, causal processes can be seen as combining personal vulnerability and precipitating factors. Vulnerability may be perceived as the susceptibility of the individual person to react in certain ways to the somatic, inter-personal and socio-economic stresses he or she will face throughout life, though there is no reason to believe that such susceptibility is not itself modified and varied throughout child and adult life. Vulnerability at the transition from child to adult is a key issue, and, therefore, factors in childhood which affect vulnerability should be clarified as much as possible.

3.2. Aims

The aim of this study, therefore, was to review the evidence currently available linking childhood factors to the frequency of mental illness in adults. This would largely use published evidence from prospective cohort studies,

would focus mainly on factors that might be amenable to individual or population intervention to prevent mental disorder and promote mental health, and would have an emphasis on relevance to European populations.

3.3. Methods

3.3.1. Literature review and overall plan

Literature searches using key-words have been greatly facilitated in recent years by computer-accessed data bases, but searching is both inefficient and ineffective for multi-disciplinary topics in which key-words are ambiguous or variably defined, as in this project. It is necessary, therefore, to perform multiple searches using a variety of key-words, and accessing several publication data banks relating to a wide range of medical and social sciences. This inevitably generates many abstracts to peruse in order to select relevant papers.

The general review plan undertaken was as follows:

- Scoping review of samples of literature generated by general searches.
- Determining the project boundaries, determinants and outcomes.
- Choosing the main search strategy and key-words required.
- Systematic search of all relevant databases.
- Review of all abstracts to select full papers for study.
- Analytical study of selected papers.
- Collation of published evidence.
- Assessing potential for further research.

3.3.2. Search strategy and literature processing

Research into both features of childhood and mental health outcomes is characterised by ambiguous and varied definitions, varied and inconsistent measures, and inconsistent and inadequate research design. There are several relevant data-banks of published material including general medicine, psychiatry and psychology, social sciences, and evidence-based reviews. Each has their own system of search terms, and each will identify a different range of papers from any particular search, overlapping to a varying degree.

It is necessary within the current scientific community to describe clearly the strategy and processes by which publications were identified, but to do this relating possible childhood determinants to adult mental disorders, the search strategy is inevitably complex. The table below presents a brief summary; it shows the seven data-banks of published research papers interrogated, and the number of 'hits' – possibly relevant papers identified - produced by each.

Database	Date Range	Search Date	Hits.	Filename	BRS
Medline (ovid)	1966-	6/10/05	873	endnotemedline.txt	endnotetom
PsycInfo (Ebsco)	1887-	12/10/05	276	ebsco 1 2 3 & 4	3endnote
Embase (Ovid)	1980-	6/10/05	472	endnoteembase.txt	endnotetom
Sci citation index	1970-	11/06/05	294	sci9905.txt sci8698	2endnote
Soc Sci Cit index	1970-95 1996-05	12/10/05	72 365	ssci197095.txt ssci9605.txt	3endnote
Assia (CSA)	1965-	11/10/05	57	assia.txt	2endnote
Cochrane		12/10/05	1 4	cochrane sys reviews central	3endnote

This produced 2,414 references for review, mostly with abstracts, assembled into a Reference Manager file.

In addition, two other sources of possible papers were used. First, the major cohort studies have web-sites and produce catalogues of published work exploiting their data-sets. Consultations with current leaders of and researchers on major cohort studies in Finland and the UK were undertaken, and a wide range of researchers from many countries were consulted. Moreover, long-term studies have been exploited chiefly by a limited range of researchers, and the literature data-banks have been searched specifically by their names.

Second, papers obtained provided a chain of references and more papers suitable for review. These strategies produced additional references. Thus in excess of 2,500 abstracts were reviewed.

Papers for full evaluation were selected in four groups: 52 were reviews of relevant topics; 155 related to particular prospective studies, our main focus; 83 papers related to retrospective studies, especially very large samples, which might provide additional evidence; 13 were concerned with preventive programmes, including some evaluations. Approximately 250 selected papers were obtained and read, and relevant data extracted and collated in relation to the ten variables discussed below, and the evidence of association with adult psychiatric disorder assessed.

3.3.3. Analysis of original cohort data

The major birth cohorts inevitably contain un-exploited data of great interest to this study, but access is neither easily nor quickly obtained. In collaboration with one of the project partners it was possible to present additional

unpublished evidence relating to parenting, from two logistic regression analyses of data from the 1946, 1958 and 1970 British birth cohorts, using the most recent raw data, now available on the appropriate cohort web-sites.

3.3.4. Contextualising prevention

Because of the emphasis on practicable implications for preventive interventions specifically in a European context, the project undertook to explore socio-medical contexts in European populations through the project partners. After due preparation they were asked to reflect upon the potential for and obstacles to preventive action with regard to four determinants of mental illness, taking into account three types of context within their own country. The four determinants had emerged from the literature as important factors: child neglect or abuse; inadequate quality of parenting; single parent family structure; school failure or drop-out.

The three types of context were political, general cultural, and service provision and organisation. Both the potential for and the barriers to preventive action were considered as widely as possible, encompassing not only medical or health service interventions, but also education, social services, social welfare, finance, housing and any other which might be relevant. Partners represented the Czech Republic, Finland, Italy, Spain/the Netherlands and the UK, and a wide range of relevant disciplines, backgrounds, interests, experiences and areas of expertise.

3.4. Results

3.4.1. Literature Review

The full review is an extensive document which will be published separately with 175 references. Ten variables emerged as important from scoping reviews and consultations with partners and colleagues. Although the main focus was upon those features of childhood which might be susceptible to preventive intervention, it proved impossible to leave out certain others which were only indicators of later mental disorder, such as childhood mental disorder, or were not amenable to intervention, such as genetic pre-disposition. They were unavoidable in the same body of literature, they interlink with other variables, and it would have seemed foolish to leave them out. The most obvious gap now is mental disorder in parents, which is only touched on in this literature, and is subject to reviews elsewhere. In this brief summary references are to key papers or reviews.

First a word of caution: because people are complex and life is varied, few of the relationships and associations between factors explored here can

be measured with precision or proven beyond doubt without almost unheard of research time and cost. The text below tries to summarise the weight of evidence currently available and give as clear an idea as possible of the effect size of risk factors from diverse research. Figures should not be used with more precision and authority than they can currently bear.

A. Psychological disturbance and psychiatric illness in childhood.
This is the most well-established precursor, though clearly not a cause, of adult psychiatric disorder. There is strong evidence of continuity of morbidity; that is, much mental illness in adults reveals its first manifestations in childhood or adolescence and these can be identified. Adolescents with persistent depression have an increased risk of persistent depression as adults which may be more than ten times other adolescents. Children with mental health problems should be identified and treated appropriately for their own sake; this needs wider recognition, more and better trained professionals and more resources. We would expect it also to reduce mental illness in these individuals as adults. However there is also clear evidence linking a wide range of childhood adversities, including parental conflict and physical and sexual abuse, with later childhood and adolescent anxiety and depression, which also have an impact on capacity for relationships and school performance. These may predispose also to adult psychiatric disorder. (**Birmaher** et al. 1996; Fergusson and Woodward, 2002; Beautrais, 2000; **Wals and Verhulst, 2005).**

B. Genetic contributions to psychiatric disorder.
There are undoubted important genetic components in the causation of psychoses, especially of schizophrenia and bipolar disorder, but the risks are not necessarily specific within DSM category boundaries. The life-time risk of psychosis with one parent with schizophrenia is probably around 10%, compared with 1% for the general population. Genetic factors may also confer increased vulnerability or resilience to stressors throughout life and predispose to or protect from adult mental illness. In some cases the increased susceptibility may reside in clinically detectable disorders of the central nervous system (CNS). (Colman and Jones, 2004; Caspi et al. 2002; Isohanni et al. 2005; Erlenmeyer-Kimling et al. 2000).

C. Neurological deviance in childhood; brain damage and disorder.
There is very strong evidence for demonstrable brain damage or disorder, incurred before, during or soon after birth, being associated with a greatly increased risk of psychosis, possibly as much as five times. This is likely to be a prime cause. Damage may arise also in CNS infections somewhat later in childhood. There are many indicators of neurological deviance which are susceptible to identification in childhood, including delayed developmental milestones, speech problems, cognitive defects, and poor motor function.

There is no evidence of a similar association with anxiety and depression. (Jones, 1997; Tarrant and Jones, 1999; Isohanni et al. 2004).

D. Features of Personality; Neuroticism.
Neuroticism, measured using standard instruments, has been commonly found as a precursor of adult psychiatric symptoms and disorder, but in a very non-specific way. It may be an indicator of increased vulnerability and poor coping skills, or represent an early manifestation of the disorder. It may also enhance the association between life events and adult mental illness. Extraversion may be associated with lower symptom scores. (Rodgers, 1991; Van Os and Jones, 1999; Neeleman et al. 2002).

E. Behaviour in childhood and adolescence.
Behaviour cannot readily be separated from other factors either conceptually or operationally, but certain elements consistently show associations with later depression and anxiety, as well as delinquent and criminal behaviour. These especially include inattention and hyperactivity; and withdrawn, deviant, aggressive, anti-social and disruptive behaviour. There is some evidence of genetic and neurological factors in their genesis. Abnormal behaviour may both reflect and provoke more negative life events than other children experience, and these are also associated with later anxiety and depression. Alcohol and other drug abuse is, not surprisingly, also related; there is now a body of evidence linking cannabis use in childhood and adolescence with later psychosis, perhaps doubling the risk. (Fergusson & Woodward, 2000; Paykel, 2003).

F. Poor school performance and educational achievement.
Poor school performance and low levels of educational achievement by the end of formal schooling, especially lower achievement than expected, are known to be associated with an increased risk of adult anxiety and depression of probably two or three times, and this is confirmed by cohort studies. Difficult and deviant behaviour, and neurological deficits of any type in childhood are likely to have an impact on school performance and achievements, and these may partially mediate the higher risk. School performance is unlikely to represent a primary causal factor, but rather to reflect a pre-existing increased risk. However, it may well be a contributory cause of later mental health problems (as with delinquent and criminal behaviour) and it does provide a relatively easily identifiable group of high risk adolescents for preventive intervention. (Maughan and Lindelow, 1997; Isohanni et al. 1998; Fryers et al. 2005).

G. Childhood adversity; life events; multiple disadvantage.
Adverse situations and negative life events could obviously include very many different types of experience, provoking many individual responses,

and, necessarily, relatively few have been measured and studied. Generalisation is, therefore, inescapable. However, it is possible to say that a wide range of adverse experiences and negative life events in childhood have been shown to increase the risk of psychiatric disorder in adulthood. Studies tend to find the increased risk for a wide variety of factors to be around two to three times.

More importantly than these modest individual effects, it is commonly found that children experiencing multiple adversities have a greater increased risk for anxiety and depression, suicidal behaviour and admission to hospital for serious psychiatric disorder. One reliable cohort study with appropriate measures could calculate that the 5% most disadvantaged children had an increased risk of 100 times compared with the 50% least disadvantaged children.

It does not require proof of adult mental illness to justify interventions to reduce childhood adversity, poverty, and family dysfunction, which should be high priorities in themselves in any civilised society, but there is evidence that reducing gross and multiple disadvantage will reduce later psychological distress and psychiatric disorder. (Beautrais, 2000; Fergusson and Horwood, 2001).

H. Child abuse, neglect and mal-treatment.
Child abuse is difficult to measure and study reliably; figures suggest that overall abuse before age 18 may be at least 15% of children, and contact sexual abuse at least 10% in girls and 3% in boys, but the reality could be much greater. Not surprisingly, serious abuse is associated with serious later psychiatric disorder of many types, personality disorders, self-destructive and violent behaviour, physical illness, teenage pregnancy, and problems raising their own children. The most dramatic effects are probably related to father - daughter incest.

With a wide range of both measures of abuse and outcomes, increased risks are difficult to estimate; related to major psychiatric disorder, cohort studies have given figures between 1.5 and 12, with higher risks for more serious abuse. However, studies following up proven victims give extremely high rates of serious problems throughout life.

Treatment is possible - cognitive behaviour therapy is generally favoured - but not sufficiently available. Prevention should be a major focus, but is far from easy, and there seems to be a dearth of ideas. It needs politicians as well as professionals to be engaged with this issue if present and future generations of children are to be adequately protected. (Weiss et al. 1999; Nurcombe, 2000; Roberts et al. 2004; Weich et al. 2005)

I. Parenting and parent-child relationships.
Parenting style and quality has only recently been subject to much study, and measures are limited. Inadequate parenting may be related to parental

mental illness, conflictual family relationships or poor material circumstances. Most studies focus on degrees of care and control by parents, data being retrospective from the children as adolescents or adults. Poor parenting, in particular low levels of care, and/or high levels of control, does appear to be associated with a higher risk of depression and anxiety in adults, even in the absence of abuse or neglect, though the increased risk may only be between times 1.5 and 3. There is also evidence that high levels of care and low levels of control are associated with lower risks of later mental health problems.

The evidence also links parenting style and quality with offspring social behaviour and capacity for relationships, including capacity for parenting their own children. Much more research is needed to tease out the details if preventive action is to be undertaken, but intervention in parenting with vulnerable groups of parents would seem a sensible and important strategy in the light of current knowledge. There are already evaluated intervention studies. (Johnson et al. 2004; Stewart-Brown and Shaw, 2004; Weich et al. 2005).

J. Divorce and separation of parents; disrupted and dysfunctional families.
Divorce cannot stand alone as a factor affecting children. It is often preceded by separation, will often be the culmination of inter-parental conflict, and results in a non-optimal family situation for the child. Divorce or separation of parents usually emerges strongly in all periods of childhood and adolescence associated with later anxiety and depression, anti-social behaviour and other outcomes, but evidence suggests that the prior inter-parental conflict may be a more important determinant. The effect may not be great; the evidence from large cohorts suggests an increased risk of depression in early adult life of somewhat less or somewhat more than times two, but it is usually found to be greater in women, and is increased by their own divorce as adults. In general, research shows none of these associations with the death of a parent.

Divorce or separation is at least an indicator of vulnerability or high risk status for children, and may often be a key point at which intervention is possible. However, intervention in family conflict situations before separation would be a preferred option where possible, and if suitable interventions are available. (Amato and Keith, 1991; Rutter, 1993; Fergusson et al. 2000; Sourander et al. 2005).

3.4.2. Parenting: analysis of data from UK National Birth Cohorts
(Partner: S Stewart-Brown; fully reported elsewhere)

Method: Secondary analysis examined data from the 1946, 1958 and 1970 birth cohorts with surviving subjects in contact of 2,500; 6-8,000, and about 4,000 respectively. The 1946 and 1958 cohorts used retrospective self-reports on earlier mal-treatment and poor relationships with parents. In the 1970 cohort various aspects of parent-child relationships were collected at age 16.

The 1946 cohort measured psychiatric symptoms in adulthood with the Psychiatric Symptom Frequency scale; the others used the Malaise Inventory. Figures were adjusted for possible confounding variables.

Results: Poor parental relationships at age 16 progressively predicted mental health problems at age 33 for both parents. Positive good relationships with parents predicted lower than average mental health problems; high levels of 'care' reported by children, and low levels of 'control', were associated with fewer mental health problems, but low levels of 'care' and high levels of 'control' were associated with more mental health problems, in adults up to early middle-age.

Conclusion: Children's perceptions of their relationship with their parents are predictive of mental health in adulthood in all three cohorts. This is independent of social class and of mental health at the time of measuring parental relationship. Abuse and neglect had a x4 effect, but lesser experiences also had an effect. In this context, father relationship seemed more important at age 16 than mother relationship. Given the longitudinal nature of the three cohorts, there is a strong presumption of a causal relationship: parent-child relationships help determine adult mental health.

3.4.3. Contextualising prevention

The five European partners in the project each prepared materials relating to the social, cultural and political context of actual or potential preventive and promotion programmes in various countries of Europe. Key issues and common barriers were identified and discussed, including the following important points.

1. Child mental health problems are clearly established as common precursors of adult mental health problems, with demonstrable continuity of morbidity in many cases. Identification and treatment of problems in children are important in their own right and need to be taken more seriously, with more resources.

2. Prevention, promotion and early identification are generally low political and professional priorities, and resources are low. Information needs improving, but what is known is not widely appreciated.

3. Poor parenting underlies child abuse and neglect, much school failure, many poor relationships and many mental health problems. There is some experience of programmes to improve parenting, but not a lot, and not well known.

4. Programmes are needed not only in health services, but also in education, welfare, and justice systems. Constraining bureaucracy, vertical rather than horizontal (co-operative) organisation of services, and competition for funding with other programmes are important barriers.

5. The voluntary sector, (NGOs and volunteers) with high motivation and flexibility of management, could be used far more but needs long-term funding.

3.5. Implications for indicators, and recommendations

Only those arising out of the present review are discussed here, so, for example, children living in conflict zones or as refugees are not covered. Where evidence is ambiguous or inadequate in the longitudinal studies reviewed here, such as drug abuse, no suggestions are made. There are several possibilities for useful indicators reflecting probable childhood determinants of mental illness.

Indicator: Damage to the CNS. The vulnerability of children with proven or likely brain damage at birth or in infancy is an important factor. In many countries there should be good national or regional records of birth and at least the first year of life, including APGAR scores, anoxia etc, and encephalitis.

Indicator: Neurological Vulnerability. Personality features, neurological deviance, child behaviour and school performance can be grouped, collectively representing increased vulnerability to serious mental disorder. The Strengths and Difficulties Questionnaire (SDQ) has been used in the UK National Children's Survey and in the WHO World Mental Health Survey (WMH). It is completed by teachers and parents, and could be applied widely.

Indicator: Quality of Parenting. The importance of parenting suggests the use of the Parental Bonding Instrument (PBI), a well-tried instrument used in the UK 1946 and 1970 birth cohorts, the Victoria (Australia) adolescent cohort, ESEMED and in a 1/25 sample of the WMH population. There is some overlap with life events as it captures parental abuse and neglect.

Indicator: Multiple Adversities. The prominence of 'multiple adversities' as a determinant and its cumulative nature would suggest an inventory of adverse child events and situations. A child life-events questionnaire was used in the UK National Children's Survey, but it is for parents about their children and cannot capture a full childhood experience; it does not attempt to capture child abuse or neglect. The adult List of Threatening Experiences (LTE) questionnaire has been used down to age 16 and could probably be used from age 14, but it has limited coverage of experience in childhood (for example, it does not ask about parental divorce). However, it could be developed, perhaps adding a specific section relating to children's adverse life events and circumstances, using, perhaps, lists of adversities such as that used in the analysis of USA NCS data (Kessler *et al*, 1997). Further research is justified.

Indicator: Parental Separation or Divorce. Divorce statistics will be widely available but are not necessarily relevant in total. Unfortunately, it is unlikely that many countries can supply statistics on divorces where children are still

present in the home. This is, perhaps something to press for as this could be an important indicator.

Indicator: Child Abuse and Neglect. Reliable data on the full range of child abuse and neglect are almost impossible to obtain, but many countries should be able to supply national or regional statistics for recorded crimes against children, and/or numbers of children removed from parental care for abuse or neglect. These might only be reliable for local areas or regions and comparing countries may not be possible as definitions and systems of data collection may well differ. But temporal changes within communities could be monitored.

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4. Survey instruments and methods

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4.1. Introduction

4.1.1. Why population surveys are needed as part of the mental health information system?

General population surveys are extremely important when it comes to collecting mental health morbidity data because neither routinely collected statistics on deaths related to mental health problems, nor hospital discharge data reflect the reality of mental health. These statistics contain no information on the large numbers of people who suffer from mental health problems but neither died nor are hospitalised as a result.

However, comparison between surveys is difficult since this requires identical sampling design and use of instruments, including identical training for interviewers and diagnostic construction. This chapter is dedicated to the study of inter-country comparability of the diverse mental health measurement instruments available, in order to suggest some guidelines for further surveys.

4.2. What has been done so far in the European context?

Previous European work has outlined the necessity to consider mental health in two complementary dimensions. These are: (1) positive mental health (well-being and ability to cope in the face of adversities) and (2) negative mental health, (psychological distress, and psychiatric disorders with medical definitions established in recognised classifications such as chapter V of the International Classification of Disease - ICD10).

Instruments have been designed to measure each of these dimensions.

According to a recent review of the 'State of Mental Health in the European Union', the most frequently used diagnostic instrument is the Composite International Diagnostic Interview (CIDI), capable in principle of detecting a wide variety of mental disorders. CIDI-SF[5] is the shortened form of the CIDI, which has also been widely applied.

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5   Kessler et al., 1998.

Other instruments measure more general factors such as 'psychological distress', by recording the presence or absence of symptoms such as anxiety or depression. This type of instrument produces a 'psychological morbidity' score, and for some of them cut-off points can be used to categorise people into groups such as 'probable cases' (of mental disorders). Instruments in this category include the General Health Questionnaire (GHQ), the MHI-5, which is a sub-scale of a widely used general health instrument, the Short-Form 36 (SF-36; Jenkinson et al., 1993). The SF36 includes some positive mental health dimensions and some questions on impairment due to mental health problems.

The SF-12 was derived from the SF-36 and includes an Energy and Vitality (EVI) score for mental health. In addition some instruments measure self esteem, sense of mastery, sense of coherence, or life orientation, and could be considered to measure positive mental health. They will not be considered in this chapter.

The report also reviewed previous European surveys, and information was collected on about 200 surveys. However, many were small-scale local surveys, no doubt locally useful but inappropriate for generalisation. In addition the diversity of sampling approach, methods, instruments, analysis, diagnostic classification and presentation of results among the others was so great as to preclude even simple comparisons except in a few cases. Meta-analysis could be attempted on only 19 studies, using one of three standard instruments described above.

The report concluded that, although there is huge potential for invaluable comparative meta-analyses, where there are many surveys covering the same ground, in countries across the EU, this potential cannot currently be realised because of non-comparable methods. If the many surveys carried out across Europe were more standardised to enable their findings to be pooled into a more powerful analysis, then the results of each study would be much more valuable. This exercise highlights the importance of an agreement on standard research practice, which would guarantee comparable data, and enable the further exploration of differences in mental health between different communities within Europe.

In order to deal with these difficulties, two multi-country European surveys were considered for comparisons.

4.2.1. The Eurobarometer Survey

The European Commission funds the Eurobarometer survey on a wide range of topics twice a year in all EU Member States. In October 2002, and again in 2005, a set of questions relating to mental health was included. These questions were standardised survey measures that had been proposed by the European project on the establishment of indicators for mental health monitoring in Europe. These measures related to either negative

or positive dimensions of mental health. The questions included were:

- Two sub-scales of the SF-36: MHI-5 (psychological distress measure) and EVI ('energy and vitality' which is a positive mental health measure). The SF-36 seeks to measure how a person perceives his or her health. A score of 52 or less on the MHI-5 scale is taken to indicate a 'case' of mental ill-health;
- A question about whether respondents had sought help from a professional for a mental health problem during the last 12 months;
- A questionnaire on social support, the 3-item Oslo Social Support Scale (Dalgard, 1996).

In 2002, the participation rate was not very good in some countries, but in 2005, when 31 European countries were covered, it was very satisfactory and provides interesting information on mental health status in different European countries, and use of mental health services.

Since MHI-5 was the instrument for this survey, it will be studied in depth in the inter-country validity study presented in this chapter.

4.2.2. ESEMeD 2000

The European Study of the Epidemiology of Mental Disorders (ESEMeD, 2000) comprised six European national surveys in Belgium, France, Germany, Italy, the Netherlands and Spain.[6] The survey used the CIDI interview tool to diagnose current or previous mental disorders, and also used the SF-12 scale to assess psychological distress. This enabled comparison with the National Mental Health Survey conducted in the UK which used a different diagnostic instrument, the CIS-R.

4.2.3. The pilot EU survey

Following a proposition from the EU project 'Establishment of indicators for mental health monitoring in Europe[7], a pilot survey was conducted in order to test the feasibility of the set of the survey indicators proposed:

6　The survey is a cross-sectional face to face household interview with probability samples representative of adult populations of the six countries. The target population were individuals aged 18 years or older residing in private households. A stratified multi-stage random sample without re-placement was drawn in each country. In most countries the sampling frame was either a register of residents or postal registries. In France, however, an adjusted commercially obtained list of telephone numbers was used. The overall crude response rate of the study was about 60% and within countries the weighted response rate ranged from 46% in France to 78% in Spain.

7　A two-year action project to establish the indicators for mental health monitoring in Europe (5 countries in Europe), coordinated by the Finnish National Research and Development Centre for Welfare and Health (STAKES), started in the beginning of 1999 under the sponsorship of the EC Health Monitoring Programme (Korkeila et al 2006, in press; Korkeila et al., 2003).

- CIDI-SF (Kessler et al., 1998): major depressive episode (MDE) and generalised anxiety sections only;
- SF-36 mental health sub-scales: 'psychological distress' (MHI-5), energy and vitality (EVI) and 'role limitation due to emotional problems' (RLE);
- CAGE, a 4-item screening instrument for clinically significant alcohol problems (Mayfield, D. et al., 1974);
- some positive mental health scales: 7-item 'Sense of Mastery' (Pearlin et al., 1981); Life Orientation Test (LOT; Scheier et al., 1994) and 4 single-item 'Indicators of Well-being' (Andrews, 1976);
- social network questions: Oslo 'Social Support Scale', and the questions from the Canadian National Survey;
- use of care for a mental health problem in the past year.

The aim of this pilot survey was to test the feasibility of the agreed set of mental health indicators. The test involved five partners in France, Germany, Greece, Finland, and Norway. The sample consisted of 2,059 participants interviewed by phone: 923 men (44.8%) and 1,136 (55.2%) women. The number of participants interviewed in each country ranged from 378 (Norway) to 441 (France). The conclusions were that the set of indicators could be easily incorporated into general health surveys, as the interviews conducted were not time-consuming (less than 15 minutes). The methods used seem to function well, which supports the view that the citizens interviewed found the survey easily acceptable. However no attempt was made to validate these instruments across countries.

4.2.4. Why is further development needed?

The conclusion of these European designed studies was that in multi-country surveys there are difficulties in ensuring consistent survey design and execution in all participating countries.

The report added to the earlier conclusion that, in addition to the choice of instrument and classification system, there are other important factors relating to survey design, including:

- Source of sampling;
- Sampling design;
- Participation (response) rate;
- Weighting system;
- Translation of instruments;
- The setting of cut-off points.

The issues outlined above have important consequences for the reliability and applicability of survey results in the population surveyed, and have implications for the comparability of results between surveys.

In multi-country surveys there are difficulties in ensuring consistent survey design and execution across all participating countries.

The present chapter describes a cross-country validation of diagnostic instruments and psychological distress measures, and will conclude with recommendations on instruments of choice, and standardisation of data collection methods.

Which are the relevant areas of mental health (and its determinants or consequences) that should be measured using survey methods?

Mental health, as defined above by two dimensions, is influenced by a wide range of factors. These include individual physical and psychological factors, social interaction, societal structures or resources, and cultural values.

Crucial demographic factors which relate to mental health are: sex, age, marital status, ethnicity and socio-economic status. Socio-demographic factors can combine with personality characteristics to influence not only the onset of a disorder, but also its course, restitution and relapse in various ways.

Social networks, and especially close confiding relationships, can act as protective or as risk factors for the onset and recurrence of mental ill health and may affect the course of an episode of illness. Perceived social support, or lack of it, has an effect on mental health. Negative pressure from, or interaction with social networks can also have an impact. Social support should not, however, be treated solely as an environmental factor as it is linked to other factors, such as personality features.

Major occurrences in a person's life that require some psychological adjustment can be risk factors for mental ill health. These adverse 'life events', such as loss of a partner or of a job, can interact with other determinants to have an effect on mental health.

4.3. The MGEN Foundation cross national validation Project

This project involved five partners, from France, Italy, Spain, Romania and the UK.

A set of instruments to be validated was selected from the most frequently used mental health instruments in European populations for measuring psychiatric diagnoses and psychological distress.

Two structured diagnostic-interview instruments, the Composite International Diagnosis Interview-short form, (CIDI-SF), and the Clinical Interview Schedule-Revised, (CIS-R; Lewis and Pelosi, 1990; Lewis et al. 1992)

were selected. For the purpose of validation, only the depressive and anxiety disorders sections were used (including diverse phobias, generalised anxiety, and panic disorder). They were then compared with the equivalent parts of the Structured Clinical Interview (SCID-I/Non-Patient; First et al., 2002) which was selected as the 'gold standard', except in the UK, where the Schedules for Clinical Assessment in Neuro-psychiatry (SCAN; Wing et al., 1990) was used instead of SCID, because of their previous use there. Comparative results are, therefore, presented only for the four countries using SCID-I/NP).

The short version of the CIDI evaluates diagnoses according to the definitions and criteria of the Diagnostic and Statistical Manual of Mental Disorders, fourth version (DSM-IV, American Psychiatric Association, 1994), but can also assess ICD-10 diagnoses. Seven DSM-IV diagnostic categories were selected for measuring as 12-month prevalence: major depression, generalized anxiety, specific phobia, social phobia, agoraphobia, panic attack and obsessive-compulsive disorders.

The CIS-R is a semi-structured interview which is largely used in the United Kingdom's National Surveys. CIS-R yields, as well as diagnosis from the DSM-IV and the ICD-10, a one month prevalence. Similar diagnostic categories were selected: any depressive disorder, any agoraphobic anxiety disorder, social phobia, specific phobia, any panic disorder, generalized anxiety disorder, and obsessive-compulsive disorder.

With the three diagnostic instruments, a set of instruments was used which measure psychological distress: two subscales of the SF-36 (MHI-5 and RLE), and the 12 item 'General Health Questionnaire' (GHQ-12; Goldberg and Williams, 1998). These instruments attempt to measure a non-specific dimension of psychopathology, and are usually recognized as being positively correlated with mental ill-health, usually anxiety and depression, related distress status (MHI-5), and a lowered level of ability to function (RLE). GHQ-12 may be used to identify 'possible cases' of minor mental disorder (a score of 3 or more on a 12-point scale).

Disorders could be recorded during the previous one year period (CIDI SF and SCID-I/NP with an approximation) or current / during the previous month (CIS –R and SCID-I/NP) to produce consistent comparisons.

Some translations of the selected instruments were available; for other languages, the translation was done according to a specific methodology using bilingual specialists with knowledge of the mental health domain.

4.3.1. Population

The validation study was conducted by interviewing volunteers aged 18 years or above (N=500; plus n=105 for UK) attending primary care clinics.

A primary care population was selected because it was close enough to the general population, but their expected mental health disorder prevalence

rates would be sufficiently high to obtain enough cases to be able to produce meaningful comparisons.

Diagnosis instruments were administred by trained interviewers (graduate students in psychiatry or psychology), and experienced psychiatrists trained to the use of SCID-I/NP conducted the clinical interviews (**Table 1**). Instruments were administered during the same day and in a random order except when the availability of the psychiatrist did not allow this.

Diagnoses (using the SCID-I diagnoses as a reference) were computed for five types or groups of disorder:

- 'Major depressive disorders' according to DSM IV criteria: 5 symptoms and above, plus either depressive mood or Anhedonia;
- 'Any mood disorder' encompassing major depressive disorder, mood disorder due to a general medical condition, and dysthymia (SCID-I/NP);
- 'Generalised anxiety disorder' according to DSM IV, plus significant impairment;
- 'Any anxiety disorder': any phobia (specific, social, agoraphobia with or without panic), general anxiety disorder, panic disorder, post-traumatic stress disorder, anxiety disorder not otherwise specified, and anxiety disorder due to a general medical condition.
- 'Any diagnosis' which includes all these disorders.

For the CIDI-SF, significant impairment was added to the symptoms criteria in order more nearly to approach the DSM-IV 'major depressive episode' as well as for generalized anxiety disorder.

4.4. Results

Four of the five samples were similar in terms of the distribution of sex (a majority of women 67.9% of women against 32.1% of men for all countries), age (mean age 50, SD 18.04) and marital status (26.21% 'never married'; 55.04% 'married'; 18.75% 'widowed or divorced'). However, in France and Romania, statistical differences (by Chi²) were identified for people 'retired' (43.6% in France, 50% in Romania, but only 22% in Italy, and 21% in Spain). For educational level, France differed from other countries in having a majority (74.8%) with higher education, because the location of the Primary Care centre in France was the Health Maintenance Organisation for teachers and related professions. Some descriptive statistics for the UK sample were quite different from the others: mean age was 38.4 years, only 35% was married, and only 60% currently employed.

Prevalence figures comparing SCID with CIDI-SF (**Table 2**) and CIS-R (**Table 3**) are given for four countries and in total. CIDI-SF gave the highest global prevalence: 38% for 'any diagnosis', then SCID, 26.4% and CIS-R

14.2%. But for 'generalized anxiety disorder' CIS-R produced a higher figure than the other instruments.

Other significant divergences in prevalence are shown in **Tables 2 and 3:** using CIDI-SF, 'major depressive disorder' showed significantly higher prevalence in France and Spain (14.2% and 21% respectively) than in Italy and Romania (7.5% and 11.7% respectively). The same was also true for 'any anxiety disorder' and 'any diagnosis'. Differences were also revealed for most categories by SCID, but CIS-R showed differences between countries only for 'any anxiety disorder'.

In general, concordance between the 'gold standard' SCID and both survey instruments were moderate for all four countries except France where prevalences were the lowest. Better concordance was noted for the CIDI-SF (0.20-0.43; see **Table 2**) than the CIS-R (0.16-0.31; see **Table 3**). UK partners had previously compared CIDI and CIS-R with SCAN for ICD-10 diagnostic categories (Jordanova et al., 2004). They noted that concordance for CIDI was moderate to excellent (kappa = 0.58 – 0.97) whereas concordance for CIS-R was poor to moderate (kappa = 0.10 – 0.65). Sensitivity was better for CIDI-SF which thus detects more 'true positives' than CIS-R. However, specificity was better for CIS-R (0.89-0.96) than CIDI-SF (0.57-0.84).

The diagnostic results were no closer for 'major depressive disorder' than for the more extensive CIDI-SF definition, mainly because no severe cases were detected in Romania by this instrument. CIS-R found some severe cases but concordance with SCID remained very low.

For 'generalised anxiety disorder', CIS-R seemed to perform well in Italy but not in other countries, and CIDI-SF results were quite close. UK results were more concordant than the other countries, but SCAN was used instead of SCID.

For 'any mood disorder' or 'any anxiety disorder', CIDI-SF concordances with the SCID were fair, and similar for three countries but not for France; this seems due to much lower prevalences in this population. When 'major depressive disorder' was specifically considered, Romania had lower results using CIDI-SF than the other countries. CIS-R showed similar trends at a lower level.

Psychological distress scales, using the recommended cut-off points, were compared with the SCID 'current' results for 'any diagnosis'. 42.2% of all respondents were considered 'a possible case' using the GHQ-12 (cut-off 3 or more) (**Table 7**); 31.1% of respondents had MHI-5 values lower than 56 (Table 8); 51.8% of respondents indicated that they had problems with work or other daily activities as a result of emotional problems (**Table 9**).

No significant differences were found between countries for MHI-5 and GHQ-12 results, but for 'role limitation due to emotional problems' (RLE) divergences were due to the high level of positive responses in the Romanian sample (P-value 0.000).

Table 4 shows that GHQ scores related to each of the other measures generally varied in a similar way between the four countries; this is not so for MHI-5 scores except in relation to SCID; this situation is not noted for MHI-5 (except for the SCID).

Positive correlation coefficients (**Table 6**) were found between the three diagnostic instruments (0.58-0.75), and the expected high correlation between MHI-5 and GHQ was revealed. Thus psychological distress instruments could be used to identify 'possible cases' of minor mental disorder.

Concordances between the three measures of psychological distress and 'current cases' identified by the SCID (**Tables 7, 8** and **9**) highlight divergences between countries. Concordance between MHI-5 and SCID yield moderate to good kappa values (0.34 – 0.59, except for France: 0.09), with better specificity than sensitivity. Lower kappa values in France seem to be due to low prevalence rates for 'any diagnosis' (current) from SCID.

For GHQ-12, Italy and Spain had better kappa values, sensitivity and specificity (kappa: 0.46 and 0.53; sensitivity: 0.70 and 0.87; specificity: 0.46 and 0.53) than the other two countries. In France and Romania, the GHQ-12 seemed to over-estimate the percentage of 'possible cases' of minor mental disorder.

Important divergences were found for RLE between Romania and the other three countries; For France, divergences are due to there being few cases (SCID) and quite a high score in the RLE.

4.5. Analysis and discussion

In surveys, diagnostic instruments should be able to identify subjects who have a mental disorder (that is, have high sensitivity) and should not identify those who do not have a mental disorder (high specificity). Specificity is more relevant. A good instrument, would show a specificity above 0.75; a specificity of 0.95 would make it an excellent instrument.

From the results, we were able to agree that the CIDI-SF seems to over-estimate the prevalence of disorders, especially major depressive disorder'. The CIS-R seems to be more sensitive to current 'generalized anxiety disorder' than the CIDI-SF.

In consequence, the recommendation is to narrow the diagnostic criteria of the CIDI-SF in order to increase the specificity of the instrument and to restrict the number of false positives.

Divergences in prevalence of disorders identified by SCID-I/non-patient version between countries could also be due to the semi-structured nature of this clinical interview. Studies have demonstrated that it yields low concordance in two non-patient samples over time, and lower reliability in community samples than in clinical samples (Williams et al., 1992).

Psychological distress appeared to be measured well by all the instruments used, with substantial congruence. However, further studies are needed to confirm this. We would also suggest that difference in scores between countries might be interpreted in terms of cultural sensitivity of the instruments.

High scores for Romania respondents, in the context of the correlation coefficient between countries, suggests that this country has major divergences. Mental disorder prevalences do not explain this divergence. The explanation can be either: 1) respondents did not understand the questions, or the interviewers did not clarify the intended focus on the limiting effects of emotional problems; 2) the socio-political context biased respondents' responses. It would be interesting to evaluate once again the sensitivity of the RLE scale, and to try to understand what it is really measuring.

As regards the GHQ-12, the score is not a convincingly good predictor of minor mental troubles when the SCID is used as a 'gold standard' for comparison.

4.6. Recommendations

How should a European mental health survey look like?
What measures/methods should be included?

The survey indicators in the MINDFUL short list (see **Chapter 8**) are the following:

1.	Psychological distress.	MHI-5 from SF-36
2.	Psychological impairment	RLE from SF-36
3.	Energy Vitality	EVI from SF-36
4.	Mental disorders among children and adolescents (generic)	SDQ[1]
5.	Major depression	CIDI-SF
6.	Any anxiety disorder	CIDI-SF
7.	Harmful and hazardous drinking	AUDIT[2]
8.	Sense of mastery	7 item scale
9.	Self esteem (Rosenberg)	10 item scale[3]
10.	Social support (Oslo)	3 item scale
11.	Negative life events	LTE[4] (12 items)
12.	Childhood adversities (4 items about abuse and neglect)	Childhood adversities[5]

1 SDQ (Strengths and Difficulties Questionnaire); Goodman et al., 1997, 1998.
2 Saunders et al., 1993.
3 Rosenberg, 1965.
4 List of Threatening Events; Brugha et al., 1985.
5 Batten et al., 2004.

This project evaluated four of these (1, 3, 5, and 6) and compared their results in four countries by using a rather elaborate method.

MHI-5 is recommended as an indicator of psychological distress; the results were consistent between countries, and the cut-off point has proved to be adequate.

RLE seems more questionable because the Romanian results were so different, but this may be due to a translation problem or a contextual problem not directly related to mental health problems. For the remaining countries it appeared a rather good instrument, in one case (Italy) with better results than MHI-5.

CIDI-SF is also a good choice for depressive and anxiety disorders; it is the shortest instrument that could produce reliable diagnoses, and it seems important to collect data on depression as well as anxiety, as these disorders may vary between countries. In addition, their co-occurrence is considered as a sign of severity and an indicator of need for care.

Different levels of comprehensiveness could be considered: from the minimum set of measures to a very extensive and comprehensive mental health survey.

Given the importance of the mental health burden and its high co-morbidity with many physical disorders, especially long-term disorders, it is strongly recommended that mental health measures should be included in any health related survey.

SF36 mental health sub-scales are the minimum requirements, with CIDI-SF ('major depression' and 'any anxiety disorder') which is a relatively brief instrument, added where feasible to provide diagnostic information. Questions on the use of care should also be included, as many people suffering from these disorders do not receive adequate care because they are not recognised.

A mental health survey should be conducted every 5 to 10 years. A sample size of 3000 per country is a minimum requirement, which should be a truly representative sample.

The most severe disorders, such as psychotic disorders, should be investigated with appropriate methods on a sub-sample after screening with scales to detect mania (e.g. MDQ- Mania Diagnostic Questionnaire) and delusions (e.g. Psychosis Screening Questionnaire).

For all surveys, there should be strong recommendations for standardised sample size, design, interviewer training and data analyses, especially diagnostic algorithms and weighting systems.

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Table 1. Methods by countries

COUNTRIES	SAMPLE SIZE	TYPE OF SAMPLE	INTERVIEWERS
Italy	120	Adult population attending a general practitioner's office	2 post graduate physicians or medicines and applying SCID-I 2 graduated in psychiatry and applying other instruments
Romania	120	Adult population attending general practitioners (in collective setting)	2 psychiatrists with 5 years clinical 2 experience and applying SCID-I 2 residents in psychiatry and applying other instruments
Spain	119	Adult population attending several general practitioners at a primary care centre	1 senior psychiatrist (PhD), with experience in structured and semi-structured interviews and applying SCID-I 3 PhD students (2 residents in Psychiatry and 1 doctor with clinical experience) and applying other instruments
France	141	Adult population waiting for general practitioners or specialists (the MGEN Public Health Mutual Insurance Centre).	1 psychiatrist with experience in structured and semi-structured interviews and applying SCID-I 4 students in Psychology (Master 1) and 1 psychologist (PhD student) and applying other instruments
TOTAL	500		

Table 2. Kappa values, sensitivity and specificity of the CIDI-SF versus SCID-I
N=500; Italy (120), Romania (120), Spain (119), France (141), UK (105)

	% SCID	% CIDI-SF	Sens*	Spec.**	Kappa	SLE	95% CI	
All mood disorders (current)								
All Countries	7.8%	13.6%	0,56	0,90	0,35	0,04	0,26	0,43
Italy	11.7%	11.7%	0,57	0,94	0,51	0,09	0,34	0,69
Romania	9.2%	7.5%	0,27	0,95	0,24	0,09	0,06	0,41
Spain	6.7%	21.0%	1,00	0,85	0,43	0,08	0,28	0,57
France	4.3%	14.2%	0,50	0,87	0,18	0,07	0,04	0,31
Uk †	7.6%	18.1%	1,00	0,89	0,54	–	0,31	0,77
p-value ††	0,141	0,021						
Major depressive disorder (current)								
All Countries	6.2%	3.4%	0,19	0,98	0,22	0,04	0,13	0,30
Italy	10.8%	4.2%	0,15	0,97	0,17	0,08	0,01	0,33
Romania	7.5%	0.8%	0,00	0,99	-0,02	0,05	-0,12	0,09
Spain	5.0%	6.7%	0,50	0,96	0,39	0,09	0,22	0,57
France	2.1%	2.1%	0,33	0,99	0,32	0,08	0,15	0,48
p-value ††	0,028	0,062						
Any anxiety disorder (current)								
All Countries	17.4%	31.8%	0,68	0,76	0,33	0,04	0,25	0,41
Italy	25.8%	27.5%	0,68	0,87	0,53	0,09	0,35	0,71
Romania	23.3%	22.5%	0,50	0,86	0,36	0,09	0,18	0,54
Spain	16.0%	33.6%	0,79	0,75	0,37	0,08	0,21	0,53
France	6.4%	41.8%	1,00	0,62	0,17	0,05	0,08	0,26
p-value ††	0,001	0,006						
General anxiety disorder (current)								
All Countries	4.4%	4.6%	0,14	0,96	0,09	0,04	0,00	0,18
Italy	11.7%	2.5%	0,21	1,00	0,33	0,07	0,19	0,46
Romania	2.5%	6.7%	0,00	0,93	-0,04	0,08	-0,20	0,12
Spain	4.2%	5.9%	0,00	0,94	-0,05	0,09	-0,23	0,13
France	0.0%	3.5%	–	0,96	0,00	0,00	0,00	0,00
Uk †	6.7%	1.0%	1,00	0,94	–	–	–	–
p-value ††	0,001	0,365						
Any diagnosis (current)								
All Countries	26.4%	38.0%	0,66	0,72	0,33	0,04	0,25	0,42
Italy	39.2%	32.5%	0,55	0,82	0,39	0,09	0,21	0,56
Romania	27.5%	27.5%	0,58	0,84	0,41	0,09	0,24	0,59
Spain	31.9%	42.0%	0,74	0,73	0,43	0,09	0,25	0,60
France	9.9%	48.2%	1,00	0,57	0,21	0,05	0,11	0,31
Uk †	41.9%	41.9%	0,89	0,92	0,80	–	0,69	0,91
p-value ††	0,001	0,003						

*   Sensitivity
**   Specificity
–   calculation cannot be done because of empty cells
†   12-month SCAN ICD-10 diagnosis
††   p-value between countries without UK

Table 3. Kappa values, sensitivity and specificity of the CIS-R versus SCID-I
N=500; Italy (120) Romania (120) Spain (119) France (141) UK (105)

	% SCID	% CIS-R	Sens*	Spec.**	Kappa	SLE	95% CI	
All mood disorders (current)								
All Countries	7.8%	4.8%	0,31	0,97	0,34	0,04	0,26	0,43
Italy	11.7%	3.3%	0,29	1,00	0,41	0,07	0,27	0,56
Romania	9.2%	6.7%	0,27	0,95	0,26	0,09	0,08	0,43
Spain	6.7%	7.6%	0,38	0,95	0,30	0,09	0,12	0,48
France	4.3%	2.1%	0,33	0,99	0,43	0,08	0,27	0,58
Uk †	7.6%	9.5%	0,38	0,93	0,27	–	0,03	0,57
p-value † †	0,141	0,129						
Major depressive disorder (current)								
All Countries	6.2%	4.8%	0,35	0,97	0,37	0,04	0,28	0,45
Italy	10.8%	3.3%	0,31	1,00	0,44	0,08	0,29	0,59
Romania	7.5%	6.7%	0,22	0,95	0,18	0,09	0,00	0,36
Spain	5.0%	7.6%	0,50	0,95	0,36	0,09	0,19	0,54
France	2.1%	2.1%	0,67	0,99	0,66	0,08	0,49	0,82
p-value † †	0,028	0,129						
Any anxiety disorder (current)								
All Countries	17.4%	12.6%	0,32	0,92	0,27	0,04	0,18	0,35
Italy	25.8%	14.2%	0,35	0,93	0,34	0,09	0,17	0,50
Romania	23.3%	13.3%	0,29	0,91	0,23	0,09	0,06	0,40
Spain	16.0%	10.1%	0,37	0,95	0,37	0,09	0,20	0,55
France	6.4%	12.8%	0,22	0,88	0,07	0,08	-0,08	0,22
p-value † †	0,001	0,006						
General anxiety disorder (current)								
All Countries	4.4%	9.4%	0,41	0,92	0,21	0,04	0,13	0,29
Italy	11.7%	12.5%	0,57	0,93	0,49	0,09	0,31	0,67
Romania	2.5%	8.3%	0,00	0,91	-0,04	0,08	-0,19	0,11
Spain	4.2%	5.9%	0,20	0,95	0,12	0,09	-0,05	0,30
France	0.0%	10.6%	–	0,89	0,00	–	–	–
Uk †	1.0%	4.8%	0,00	0,95	–	–	–	–
p-value † †	0,001	0,321						
Any diagnosis (current)								
All Countries	26.4%	14.2%	0,32	0,92	0,28	0,04	0,20	0,36
Italy	39.2%	15.0%	0,32	0,96	0,31	0,08	0,17	0,46
Romania	27.5%	15.0%	0,33	0,92	0,29	0,09	0,13	0,46
Spain	31.9%	14.3%	0,32	0,94	0,30	0,08	0,14	0,46
France	9.9%	12.8%	0,29	0,89	0,16	0,08	-0,01	0,32
p-value † †	0,001	0,947						

* Sensitivity
** Specificity
– calculation cannot be done because of empty cells
† 12-month SCAN ICD-10 diagnosis
† † p-value between countries without UK

Table 4. GHQ-12: mean and median values by 'any current diagnosis'

	SCID (n=39)		CIDI-SF (n=68)		CIS-R (n=24)		GHQ score =>3 (n=210)		MHI-5 score =>56 (n=154)		RLE (n=257)	
	m*	M†	m*	M†	m*	M†	m*	M†	m*	M†	m*	M†
All Countries	5,1	5	4,4	4	5,8	5	5,9	5	5,8	5	4,2	3
Italy	4,7	4	4,8	4	5,6	5,5	5,9	5	5,2	5	4,4	4
Romania	4,9	5	5,3	5	5,7	5	5,7	5	5,7	5	3,4	2
Spain	6,6	6,5	5,2	5	7,9	8	6,5	6	7,0	7	6,1	6
France	3,4	2	3,2	2	4,3	4	5,5	5	5,2	5	4,2	3
p-value	0,013	0,046	0,004	0,006	0,045	0,165	0,256	0,437	0,066	0,274	0,001	0,001

* Mean
† Median

Table 5. MH5: mean and median values by 'any current diagnosis'

	SCID (n=39)		CIDI-SF (n=68)		CIS-R (n=24)		GHQ score >=3 (n=210)		MHI-5 score <=56 (n=154)		RLE (n=257)	
	m*	M†	m*	M†	m*	M†	m*	M†	m*	M†	m*	M†
All Countries	48,5	48	52,9	52	43,5	44	50,2	48	38,6	40	55,2	56
Italy	50,3	52	48,7	52	46,0	52	46,2	44	37,6	38	51,9	56
Romania	50,9	52	50,3	48	42,0	40	55,4	56	38,7	40	61,9	64
Spain	41,5	36	50,8	48	37,7	36	45,8	44	35,6	36	45,0	40
France	55,7	56	58,3	56	48,0	48	53,2	52	42,7	48	53,9	52
p-value	0,040	0,009	0,068	0,376	0,419	0,143	0,020	0,142	0,052	0,041	0,001	0,001

* Mean
† Median

Table 6. Terachoric correlation between psychological distress

All country			
Variable	GHQ	MH5	RE
GHQ	1		
MHI-	0,7478	1	
RLE	0,6022	0,583	1

Table 7. Kappa values, sensitivity and specificity of the GHQ-12 versus SCID-I

	% SCID	% GHQ-12	Sens*	Spec.**	Kappa	SE	95% CI	
Any diagnosis (current)								
All Countries	26.4%	42.2%	0,70	0,67	0,32	0,04	0,23	0,40
Italy	39.2%	41.7%	0,70	0,77	0,46	0,09	0,29	0,64
Romania	27.5%	45.8%	0,61	0,60	0,17	0,08	0,00	0,33
Spain	31.9%	46.6%	0,87	0,72	0,53	0,09	0,36	0,70
France	9.9%	35.7%	0,43	0,65	0,04	0,06	-0,09	0,16
p-value ††	0,001	0,259						

*   Sensitivity
**   Specificity
††   between countries

Table 8. Kappa values, sensitivity and specificity of the MHI-5 versus SCID-I

	% SCID	% MHI-5	Sens*	Spec.**	Kappa	SE	95% CI	
Any diagnosis (current)								
All Countries	26.4%	31.1%	0,57	0,77	0,34	0,04	0,25	0,42
Italy	39.2%	35.0%	0,53	0,77	0,30	0,09	0,13	0,48
Romania	27.5%	29.2%	0,52	0,79	0,30	0,09	0,12	0,48
Spain	31.9%	32.5%	0,71	0,85	0,59	0,09	0,41	0,77
France	9.9%	28.3%	0,43	0,72	0,09	0,07	-0,05	0,23
p-value ††	0,001	0,641						

*   Sensitivity
**   Specificity
††   between countries

Table 8. Kappa values, sensitivity and specificity of the RLE versus SCID-I

	% SCID	% RLE	Sens*	Spec.**	Kappa	SE	95% CI	
Any diagnosis (current)								
All Countries	26.4%	51.8%	0,73	0,56	0,22	0,04	0,15	0,30
All Countries †	26.1%	41.0%	0,69	0,69	0,32	0,05	0,23	0,42
Italy	39.2%	42.5%	0,68	0,74	0,41	0,09	0,24	0,59
Romania	27.5%	85.8%	0,85	0,14	-0,01	0,04	-0,09	0,08
Spain	31.9%	38.1%	0,71	0,78	0,48	0,09	0,30	0,66
France	9.9%	42.0%	0,64	0,59	0,10	0,06	-0,01	0,22
p-value ††	0,001	0,001						

*   Sensitivity
**   Specificity
†   without Romania
††   between countries

5. Monitoring service utilisation

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5.1 Introduction

5.1.1. Background

Service-use data are an important complement to epidemiological data on mental health and mental disorders. Service use depends on many factors, including the incidence and prevalence of mental disorders, the availability and accessibility of services in a specific area, and the illness behaviour of persons affected by mental disorders.

In conjunction with epidemiological data describing the incidence and prevalence of mental disorders, data about need for treatment, and data on existing services, service-use data can be used to estimate whether there is under-provision, over-provision or even inappropriate provision of services, and whether there is under-use, over-use or inappropriate use of services.

5.1.2. The present situation

Currently a large amount of data on the use of health services (including mental health services) is routinely collected and reported year by year in EU Member States. Collecting and reporting data can occur at five levels: a) the institutional level (i.e. an individual service); b) the organizational level of health service providers and financiers; c) the sub-national / regional level within one country; d) the national level; e) the international level (e.g. EUROSTAT collects and publishes health service-use data on a regular basis).

However, the question arises how well the collected and reported data represent the actual facts of mental health service-use, i.e. how valid they are. There are at least three issues which have to be considered when answering this question.

a) Level of data aggregation and validity and reliability of data
Depending on the constitution of a country (federal or centralised state) and on the organisational and financing systems of health services, not all levels pertain to all countries. Experience shows that the higher the level,

the fewer data are available and the less valid and reliable they are. Reasons for this include differences in definition of services and an ensuing lack of comparability, the high costs of data collection, and omissions in reporting due to flawed monitoring systems.

b) Types of services covered or not covered by the reporting systems
The appropriateness of currently collected data for monitoring the total mental health service use is questionable. On the one hand, data are often reported because they are easily available (or collected because this has always been done in that way, e.g. the number of psychiatric hospital beds); on the other hand, hardly any routinely collected data are available for other services which provide a large amount of mental health care (e.g. GPs).

c) Failure to include all relevant health, social, educational and other societal sectors
In the medical sector, data on in-patient services are more often routinely reported than any other services – this is unfortunate, as today the majority of health services are provided on an out-patient basis. The situation is even less satisfying for *mental* health services, since many services are not provided and financed by the health care system, but by others, such as the social and educational sectors (e.g. residential facilities, day centres, counselling services). In most countries routine data reporting is less common and of poorer quality in these sectors than in the health sector. One possible reason for this is that responsibility for help is usually more decentralized in the social than in the health care sector and that data are less often available at an aggregate level.

5.1.3. Aims of the project

Given this unsatisfactory situation, the aim of the project was to describe and analyse existing monitoring systems for mental health service use, i.e. describing and analysing the collecting and reporting systems for the different levels mentioned above. For this purpose, technological developments and results and proposals of other EU activities, such as the European Community Health Indicators (ECHI) Project and the Hospital Data Project, had to be taken into account. As a result of these analyses, a number of suggestions for improvement are made.

5.2. Description of the process

5.2.1. Participating countries

Six EU countries participated in the project. They were chosen in order to represent both "old" and "new" Member States, as well as a wide range of types of mental health service systems. They were Austria, Greece and Spain ("old" Member States) and the Czech Republic, Latvia and Slovakia ("new" Member States). For each country a "country expert" was chosen.

5.2.2. Data sources

Data sources for mental health service use included data routinely collected and reported by the services themselves as well as data from general population self-report surveys. Routinely collected data included in-patient, day patient, out-patient, complementary and other services. For the in-patient sector, also data on resources (hospital beds) were included. For general population self-report surveys, Eurobarometer and national surveys available in the HISHES database were used.

5.2.3. Strategy

Both a top-down and a bottom-up approach were applied. For the top-down approach, internationally available databases and publications were used, such as the WHO Health For All (HFA) database, the EUROSTAT Yearbook, the EUROSTAT publication 'Health Statistics – Key Data on Health', the EUROSTAT New Cronos database, and data sources available at the national level (National Statistics Year-books, National Health Statistics Year-books and National Mental Health Statistics Year-books). These were analysed in respect of their content of mental health service-use data. For the bottom-up approach, the data flow was analysed in each country from the service level, through several intermediate steps (where appropriate), to national agencies (such as ministries of health and national statistical offices) responsible for reporting data to international agencies (i.e. EUROSTAT and the World Health Organization).

5.2.4. Working method

The working method involved the group of country experts jointly elaborating structured questionnaires, schemas and procedures, applying them locally in each of the participating countries and then reporting back to the whole group. A matrix for describing the flow of data from the services level

to the international level was developed (see **Figure 1**). With the help of these questionnaires and schemas, the national and international data collection systems for mental health service use were analysed.

5.2.5. Logistics

Six two-day meetings were held in Vienna in which all country experts participated, together with several conference calls. The working method had an iterative character – interim results were reported and discussed in these meetings and conference calls, which led to new questions and activities in each of the participating countries, the results of which were again reported back, etc.

5.3. Results

Mental health services are extremely manifold, both in their nature (hospital beds, other residential facilities, ambulatory and mobile services, etc.) and in their financing mechanisms (tax-funded, medical insurance, social budget etc.). For the purpose of this project, a tentative broad classification of services overtly recognised as for 'mental health' is presented in **Table 1**.

The intention was to analyse all types of service-use data, i.e. in-patient, day patient, out-patient, complementary and others, in the same thorough way. It turned out, however, that, except for hospital services, regularly reported data don't exist at the international level, and – depending on the country – often not at the national level. But the character of modern community psychiatry is not reflected in hospital data; a much larger proportion of mental health care is today provided outside the hospital sector. Merely publishing hospital data will, therefore, give a false picture of the mental health care situation.

First, service use data as reported by the services themselves (and the respective reporting systems) will be described for in-patient services (5.3.1), day care services (5.3.2), as well as out-patient, complementary and other services (5.3.3). In a concluding section (5.3.4), self-report data will be described and analysed. In each of these instances emphasis will be on examining inconsistencies and discrepancies.

5.3.1. In-patient services

a) In-patient episodes with a main psychiatric diagnosis
Usually absolute yearly numbers of hospital discharges with a main psychiatric diagnosis, and/or rates per 100,000 inhabitants, are published in EURO-STAT reports (EUROSTAT Yearbook, EUROSTAT Health statistics – Key data on health and in the EUROSTAT New Cronos database). These data

Figure 1: A General Model of a Reporting System of Mental Health Service Utilization Data

| LEVEL 5: International |
| LEVEL 4: National |
| LEVEL 3: Subnational/ Regional |
| LEVEL 2: Provider |
| LEVEL 1: Services |

EUROSTAT — WHO

Ministry of Health → Central Statistical Office ← Health Insurance

Health Agency → Social Agency

Provider 1 | Provider 2 | Provider 3 | Provider 4 | Provider 5 | Provider 6 | Provider 7

H | H | H | OP | OP | OP | CS | CS | CS

H = Hospitals **OP** = Out-patient Services **CS** = Complementary Services
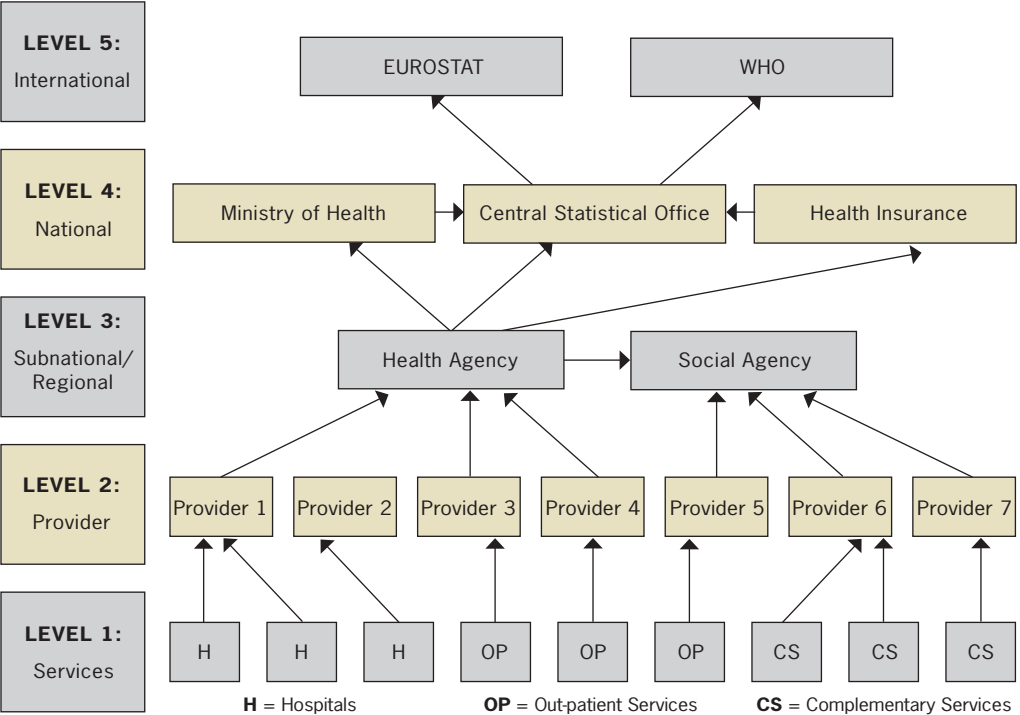
Table 1: Classification of mental health services according to place of intervention and responsible societal sectors

	Responsible societal sectors		
Mental health services; place of intervention	Medical	"Social"	Others (Educational, NGOs, self-help, etc.)
In-patient services	Hospitals	Nursing homes, etc.	Residential facilities
Day care services	Day hospitals, day clinics	Day centres, sheltered workshops	Vocational training, etc.
Out-patient services	Ambulatory services in hospitals, health centres, psychiatrists in own office, etc.	Counselling services, etc.	Counselling services, etc.
Mobile services	Emergency services, etc.	Outreach teams, etc.	Home visiting services, etc.
Telecommunication	Telephone hotlines, etc.	Telephone services, etc.	Telephone services, etc.

Complementary services

are recorded at the time of discharge, because by that time also a diagnosis is available.

In addition, some countries provide related variables, such as average length of stay, numbers of one-day cases and numbers of hospital days. Problems discussed below for the indicator "hospital discharges with a main psychiatric diagnosis" are also relevant to these derived indicators.

One important finding is that hospital discharge figures differ largely between EU countries; for example, the WHO-HFA database for the year 2000 reported 65 discharges with a main psychiatric diagnosis per 100,000 inhabitants in Poland, and 2,291 discharges per 100,000 inhabitants in Hungary.

In addition, when comparing different international reports, in quite a few instances considerable differences are found for one and the same country. For example, data on hospital discharges with a psychiatric diagnosis per 100,000 inhabitants, are more or less identical for five of the 13 EU-15 countries reporting data in the three EUROSTAT reports for 1999, but different for eight countries. Another example for such discrepancies is that when comparing EUROSTAT New Cronos and the WHO-HFA database the absolute numbers of hospital discharges with a main psychiatric diagnosis are identical, but the rates per 100,000 inhabitants are different for some countries.

The project tried to identify possible reasons for these differences and discrepancies, some of which are listed below.

There is variable inclusion of different types of hospital and types of beds in different countries and in different reports. In most countries (but e.g. not in Greece) these indicators refer to patients treated in *any type of hospital*, not only in designated psychiatric hospitals and/or departments of general hospitals.

> In Austria, of 107,120 discharges with a main psychiatric diagnosis from hospitals during the year 2002, only 54% were from psychiatric hospitals and psychiatric departments in general hospitals, i.e. from officially defined psychiatric beds, while 46 % were from non-psychiatric hospitals and non-psychiatric departments in general hospitals.

> In the Czech Republic, for discharges with a main psychiatric diagnosis, psychiatric hospitals were excluded from the data published for 2000 and 2001 in WHO-HFA. But the equivalent data in the EUROSTAT New Cronos system do include discharges from psychiatric hospitals.

There is variable inclusion of day hospital discharges.

> In Austria, discharges from day hospitals are included in national in-patient data and those reported to both EUROSTAT and WHO-HFA, but the other five countries in the project do not include them.

There is variable inclusion of non-national residents.

> The differences in the reported data on hospital discharges with a main psychiatric diagnosis for Austria in EUROSTAT New Cronos and WHO-HFA are because data sent to EUROSTAT New Cronos includes only patients who are nationals of Austria (e.g. 120,904 discharges in 2001), while the data sent to WHO-HFA includes all patients discharged (123,154 in 2001).

There is variable treatment of intra-hospital transfers. If a patient is transferred from one department to another within the same hospital (e.g. from a psychiatric department to a department of internal medicine), this is counted as one episode in some countries (e.g. Greece), and only the diagnosis given by the department from which the patient is ultimately discharged, is reported. In other countries the same circumstances are reported as two episodes with two diagnoses.

> The differences in reported data on hospital discharges with a main psychiatric diagnosis in EUROSTAT New Cronos and WHO-HFA concerning Slovakia are partially because a transfer to another department followed by a "re-transfer" back to psychiatry and final discharge, is counted as two discharges in the data sent to EUROSTAT New Cronos, but as one discharge in the data sent to WHO-HFA.

Denominators are not consistent. Different rates per 100,000 inhabitants in EUROSTAT New Cronos and WHO-HFA data are also partly due to different population figures being used to calculate the rates.

> For four of the six project countries, the absolute numbers of hospital discharges with a psychiatric diagnosis are identical in the two systems for the year 1999, but the rates per 100,000 inhabitants are different.

One further reason for lack of comparability of hospital discharges with a psychiatric diagnosis are the different routines of whether day care episodes are included in hospital discharge data or not (see section (2) below).

> In Austria, the Czech Republic and Latvia one-day cases are included in the inpatient hospital statistics, in Slovakia they are included in outpatient data (duration of stay is less then 24 hours).

Sub-specialist beds are variably included. Discharges from private hospitals, specialist substance-abuse units, military hospitals and designated forensic beds are included in some countries but excluded in others.

There is also a problem of diagnosis. In the EUROSTAT New Cronos database, hospital discharge data (hospital discharges with a psychiatric diagnosis, average length of stay, etc.) are allocated to nine psychiatric diagnostic groups consistent with both ICD-9 and ICD-10, which can generally be provided by European countries. However, most countries use different groups at the national level, so that international and national data are not comparable.

There can also be technical errors in the use of the groups.

> One country has sent to EUROSTAT for the year 2000, not ICD-9 groups 291 *plus* 303, but all groups from 291 *to* 303 inclusive.

Another diagnostic problem relates to countries where Diagnosis-Related Groups (DRGs) are used for reimbursement: in some cases, the diagnosis having the highest economic value tends to be reported as the main diagnosis.

One more general issue has to be added here: The indicator "hospital discharges with a main psychiatric diagnosis" does not represent psychiatric co-morbidity in patients suffering primarily from physical disorders in non-psychiatric hospital beds, as the following example shows.

> In Austria, of approximately 234,000 discharges with a psychiatric diagnosis in 2002, 107,000 had a main psychiatric diagnosis (and are therefore counted), and 127,000, i.e. more than 50%, had a secondary psychiatric diagnosis (with a main physical diagnosis) and are therefore not counted as in-patient episodes with a psychiatric diagnosis.

b) Psychiatric hospital beds.

Many of the problems discussed above are also relevant to reports about "psychiatric hospital beds". The calculation of the number of beds depends on the one hand, on the official status of a hospital bed defined in each country ("planned" beds, "really existing" beds, "grey" beds, "actually used" beds), and on whether sub-specialist psychiatric beds are included. These can include beds for alcohol or drug treatment, child and adolescent units, beds for dementia or the elderly, for eating disorders, for forensic services, etc.

Inconsistencies in the reported data are also due to the fact that some countries report only beds in psychiatric hospitals, while others include also psychiatric beds in general hospitals. Some use different definitions for different international systems: (e.g. the Czech Republic records only beds in psychiatric hospitals in EUROSTAT New Cronos, but in WHO-HFA includes also beds in general hospitals.

Finally, the way the "prevalence" of psychiatric beds is calculated may vary. In Austria, the Czech Republic and Spain it is calculated as an average for the year. In Greece and Slovakia it is a point prevalence at December 31. In Latvia both reporting methods are used: figures sent to EUROSTAT are calculated as an average for the year, but in the Statistical Year-book for Mental Health Care in Latvia beds are calculated as of the 31st of December.

5.3.2. Day care services

Day care services (also called "part-time hospitalisation") are intermediate between in-patient and out-patient care. Patients don't stay overnight, but they do stay for several hours, not only for a short consultation with a professional as in an out-patient service. All six project countries have day care services, usually called "day hospitals" or "day clinics".

While day care is a very important component of a modern community-oriented psychiatric service, its very flexibility constitutes a problem for documenting its use in a comparable way. Usually patients attend such services several or all working days of the week, but stay at home at weekends. It is possible to count the days on which such a service is attended (similar to out-patients); to define an episode of care during which a patient attends the service (similar to an in-patient-episode); or to count the weeks during which a patient attends a day care facility (being 'discharged' on Friday and 're-admitted' on Monday). All these have been or are being used, often depending on the specific reimbursement system in a country. Comparative service-use statistics are, therefore, even less reliable than those for in-patients, while practically all the problems with in-patient data listed above, also apply to day care.

No explicit data on day care are published at the international level. Nationally, annual data on service use in day hospitals are published in Latvia and Spain; in Austria, the Czech Republic, Greece and Slovakia no specific data on service use in day hospitals are regularly published.

> In these four countries, several ways of handling day care data could be identified. In Austria discharges from day hospital care are included in in-patient data. In the Czech Republic three possibilities exist: attendance for day care may be reported (a) as an out-patient contact, if it occurs in a day centre within a psychiatric facility; (b) as an in-patient episode; (c) not at all.

> In Slovakia, day hospital attendance is neither included in the data on in-patient services, nor in out-patient data.

> In Greece, attendance at a day hospital is counted as an out-patient visit, but no statistics are published. In Spain, three types of day hospital exist: psychiatric day hospitals that belong (a) to a hospital, (b) to a mental health centre, and c) as an independent day hospitals. In the published figures only day hospitals that belong to a hospital are included.

5.3.3. Out-patient, mobile, telecommunication, complementary and other services

These services exist in many different forms (see **Table 1**). At the international level no data are available for any of these services in the mental health field. At the national level, out-patient services are regularly reported in Spain, Latvia, Slovakia and the Czech Republic, but not in Greece and Austria, though in Austria irregular, non-annual reports exist.

5.3.4. General population self-report surveys on mental health service use

While erratic general population surveys which report on mental health service use in EU-countries exist, no regular reports are available. Two special Eurobarometer (EB) surveys, (EB 58.2, carried out 2002, and EB 64.4,

carried out 2005) are relevant here (for the population aged 15 and above). Question 46 in EB 58.2 (corresponding more or less to question 7 in EB 64.4) is as follows:

> "In the last 12 months, did you seek help from somebody in respect of a mental health problem?" If the answer is "yes", the person is asked to indicate who of the following professionals was contacted (multiple answers are possible): General practitioner, chemist, psychiatrist, psychologist, nurse, social worker, other professional help, other (spontaneous), and don't know.

This question does not allow us to identify the type of service where the contact was made, although it can be assumed that in most cases out-patient contacts were reported.

In EB 64.4 an additional question (9) was asked, which is more relevant to mental health service use:

> "I want to ask you about your possible treatment for mental health problems during the last 12 months. Please indicate which ones of the following statements apply to your situation" (multiple answers were possible): a) been admitted to hospital due to mental health problems, b) taken drugs due to mental health problems and c) received psychotherapy due to mental health problems.

Answer b) is ambiguous, between having been prescribed drugs (i.e. having used a service), having used over the counter drugs, or having used illegal drugs.

This ambiguity together with the small sample sizes and low response rates of the EB surveys (in 8 of 17 countries below 50%), makes the data obtained in this way not very useful.

5.4. Conclusions and recommendations

It can be concluded that data on mental health service use which are published or made available regularly at an international level (EUROSTAT and WHO-HFA) are seriously problematic.

- They provide only a distorted picture of the actual pattern of mental health service use, because they concern exclusively hospital in-patient episodes. These, in most European countries, represent only a small proportion of total mental health service use, as psychiatric beds are on the decline everywhere and out-patient, day care and complementary services increasingly dominate the mental health service system.
- They are of low validity and limited comparability – because of inconsistencies

- in defining a psychiatric bed,
- in including or excluding specific types of facilities,
- in including or excluding episodes with a psychiatric diagnosis in non-psychiatric beds,
- in the method of calculating statistics,
- in handling referrals within the same hospital,
- in handling diagnostic co-morbidity,

and because of other reasons described in detail above.

- They are of limited usefulness for epidemiological purposes and for health service planning because of the impossibility of linking service use episodes of individual patients, even within one service, let alone across different services. The problems of the "heavy users" and users of multiple services cannot be addressed.

Based on this current state, and taking account of on-going developments in the field of record-keeping and data-systems, the following recommendations are proposed for improving the present international monitoring systems for mental health service use:
- The relevance and meaningfulness of data, not only their availability, should be the leading criteria for designing a monitoring system for mental health service use.
- The existing hospital-focused systems for monitoring mental health services utilization should be supplemented by systematic reporting on day care, out-patients, complementary and other types of care.
- The definitions of the reported variables should be standardised for all EU Member States.
- Reporting to the international data bases (e.g. EUROSTAT) should be made obligatory (including deadlines) with sanctions in case of non-compliance. Reporting should come to all international data-bases from one national source to guarantee consistency.
- The development of e-health systems, e-cards and electronic patient records should be furthered (possibly also covering social care services) in order to provide the possibility of linking data across different mental health services to obtain a realistic picture of current mental health service use (data protection aspects would have to be taken into account).
- General population self-report surveys might be a relevant source of information about mental health service use if questions and answers are formulated in a less ambiguous way than they have been until now.

6. Quality indicators for mental health promotion and prevention

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6.1. Background

Besides knowledge on the impact and prevalence of mental disorders there is also a need to know the causes of these problems. It is known that mental health is determined by multiple and interacting social, psychological, and physical factors (WHO, 2004a). Having identified these determining factors, we should address them if we are to improve the mental health of a population. For this, mental health promotion and mental disorder prevention can be effective strategies. Protective factors can be strengthened through mental health promotion and risk factors can be diminished by mental disorder prevention.

As it became clear that mental health is determined by these many factors, it was also recognised that mental health is not merely the absence of mental disorder, and a growing interest in approaches to positive mental health developed. Positive mental health is defined by the WHO (2001) as: "a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community".

Currently, there are numerous mental health promotion and mental disorder prevention programmes, and one of the main research questions should be 'What makes a programme effective?' Research has provided evidence on the efficacy of programmes for different age groups, different settings and different disorders (Jané-Llopis et al, 2003; Hermann et al, 2005; WHO, 2004a; Saxena et al., 2006). However, there is still a need to expand research and strengthen the evidence. Any factors identified should be taken into account when developing and implementing a prevention or promotion programme, in order to increase the efficacy and the overall quality of the programme.

In order to identify factors that influence efficacy, an understanding of the planning process for mental health promotion and mental disorder prevention programmes is needed. Such a programme should be based on a community analysis which identifies the needs in the population and sets priorities. The programme can then be developed and goals set. The next step, implementation, delivers the programme to the target population.

The last step is evaluation, which addresses the effectiveness of the programme and identifies constraints experienced and the potential for strengthening the programme.

The development of a programme, its content, implementation and evaluation all need to be of high quality, and to strengthen the quality of an intervention we need indicators which can predict its potential effectiveness.

Quality indicators for mental health promotion and mental disorder prevention programmes are different from those for mental health itself. While indicators of mental health in populations can use numeric data, indicators for mental health promotion and mental disorder prevention programmes do not measure quality of mental health but simply indicate the effectiveness of programmes. They are not measurable by quantitative data, but will have a more qualitative character.

When quality indicators are specified and taken into account, one can expect that a programme will be more effective, but such indicators are lacking.

Many effective initiatives in mental health promotion and mental disorder prevention are now undertaken, but people in the field are often not aware of them. Making information on these effective programmes available and accessible would provide a spectrum of opportunities to choose from, and there have been some attempts to capture activities in Europe. The 'Implementing Mental Health Promotion Action' (IMHPA) project, supported by the EU, *(http://ec.europa.eu/health/ph_projects/2004/action1/docs/action1_2004_a02_30_en.pdf)* assembled a collection of country stories. There is also some database information collected on the European level (*www.imhpa.net/database*) and on the national level (*www.quidatabank.nl*). However, in general, there is still a lack of access to the evidence base and a lack of information on what prevention and promotion interventions have been implemented (Jané-Llopis & Anderson, 2006). There is, therefore, a need for improving the collection and sharing of information on evidence-based, implemented programmes across Europe.

Different types of mental health promotion and mental disorder prevention programmes will need different quality indicators, depending on the design, target group and setting of the programme. To identify quality indicators and ensure quality of interventions, monitoring and evaluation are essential, but this is generally given little attention. If the evidence base is to be strengthened and quality assured, researchers and programme developers need to be aware of the monitoring and evaluation of existing programmes (Jané-Llopis, 2006).

A successful planning process will include several steps; for this research we have followed a model of four programme domains:
1. Development;
2. Content;
3. Implementation;
4. Evaluation.

6.2. Aims

The aims of this MINDFUL partnership project were: to build on the available evidence to develop an overview of quality indicators for mental health promotion and mental disorder prevention programmes; and to use the collected evidence to create a training course to increase capacity across European Member States. The list of quality indicators for mental health promotion and mental disorder prevention, and a Training Manual with evaluation of the first pilot course, are the main outcomes of this project.

6.3. Methods

To identify key quality indicators of mental health promotion and mental disorder prevention in the four domains, both quantitative and qualitative data have been collected. Because of the complexity of the field and the broadness of the topics involved in the search strategy, the data were collected through multiple formal literature searches, searches of the 'grey literature', and expert consultation. The results of the literature review formed the basis of the first draft of training modules as well as a paper accepted for publication on the key principles of intervention success.

6.3.1. Literature searches

Literature searches using several publication databases (PubMed, PiCarta, Cochrane and PsycInfo) have been undertaken using a variety of key-words including those relating to the development, implementation, evaluation and quality of mental health promotion and mental disorder prevention programmes. Wider searches encompassing general health and mental health fields were expected to identify additional literature because there are many similarities in the development, implementation and evaluation of promotion and prevention programmes.

6.3.2. Grey literature

Through the formal literature searches, it appeared that quantitative studies in Europe relating to the evaluation of mental health promotion and mental disorder prevention programmes are not widely available. Because of this, it was decided also to include the 'grey literature' (research reports and papers not published in scientific journals), to identify more key indicators. In recent years, with the growing interest in mental health promotion and mental disorder prevention programmes, a wealth of information has become available through the grey literature. Although not usually peer-reviewed,

we were sufficiently persuaded of its quality and relevance to include this information source in the analysis.

6.3.3. Expert involvement

In addition, there have been consultations with several experts in the mental health promotion and mental disorder prevention field concerning the list of quality indicators identified from the literature. The experts commented and discussed the list of quality indicators in an iterative process, and identified possible additional indicators.

6.3.4. Developing the Training

In summary, the training content was founded upon the most important and practical effect predictors drawn from the literature review. Initially, two two-day modules were planned, but after thorough consultation with expert colleagues and further reflection, these were combined into one three-day course (a total of 21 hours) encompassing programme development, training and evaluation, and implementation issues. A first draft Training Manual was produced for a pilot training programme in Spain in April 2006. Following this experience and its evaluation, modifications were made to the course content, style and organisation, and a definitive Training Manual produced. (More details of the course are given under 'Results'.)

6.4. Results of the literature review

The indicators identified in the literature review are presented in the four domains described above:

6.4.1. Programme development

In the first domain, six indicators have been identified:

Understanding the context and setting the starting position.
[**Indicator:** *Has a community needs assessment been carried out and used in designing the programme?*]
At the beginning of the development of a mental health promotion or mental disorder prevention programme, it is essential to understand the social context, and demographic, organisational, and cultural characteristics that might influence the success of the intervention. A 'community needs assessment' is required; there are several standard methods available.

Defining goals.

[**Indicator:** *Have clear goals been set, realistic in the light of the needs assessment, and agreed by all participants?*]

Following needs assessment, goals can be set. This is a crucial aspect of the planning process. Goals must be concrete, feasible, measurable (WHO, 2005b) attainable (Jané-Llopis & Barry, 2005) specific, achievable (WHO, 2005c), evaluable (Edvardsson & Hansson, 2005) and consistent with other goals and the problem analysis.

Scientific problem analysis, and theoretical basis.

[**Indicators:** *Is there a theoretical justification for the programme aims and goals? Are there adequate epidemiological and sociological data on the population to serve the design needs of a programme? Have the available epidemiological data been used in the design of the programme?*]

For a clear understanding of the health problem being addressed, a 'problem analysis' is needed encompassing prevalence, incidence, expected short and long term outcomes, the population at risk and the experienced burden and expressed need for interventions. The content, structure and implementation of mental health promotion and mental disorder prevention programmes should also be founded on a clear theoretical basis in order to assure the quality of the programme as there are strong arguments that this has an impact on programme results (Jané-Llopis, 2002).

Sound relation between goals, problem analysis and intervention.

[**Indicator:** *Do the goals accurately reflect the needs shown in the community assessment?*]

It is essential that there is a close relationship between the goals, the problem analysis and the programme design for a realistic and potentially successful programme. When there is only a weak or moderate relation between the goals and the needs, it is unlikely that the goals will be achieved.

Defining the target population.

[**Indicator:** *Has the target population been adequately described in terms of ....?*]

The target population needs to be identified and described as precisely as possible with regard to characteristics which might influence the results of a prevention or promotion programme (van Bokhoven et al., 2003). By taking account of these characteristics, the risk decreases that the target group is not reached, does not understand or accept the intervention, or is unable to act upon it. (Peters et al, 2003).

Involvement of target population in programme planning.
[**Indicator:** *Has the target population been involved in planning the programme?*]

Target group participation in planning allows **the intervention to be** adapted to their particular wishes, needs and situation. This should help to optimize acceptance by the target group and support for the intervention (Peters et al., 2003).

Duration and intensity of the intervention.
[**Indicator:** *Are the duration and intensity appropriate to the target population and the objectives of the programme?*]

The duration and intensity of interventions must depend upon the objectives of the programme, the characteristics of the target group and the wider context, but it seems that, generally, different target groups benefit from different intervention duration. Longer interventions have been shown to be more effective for children, while the older population have shown the opposite (Jané-Llopis, 2002).

6.4.2. Programme content

Multi-component strategy.
[**Indicator:** *How many interventions, on how many organisational levels does this programme include?*]

Multi-component programmes are those that simultaneously target multiple risk or protective factors on different organisational levels. They are generally more effective than those that intervene solely on one level because they can take the wider environment into account (WHO, 2005d).

Cultural sensitivity.
[**Indicator:** *Have specific cultural characteristics of the target population been addressed in the programme content?*]

Every culture has its own perceptions of reality, and its own understanding of words, symbols and gestures. These cultural differences should be taken into account when developing or adapting a mental health promotion or mental disorder prevention programme, including the message, the channel, the method and the source of each intervention (Peters, et al. 2003).

Empowerment.
[**Indicator:** *Is empowerment a specific objective of the programme and reflected in the content?*]

Empowerment is an important component of mental health promotion and mental disorder prevention programmes and proven to be effective. The development of personal skills supports personal and social development,

increases the options available for people to exercise more control over their own health and their environment, and to make choices conducive to health (Jané-Llopis et al., 2005).

Use of behavioural techniques.
[**Indicators:** *Are behavioural techniques specifically included in the design? Are those specified appropriate to the objectives of the programme?*]

If the target group perceives benefits in more desirable behaviour, it is more likely that that behaviour will be sustained. Therefore, behavioural techniques that increase life-skills are likely to make a programme more effective.

Interactive character of intervention methods.
[**Indicator:** *Are interactive procedures built into the content of the programme?*]

Inter-active approaches help to ensure that an intervention is relevant to the target groups own ideas, wishes and problems, and stimulates commitment. This is likely to increase effectiveness, particularly with regard to higher levels of sustained change (Tobler & Stratton, 1997; Swerissen & Crisp, 2004).

6.4.3. Programme implementation

Implementation is "how well a proposed programme or intervention is put into practice" (Durlak, 1998). The effectiveness of a programme is strongly influenced by the manner in which it is implemented, and programmes known to be effective can sometimes show no results because of a lack of proper implementation. There are several possible indicators:

Piloting.
[**Indicator:** *Has the programme been piloted?*]

Piloting a programme should reveal if a programme and its delivery are effective before it is implemented widely, so it is a worthwhile investment, especially when previous experience is scarce.

Using motivation-enhancing tools.
[**Indicator:** *Are motivation-enhancing tools being used in implementing this programme?*]

Research has shown that a positive attitude towards change and a commitment to change are associated with positive intervention outcomes (Miller & Tonigan, 1996). Therefore the use of motivation-enhancing tools in the programme should indicate increased effectiveness.

Availability of a programme manual.
[**Indicator:** *Is a programme manual available?*]
For every **programme, a structured manual should be created with** detailed intervention protocols before defining programme components, describing theories, procedures, and activities. The programme should then be systematically monitored to ensure compliance (Barry et al., 2005).

Building in feedback and learning systems.
[**Indicators:** *Is a system of monitoring and feed-back in place? Are there systematic procedures for modifying implementation of the programme if in response to monitoring and feed-back?*]
Continual monitoring and documenting of the implementation process, and adjusting the programme as required allows programme strengths and weaknesses to be highlighted. Feedback systems permit progressively improved implementation.

Making explicit what resources are needed for implementation.
[**Indicators:** *Have required resources been thoroughly estimated? Are they guaranteed to be available?*]
If an existing programme is to be adapted, it is essential that all the relevant information on implementation is available, including what resources are needed (budget, manpower, expertise, etc.).

Programme provider training and support.
[**Indicator:** *Is there a built-in system of training and support for providers of this programme?*]
High quality training and continuing support is required for those implementing the programme, throughout implementation.

Infra-structural support from management.
[**Indicator:** *Are all the key administrative personnel in full agreement with the programme?*]
When organisational changes are needed to implement a programme, the degree of administrative or infra-structural support is having a critical influence on its success or failure (Jané-Llopis & Barry, 2005).

Coverage of the target population.
[**Indicator:** *What proportion (%) of the target population is expected to be covered?*]
Ideally a large proportion of the target population should be exposed to the intervention to have the greatest effect. This needs implementation strategies which will overcome barriers throughout the target population.

Ensuring sustainability.

[**Indicator:** *Are there practical and realistic plans for long-term sustainability of the programme if proved effective? Have resources been identified?*]

The impact of evidence-based programmes on the mental health of populations depends partly upon the duration of their implementation but sustaining a programme is often very difficult. Once proven effective it is crucial that preventive interventions build on and promote indigenous resources to maximize their local impact over time (WHO, 2004a). However, sustainability remains a vague term in health promotion. WHO defines programme sustainability as the potential of an intervention to continue to deliver benefits or health gains beyond the initial funding or demonstration stage of the project (WHO, 2005d).

Box 1: Sustainability of programmes

- Select programmes that can build on existing infrastructures and resources.
- Build coalitions among participating agencies, organizations, government departments, professional associations and individuals across relevant sectors.
- Find key influential supporters inside and outside governments.
- Work with mental illness professionals to prevent them blocking mental health promotion activities.
- Build an evidence base, monitor programmes, evaluate and reflect, focussing on economic arguments as well as health arguments.

Box 1 sums up key recommendations to ensure sustainability of mental health promotion and mental disorder prevention programmes
(WHO, 2004a, Moodie & Jenkins, 2005).

6.4.4. Evaluation

Evaluation process:

[**Indicator:** *Has systematic evaluation been built into the basic design of the programme?*]

High quality, systematic, rigorous evaluation, using valid methodologies, and on-going monitoring procedures are essential ingredients of successful intervention programmes (Bond and Hauf, in press; Hackbarth & Gall, 2005). Only when a programme is properly evaluated can conclusions be drawn about its effectiveness.

Box 2: The Evaluation process

The process of evaluation can be subdivided in:

1. Process evaluation
2. Evaluation of the coverage
3. Efficacy and effectiveness evaluation
4. Cost-effectiveness
5. Feedback

Outcome measures – assessment tools.

[**Indicator:** *Has a mental health impact assessment been built into the programme?*]

One available technique for measuring the influence of a mental health promotion or mental disorder prevention programme on health and the quality of life is the 'mental health impact assessment'. This uses a range of methods and approaches to help identify, measure and assess and consider the potential or actual health, quality of life and equity impacts of a programme (Taylor & Blair-Stevens, 2002) in order to maximize health benefits, mitigate negative effects and/or prioritize areas of investment to enhance mental health (WHO, 2005d).

Health impact assessments can be undertaken during planning to optimize programme design, during implementation to monitor performance, or after implementation to show what has resulted, and captures this learning to guide future programmes (Taylor & Blair-Stevens, 2002). However, there is no well established tool currently available for mental health impact assessment.

Long-term evaluation.

[**Indicator:** *Has long-term evaluation been planned encompassing mental and physical health, social and economic outcomes? Have resources been identified?*]

Long-term evaluation is necessary, and should not only include outcomes in terms of mental health and mental health determinants, but also benefits of physical health, and social and economic outcomes (Jané-Llopis, 2005). The results of evaluation then need to be applied in development of new programmes. (Hardeman et al., 2005).

None of this is easy. When a programme has been researched and shown to be effective, this does not automatically mean that it is a good intervention, as there are several possible limitations of such research. Some apparently effective programmes have limited coverage in the target population and effect sizes are moderate. Others have been implemented only in an experimental situation and still need to be evaluated in wider populations. (WHO, 2004a; Jané-Llopis & Anderson, 2006). However, high quality evaluation is possible, and can strengthen the evidence base for the effectiveness of specific interventions, and ensure further progress in mental health promotion and mental disorder prevention. Five evaluation domains are given in **Box 2**.

6.5. Results of the Training Development Programme

6.5.1. The Pilot Course

The course was held in Spain in April 2006, with 28 participants from 22 EU Member States, nominated by members of the European Network for Mental Health Promotion and Mental Disorder Prevention (IMHPA). These were a professionally diverse group, but all had an interest in mental health promotion. Evaluation forms from the participants recorded that all found it useful, interesting and important in developing the field throughout Europe. Those involved directly in mental health promotion and mental disorder prevention found it also a welcome opportunity to share knowledge and experience.

Training methods were generally positively evaluated, though formal presentations were considered rather too short and too full of information, there were recommendations to revise the balance of curriculum time, particularly wanting more time for 'planning models', 'problem analysis', 'needs assessment' and 'evaluation'.

The Training Manual was revised as "Programme Planning, Evaluation and Implementation" for a three-day group training, with the objectives:

1. to motivate participants to implement promotion and preventive policies and programmes in their own country;
2. to provide participants with basic knowledge about planning processes appropriate to developing, implementing, evaluating and disseminating effective promotion and preventive programmes;
3. to provide participants with basic skills needed for the development and implementation of such programmes.

Finally, a further result was already enhanced professional capacity in the field through the pilot course.

6.6. Conclusions and recommendations

1. This chapter has pointed to the problem of the scarcity of easily available quantitative indicators for the effectiveness of mental health promotion and mental disorder prevention programmes, policies and infrastructures. More resources should be given to research identifying such indicators and making them widely available.

2. The literature shows that this paucity of indicators also applies to those which would help in monitoring the availability and quality of existing or proposed mental health promotion and mental disorder prevention programmes. Sensitive indicators would help to improve programme quality.

3. For monitoring availability, there is a need not only for individual indicators, but a sustained system. One solution to the lack of indicators of

availability is a '*prevention and promotion of mental health portal*', providing access to all relevant information Another solution is the development of a European database bringing together information on all effective mental health promotion and mental disorder prevention programmes that are available in the different Member States, together with the evidence base and evaluation data for each programme. Such a database would allow countries to choose established and evaluated programmes appropriate to their needs. This could help to optimise the efficient use of scarce resources (Hosman, 2000).

4.   For improved quality and effectiveness of interventions in the future, there is also a need for an easily quantifiable system of quality indicators, which professionals can use during the development and implementation of their promotion or prevention programmes.

5.   Existing knowledge about available tools to improve effectiveness of interventions should be made available and their use promoted by researchers, practitioners and policy makers should be stimulated. Such tools could include, for example, registries of effective programmes or interventions, validated instruments to assess implementation quality and quality of research designs, and checklists for evaluation (Jané-Llopis & Barry, 2005).

6.   **In European countries, many promotion and prevention programmes** have been implemented but proved not to be sustainable. We need to bring these effective programmes to scale, and where appropriate, disseminated, adopted and implemented across countries, taking account of cultural variation. (Marshall Williams et al., 2005).

7.   In order to improve the quality of mental health promotion and mental disorder prevention programmes, policies and infrastructures across the European Member States, indicators should be used to develop training for professionals. This could be based on the experience already gained in the present project, and the Training Manual now available. Such training could produce a generation of highly-qualified experts across Europe that possess the attitudes, knowledge, skills and leadership qualities to further develop the field of prevention and promotion in mental health, and to generate significant mental health and related benefits in their countries and communities.

Summary of the recommendations:

1. Need for more sensitive indicators for monitoring availability and quality;

2. Need for sustained system for monitoring availability;

3. Need for easily quantifiable system of quality indicators;

4. Need to make use of tools that enhance efficacy and effectiveness;

5. Need for improving systems of existing programmes;

6. Need to fit the practical application of the quality indicators into a training to assure quality of prevention and promotion interventions

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7. Exploring and developing the relevant mental health information systems in the new Member States

Tanja Kamin and Andrej Marusic

7.1. Introduction

This project arose from the need to extend previous work on mental health indicators for use throughout the European Union and previous research on the state of mental health in the European Union, because of its enlargement. On the one hand it adds to our knowledge of the state of mental health in the EU by including the new EU Member States in the database. On the other hand, it questions the quality and quantity of existing data on mental health by analysing the mental health indicators and the process of data collection and management. Its contribution to mental health information research in the EU should help to develop a more refined and unified mental health monitoring system, which would provide better evidence for policy and actions.

7.2. Background

The recent enlargement of the European Union has changed the context of public health. The EU has inherited situations linked to transitional changes within the new Member States who are experiencing rather fast structural changes in political and economic organisation of societies and many changes for individuals across whole populations. These include changes in marital status, family structure, household constitution, gender issues, housing situation, rural and urban migration, ethnicity issues, employment status, economic standards, education, socio-economic differentials and inequalities, social networks, etc. All these, as previous research has shown, are important socio-demographic factors which, in combination with personality characteristics, influence mental health, and the onset, clinical course, restitution and relapse of mental disorders (Kovess et al, 2004: 9; 34-51).

The EU is confronted with a widening gap in living standards not only within national populations, but also between Member States. This affects the state of public health, not least the state of public health information systems across the EU. According to the classification used by the Directorate-General

for Regional Policy as in the EU Quality of life survey, (Fahey, et al, 2004) most of the new Member States belong to the category of the 'poorest' EU countries (Latvia, Lithuania, Estonia, Poland, Slovakia, Hungary) and category of 'Low GDP per capita' (Czech Republic, Malta, Slovenia, Cyprus). The poorest countries in the richest group of EU countries are less deprived than the richest countries in the poorest group. (EU6 Low). And median household income in the richest EU states such as Denmark and Germany, is three to four times greater than in the poorest Member States, such as Latvia (Fahey et al, 2004).

Together with similar GDP and median household income, the majority of new Member States also share, similarities of cultural change, unemployment, socio-economical inequalities, low rating of public services, low trust in the state benefit system, low satisfaction with the standard of living, lower trust in people, lower voluntary activity, lower civic activity, stronger feeling of social isolation, higher perception of poor or only fair health, alcohol abuse, fear of crime, and so on.

This socio-economic situation creates some common ground for the state of mental health in the new Member States, as stressors related to the socio-economic condition are gradually transformed into symptoms of ill health (Muller, et al, 2002; White 2002). These transition-related problems of the new Member States and EU applicant countries, not least some of the highest suicidal behaviour rates in the world, have become and will continue to be the overall concern of the EU, and a major public health burden.

As elsewhere in the developed world, mental health issues have only recently gained serious attention in the overall public health programmes and policies of the EU. There has been even less attention in the new EU Member States, where 'mental health' has been understood in predominantly negative terms and locked away from the wider public concern into the psychiatric and clinical treatment domain. This also affects the structures of the mental health information systems, the complexity of mental health monitoring, and, consequently, the richness of the data on mental health.

All of this strongly reflects the overall organization of the public health function in a particular country, which varies considerably between new Member States. It manifests variations of degrees of central and local control, of cross-sector organization, and of openness and collaboration among professional disciplines (Knight et al, 2003). Similarly as in the old EU Member States, the mental health monitoring system of the new Member States is based on conventional epidemiology, predominantly disease and health-care system oriented, as will be discussed later in this chapter. As such, the data for evidence-based mental health policy have been too limited and policy decisions thus weak, especially at cross-country level within the EU.

To develop effective strategies in the EU for sustaining and improving mental health and preventing mental ill-health in populations, mental health

monitoring issues should be reconsidered. A recent study on the state of mental health in the EU before its enlargement (Kovess et al, 2004) revealed many factors for improvements in mental health in the population, but also demonstrated major problems of data comparability across countries. There was also a serious lack of data on mental health in specific populations such as children, adolescents, immigrants, etc, and on positive factors for mental health. Amongst other things, current research aims at widening and refining mental health indicators to improve validity, reliability and comparability of the mental health data throughout the EU.

Since every country has a specific socio-political context and history and its own unique systems use of a systematic review of mental health information systems in the new Member States is a necessary step in the development of a unified mental health information system across the enlarged EU. This project also aims to assess the need for change in each country towards the development of a unified EU system.

7.3. Research objectives

This project was intended to explore the characteristics, differences and similarities of mental health information systems in the new EU Member States, including the data collected, the processes of collection, problems of data comparability, and more general mental health problems.

It focussed particularly upon the following topics:
1. Availability of mental health indicators;
2. Comparability of mental health indicators between the new and the old EU Member States;
3. Accessibility of data on the state of mental health;
4. Data on mental health and mental disorder in the new Member States.

7.4. Methods

Ten country representatives participated in the project - "experts" from nine new EU Member States: Slovenia, Poland, Hungary, Slovakia, Czech Republic, Estonia, Cyprus, Lithuania, Latvia and from one of the applicant countries: Croatia.

The research was descriptive and analytical using the following strategy:
1. Designing a questionnaire for country representatives to explore the availability, accessibility and comparability of mental health indicators from the ECHI list. A mental health indicator could be derived

from items in health surveys, or from statistical data collected routinely or occasionally;

2. Gathering the available data on the state of mental health at four points in time: years 1990, 1995, 2000, and the last available, in order to identify trends in the new Member States;

3. In-depth discussions with the 10 "experts" – country representatives, on mental health information systems in their countries, on mental health data available, and on the need for and adequacy of the proposed ECHI list for measuring mental health;

4. A telephone survey, designed and implemented on a national representative sample of the adult population (n = 846) in Slovenia in June 2006[8] using the proposed ECHI list for measuring personal aspects of mental health, such as psychological distress, psychological well-being, psychological impairment, sense of mastery, sense of support, social isolation, and negative life events.

7.5. Results

In general, observed health indicators for monitoring mental health of the population could be divided into 1) subjective (personal assessment of a mixture of biological, social and psychological dimensions of one's own health) and 2) objective (absence and presence of ill health, health care system data, structural and other indicators describing positive mental health). Both groups of statistical data are equally important for assessing the state of mental health in a country, and could be collected routinely, or by health surveys.

However, the study shows that in the new EU Member States it is primarily the second group of indicators which are available for mental health assessment, and even these vary considerably between countries.

These variations will be discussed concerning first the availability of indicators, second the comparability of data and third the accessibility of data. Indicators were those in the ECHI list of recommendations. This report will only summarize the main findings that bring attention to the main difficulties in unifying the mental health monitoring systems across EU.

7.5.1. Availability of mental health indicators

Availability of an indicator for this project meant the existence of an indicator in a national mental health monitoring system. Indicators could be available on a regular basis, an occasional basis (within occasional surveys) or

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8 This research has been conducted with the financial support of ARRS, Slovenian Research Agency.

not at all, regardless on what sample the data had been collected from. We were asking if the indicator as defined in the ECHI list exists in a particularly country, and if it has ever been used.

The table below gives a summary picture of available indicators in the new EU Member States. As will be explained later, the availability of an indicator does not necessary guarantee neither the accessibility of the data gathered with it, nor the comparability of the data within countries year by year, or between countries.

Table 1. Available indicators in the new EU Member States

Legend:
✓ available
☑ definition of the indicator is different
☒ available, but not used at the population level
   (small scale regional sample, hospitalized population, pilot and non-representative sample)
✗ not available

List of the set of mental health indicators
(proposed ECHI[i] list)

Domain of the indicator	Individual indicators (by definition)	SLOVENIA	CZECH REPUBLIC	SLOVAKIA	LITHUANIA	LATVIA	HUNGARY	CYPRUS*	ESTONIA	POLAND	CROATIA
HEALTH STATUS											
Cause specific mortality	1. Suicide; *(ICD-10: X60-X84)*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	2. Events of undetermined intention *(ICD-10: Y10-Y34)*	✓	✓	✓	☑	✓	✓	✗	✓	☑	✗
	3. Drug related deaths *(ICD-10: F11-F12, F14-F16, F19, X41-X42, X61-X62, Y11-Y12; T40.0-T40.9, T43.6 (The EMCDDA definition))*	✓	☑	✓	☑	☑	✓	☑	✓	✓	✗
	4. Alcohol related deaths *(ICD-10: F10, G312, G621, G721, I426, K292, K70, K860, O354, P043, X45)*	✓	☑	☑	☑	☑	✓	☑	✓	✓	✓
Morbidity, disease specific	Social phobia *A disorder fulfilling the criteria of social phobia during past 12 months. Instrument: CIDI-SF*	☑	☑	✗	✗	☑	☑	✗	☑	☒	☑
	6. Major depression *An episode of depression for at least two weeks during past 12 months. Instrument: CIDI-SF*	☑	☑	☒	☒	☑	☑	✗	☑	☒	☑
	7. Alcohol dependency *Caseness: for men 3 and for women 2 positive answers in the CAGE instrument*	☑	✗	☑	☑	☑	☑	✗	☑	✓	☑

* Where indicators exist, they are used only for the Greek-Cypriot population.

		SLOVENIA	CZECH REPUBLIC	SLOVAKIA	LITHUANIA	LATVIA	HUNGARY	CYPRUS*	ESTONIA	POLAND	CROATIA
	8. Lifetime occurrence of suicide attempt *Positive answer to the specific question: Have you ever attempted suicide?*	✗	✗	✗	✗	✗	☒	✗	✗	☑	✗
Morbidity, generic	**9. Psychological distress** *MHI-5 index from the SF-36 questionnaire. Suggested cut-off point: score 56 or less predicts disorder*	☑	☑	✗	✗	✗	☒	✗	☑	☑	✗
	11. Psychological well-being: *Energy and vitality index (EVI) from the SF-36 questionnaire. Suggested population norm: mean score 70*	✗	☑	☑	✗	✗	☒	✗	☑	✗	✗
	12. Psychological well-being: Happiness *4-step verbal question: Taking all things together, would you say you are?:* - very happy - quite happy - not very happy - not at all happy *very=4.....not at all=1*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	13. Psychological impairment (original title: Role limitations due to emotional problems) *Role limitations due to emotional problems -index from the SF-36 questionnaire. Suggested population norm: mean score 89. Suggested cut-off score: 80*	✗	☑	✗	✗	✗	☒	✗	☑	✗	✗
DETERMINANTS OF HEALTH											
Personal conditions	**14. Sense of mastery** *The 7-item version of the SOM questionnaire (Perlin et al. 1981). Score under 20 indicates low sense of mastery*	☑	✗	✗	✗	✗	☒	✗	☑	☑	✗
Social and cultural environment	**16. Social support** *The 3-item Oslo Social Support Scale. Poor social support: score 3-8. Moderate social support: score 9-12. Strong social support: score 12-14*	☑	☑	✗	☑	✗	☑	✗	☑	☑	✗
	Social isolation *The 4-item Social Isolation scale (Beaudet et al. 1996). A negative answer to at least one of the questions indicates social isolation.*	☑	☑	✗	✗	✗	☒	✗	✗	☑	✗

		SLOVENIA	CZECH REPUBLIC	SLOVAKIA	LITHUANIA	LATVIA	HUNGARY	CYPRUS*	ESTONIA	POLAND	CROATIA
	17. Negative life-events *The 12-item Threatening Life Events (LTE) questionnaire (Brugha et al. 1985) Cut off point: two or more events during past 6 months*	✗	✗	✗	✗	✗	☒	✗	✗	☑	✗
HEALTH SYSTEMS											
Prevention, health protection and promotion	19. Suicide prevention projects; *Percentage of suicide attempters sent for psychiatric evaluation from the emergency room.*	✗	✗	✗	✗	✓	✗	✗	✗	☑	✗
	Parenthood training *Percentage of first-time mothers receiving parental skills training.*	☑	✗	✗	✗	✗	✗	✗	✗	☑	☑
Health resources	21. Number of psychiatric beds *Hospital beds:* *Number of psychiatric beds.*	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓
	22. Number of psychiatrists Registered medical specialists: Psychiatry/ Neuropsychiatry.	✓	✓	✓	✓	✓	✗	✓	✓	✓	☑
Health care utilisation: psychiatric care and social services	24. Number of in-patient episodes due to mental health conditions *ICD-10: F00-F99.*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	25. Long-stay patients *Number of mental patients in mental hospitals and departments at the end of given calendar year with a length of stay of 365 days or more. Data from the routine reporting system.*	✓	✓	✓	✗	✓	✓	✓	✗	✓	✓
	27. Use of out-patient services *Persons treated in psychiatric out-patient clinics.*	☑	✓	✓	✓	✓	✓	✓	✓	✓	☑
	28. Self-reported use of mental health services *Positive answer to the question about help-seeking from some professional (or healer) due to mental health problem during the past 12 months.*	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
	29. Use of antidepressants *Consumption of antidepressants (ATC-group N06A), DDD/1 000 inhabitants/day.*	☑	✓	✓	☑	✓	✓	✗	✓	☑	☑
	30. Use of antipsychotics *Consumption of antipsychotics (ATC-group N05A), DDD/1 000 inhabitants/day.*	☑	✓	✓	☑	✓	✓	✗	✓	☑	☑

		SLOVENIA	CZECH REPUBLIC	SLOVAKIA	LITHUANIA	LATVIA	HUNGARY	CYPRUS	ESTONIA	POLAND	CROATIA
	31. Use of anxiolytics *Consumption of anxiolytics (ATC-group N05B), DDD/1 000 inhabitants/day.*	☑	✓	✓	☑	✓	✓	✗	✓	☑	☑
	32. Use of hypnotics *Consumption of hypnotics and sedatives (ATC-group N05C), DDD/1 000 inhabitants/day.*	☑	✓	✓	☑	✓	✓	✗	✓	☑	☑
	33. Proportion of disability pensions due to mental disorders *Number of people (16-64 years old) receiving disability pensions due to mental disorder (ICD-10 category F) out of all disability pensions at the end of the year.*	☑	☑	✓	☑	✓	✓	✓	✓	☑	✗
	34. Sickness compensation periods due to mental disorders *Number of people (16-64 years old) having received sickness benefit due mental disorder (ICD-10 category F) out of all sickness benefits during a year.*	☑	☑	☑	☑	✓	✗	✗	✓	☑	✗
Expenditure	35. Total national expenditure on psychiatric services *Total expenditure on specialised psychiatric services per total population during a year. Euros spent per capita.*	✗	✗	✓	✗	✓	✗	✓	✓	☑	✗

Countries included in the research differ to a great extent regarding the availability of indicators for measuring the state of mental health, and there are many gaps.

The majority of available mental health indicators are within routine data systems related to morbidity, mortality and health care utilisation, and are mostly used for administrative purposes. Differences in national legislation, regulations, and administrative practices, all of which have been changing through the last decade in the new Member States due to political and economical reformation, may cause significant bias in interpretation of the data and in temporal or geographical comparisons. These indicators apparently share the same definition, but this cannot be accepted at face-value. During the in-depth discussions with country representatives, differences in understanding of particular elements of each indicator definition emerged. For example, countries differently interpret what is a mental hospital bed[9], and what is an alcohol-related death. The latter is too vague: it may or may not include both alcohol-related disease and death from alcohol-related car accidents, freezing to death while drunk, etc. It is recommended, therefore, that the *definitions of each indicator and its elements should be more precisely operationalized to provide better comparability.*

The most obvious gap in mental health monitoring systems in the new EU Member States, as in the old Member States, is of indicators assessing mental health determinants, and indicators of mental health in the general population based on subjective data. Since most people with mental health problems are never hospitalized and never treated, survey data are extremely important to assess mental health state and evaluate mental health interventions. Such indicators are mostly not available at all in the countries studied; where they do exist, they have different definitions from the ECHI indicators, and data was available from a representative population sample only once in the last decade.

The project has identified the existence of indicators similar to the ECHI list for general population mental health assessment in a majority of the countries, such as life satisfaction, social networks, happiness, sense of control, and sense of social inclusion. However, they were most often part of public opinion surveys, and research on quality of life or other small scale social research, from which the findings could not be generalized to the whole population.

This finding suggests significant benefits might be gained by closer cooperation between the health sector and social sciences, university departments, high schools and criminal departments, which often explore data relevant for mental health assessment. This needs to be further explored.

From the availability of mental health indicators we could conclude that mental health information systems in the studied countries are more oriented towards services and service users than the general population.

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9 Different understandings of mental health service utilisation are also discussed in chapter 5 of this book.

With the exception of two countries (Estonia and the Czech Republic), no real epidemiological survey on mental health has been carried out so far. This gives a distorted picture of mental health status for most countries. For example, treatment based morbidity data are often used as though they were incidence and prevalence. Data collected for "social phobia" in most countries reflect only the number of hospitalized patients and excludes those treated by general practitioners and those without any treatment.

Discussions with country representatives have revealed that there have been some changes in inclusion and exclusion of different indicators in mental health monitoring systems in the last decade. Some countries are currently developing new mental health indicators to be included in their health monitoring system. Cyprus, for example, is about to accept a new mental health monitoring system, which has been developed totally independently of the ECHI propositions.

As many countries are trying to fill gaps in their mental health monitoring system according to their needs and their understanding of mental health, it is suggested that common monitoring standards and procedures should be strongly recommended from the EU for all present and future EU states. Once new systems are established, it will be very difficult to change them to accord with EU standards. It would be therefore important to include in these suggestions also the new and future applicant countries.

The project also identified poor use of databases and bench-marking, even where data have been gathered, due to the lack of knowledge, poor information technology, and shortage of human resources. A lot of data related to mental health rests in potentially useful databases without analysis, application or publishing.

7.5.2. Comparability of the data

Definitions of an indicator
It is evident from the table above that comparability of mental health data between countries is questionable. Many indicators have a different definition or different elements in the definition, and are differently interpreted in different countries. For example, the indicator "total national expenditure on psychiatric service" may measure only expenditure in the health sector, or also include other sectors, such as social services.

Sample
Indicator data with the same or similar definitions have often derived from differently defined population samples. If prevalence is estimated on the basis of hospitalised cases, data may be available only from a regional sample, or from an un-representative opportunity sample. A sample of the "adult

population" may, in some countries, include persons aged 16 to 65, and in others aged 18 to 70.

It is recommended that, in order to compare data from representative samples of country populations, the age interval of population samples is unified across countries.

Deficient reporting

Health professionals or administrative personnel responsible for reporting routinely to statistical offices do not always report fully or accurately. Sometimes this is due to unusual events, such as health service reforms or strikes, or on-going resource, system or attitude problems such as staff shortages, or re-imbursement issues. This background information on circumstances should be considered in data interpretation and analysis of statistical trends and comparisons. For example, Polish data on suicide for the period from 1997 to 1998, show a significantly lower rate than previous years. But this was influenced by a general strike, during which medical doctors did not complete death certificates and thus record and report the data on suicides.

Biased data reporting may serve financial interests; in cases of co-morbidity one diagnosis may have a higher economical value for an institution because of differential re-imbursement. Biased reporting might also be influenced by social issues. For example, in Lithuania the external causes of death rates are similar to neighbouring countries. For the same period the suicide rate in Lithuania is significantly higher but the homicide rate, even in the most violent areas, is very low. Is it possible that a number of homicides is hidden in the suicide rate?

In general, professionals and private entities in all countries show a rather low interest in reporting data. In many cases they think they have too many forms to fill, and only a small proportion of data gets used. Reporting could be improved by a number of strategies. Partners of the project reported that in most countries, the only obligatory information to be reported is financial.

If data are to be complete, consistent reporting could be promoted by rewards and penalties for those reporting data. Feed-back of data analyses and interpreted information could also encourage better reporting. Another mechanism to improve reporting is more active pursuit of data by those concerned with collection and analysis.

Who is bounded by contract to report the data?

Nationally mental health monitoring systems include information flows between many organisations; from mental health service providers to regional health agencies, national health institutes, central statistical offices, health insurance offices, state mental health centres and ministry of health. In the studied countries, only those entities that are contracted with the national public health system are bound to report data. Private mental health

service providers and those not under the national public health system, do not have any obligation to report data. For example, in Lithuania, private mental health care providers give only financial data to the State Patient's Fund, and only if they are contracted by it. In this way a lot of data is lost. *Governments should influence the reporting from both the public and private sectors.*

7.5.3. Accessibility of the data

Data relating to an indicator might be generally accessible to the public in printed or electronic publications, including international databases such as Eurostat; they may be accessible on request with or without payment, they may be accessible only to the owner of a database, or not accessible at all.

Availability of data for indicators and data on mental health does not mean that the data are accessible to the public or even to researchers. With increasing privatisation, common now in all new EU members, there is a trend towards less publicly accessible data. To this trend contributes also greater legal restraints for better personal information protection. Previously accessible data in these countries are becoming increasingly non-accessible or only accessible against payment. These data are commonly related to financial issues, such as sickness compensation, disability pensions, drug re-imbursement, etc.

Governments could influence the accessibility of important data. *We would advise that in the process of privatisation, certain types of data stay in the public domain in the interest of the general public.*

7.6. Conclusions and recommendations

The state of mental health in a country can be observed on at least five parameters:

    a   mental health of the population
    b. mental health care resources
    c. mental health policies
    d. mental health information systems
    e. cultural meanings of mental health (media, stigma, etc).

This project has shown that mental health monitoring systems in the new EU Member States, as in the old EU Member States, are focused mainly upon mental health care resources, particularly hospitals, and on some routine statistics on morbidity and mortality. The availability of such data does not mean that they are the most relevant for detecting mental health problems and defining needed interventions. Many determinants of mental health

problems lie outside the area of health care. This presents a challenge for development of mental health policies, which are too often issued almost exclusively by the health sector. If mental health is understood as more than just the absence of mental illness, more determinants will be addressed, more view-points will emerge, and, consequently, all relevant sectors should be included in mental health monitoring, and policy development.

Information about mental health in the new EU Member States should be collected in more appropriate ways to enable valid comparisons. For this reason, definitions of indicators should be more fully operationalised and consolidated across the whole EU, sample sizes and sampling procedures should be standardised, and important contextual factors that influence data interpretation should be provided.

Much research relevant for mental health population assessment exists. However, it could be better co-ordinated, explored and used, especially between different sectors. A mental health component should be included in other surveys beside health surveys, not least those investigating quality of life, human development etc.

Special population groups (vulnerable groups such as the unemployed, children, immigrants, and older people) should be specially addressed in research. More comprehensive indicators for certain population groups are needed.

Reporting to the national and international data bases should be made obligatory within the EU, and responsible institutions should be properly sanctioned for non-compliance. For this reasons a chain or network of relevant institutions collecting data and reporting them, should be established, with clear formally defined relations.

In the process of privatisation more and more data will be accessible to researchers only against payment. Governments should ensure that certain data, important for policy development, stay in the public domain and are available for research purposes.

Some countries operate with significantly smaller budgets than others. This has an impact on the complexity of any monitoring and research systems across the EU. The EU should set priorities for mental health monitoring and, with proportionally distributed funding, help to organise a certain degree of standardisation in information systems in all EU Member States.

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8. Proposal for a harmonised set of mental health indicators

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8.1. Aims and activities of MINDFUL

The MINDFUL project aimed at improving the status of mental health information within the European Union by building on previous work in this area and also by widening the scope of the mental health monitoring systems, to cover not only mental ill-health, but also positive mental health, mental health promotion and prevention of mental disorders. The main outcome of MINDFUL is the comprehensive forward-looking mental health information system presented in this chapter. The information system endorses sound and sensible policy-making based on reliable and comparable information. In order to achieve the objectives in full, the project co-operated closely with relevant organisations (e.g. Eurostat, OECD, WHO, and national institutions).

Analyses of structural indicators of positive mental health and of childhood determinants of adult mental ill-health have been performed. The project has reviewed the mental health monitoring systems in the "new" Member States, and mental health service-use information, proposing a system for monitoring service utilisation data. It has included training and monitoring for effective mental health promotion and a comparative examination of current instruments used in mental health surveys. A mental health indicator database has been established.

Taken together, the independent *partnership projects* of MINDFUL intended to support each other with the specific aim of building up a truly comprehensive system that takes into account various aspects of the mental health field feasible within the European Union context. MINDFUL aimed to promote the use of a practical and coherent set of mental health indicators in the Member States.

The project has suggested improvements to the European Community Health Indicator (ECHI) list and supported the development of the European Health Survey System (EHSS). The results are freely available in an online database with meta-data and numerical data on mental health indicators (the MINDFUL Database: *http://info.stakes.fi/mindful/EN/database/overview.htm*).

This chapter presents the 'final' set of specific mental health indicators, proposed by MINDFUL, to be included in the EU health monitoring system. There will be both statistical indicators (e.g. suicide mortality) and survey-based indicators (e.g. psychological distress). The unambiguous definition of each selected indicator will be given, as well as information on their availability and utilisation in the Member States.

8.2. The set of indicators defined by MINDFUL

The initial set of indicators proposed by the Mental Health Indicators project (see **Chapter 1.7.**) has been under extensive scrutiny since its publication in 2002. Although the indicators have been considered as feasible in principle, one can also see practical problems due to several reasons:

1. Data on some of the indicators are hardly available in any of the Member States
2. The definition of some indicators has been considered too diffuse and unclear
3. Some other indicator than the selected one could be more feasible for that specific aspect of mental health.

The conclusion has been that a revised list of mental health indicators is needed. All of these indicators should be included in the so-called ECHI (European Community Health Indicators) Long List. Their precise definition and availability is given in **Annex 1** of this report.

8.2.1. Indicators, domains and rationale

8.2.1.1. Health status

This section contains indicators on various aspects of the actual health situation of the population. Indicators may have been selected because of their direct concern with monitoring (e.g. their share of the total burden of ill-health) or, alternatively, because of their reference to known risk factors, or to identified activities in prevention and health care (e.g. avoidable mortality).

Many studies have shown that, compared to the general population, mortality is increased among those suffering from mental ill-health, those with psychological distress as well as psychiatric patients, and due to both natural and un-natural causes. Additionally, e.g. major depression has been found to increase the incidence of and mortality due to coronary heart disease. Adverse life events, e.g. loss of spouse, have been linked to increased mortality. Out of those who commit suicide about 90% have been found in psychological autopsy studies to suffer from a mental disorder. The negative impact of mental ill-health on survival has even been noted in some

community samples. The mortality ratio of discharged patients has been found increased compared to the general population. Part of the explanation for this is that patients suffering from chronic mental disorders have been found to have relatively high rates of physical illness.

As disease-specific morbidity is best covered by the use of epidemiological tools, the indicators can only monitor a limited number of disorders in a cost-effective manner. Therefore, the project has narrowed down the number of disorders that will be indicated. The disorders monitored have to be important in terms of public health. A measure to be included also needs to be very short. This limits further the number of disorders, as there are a limited number of short instruments and they usually deal with depression.

Mortality
1. Suicide
2. Deaths of undetermined intention
3. Drug related deaths
4. Alcohol related deaths

All mortality data are based on routine statistics. The data mentioned here are already available. Not all the suicides committed are, however, listed as suicides; as in some cases, the cause of death may be listed as e.g. "unknown". There may be differences between countries, depending on culture, in the reliability of figures related to suicide. Gender, age group, region and SES should specify the mortality indicators. These should be consistent with groupings made in the demographic indicators. Most indicators can be calculated from standard cause-specific mortality databases. A notable exception is the indicator for mortality differences between socio-economic status groups. This requires the link with data on occupation and/or educational level (see list by ECHI-project). Causes of death (COD) are statistical categories not necessarily those mentioned on death certificates. General Mortality Registers in some European countries still apply the ICD-9 classification, although ICD-10 is increasingly in use.

Disease specific morbidity
5. Any anxiety disorder
6. Major depression
7. Harmful and hazardous drinking
8. Suicide attempts

Depression as disorder, harmful and hazardous use of alcohol, any anxiety disorder and lifetime suicide attempts have been chosen as disease specific morbidity to be indicated, because these phenomena represent a substantial share of the burden of mental ill-health in the population.

Generic morbidity

Addition: Psychiatric disorders and adjustment problems in children and adolescents

   9. Psychological distress

10. Mental disorders and adjustment among children and adolescents

11. Energy and vitality

12. Happiness

13. Psychological impairment

These indicators measure mental health in a non-specific manner including consequences of illness (disability). Non-specific psychological distress as a dimension of psychopathology can be straightforwardly and cost-effectively measured in the general population. Elevated scores on some of these scales indicate that something is wrong, but they were not developed to yield specific diagnoses. Furthermore, psychological distress seems to express more accurately the urgency with which treatment is needed, while diagnosis gave information about help eventually needed.

Psychopathology has a significant link to various forms of disability. Early onset disorders often lead to truncated education. Mental disorders are significantly related to work loss. Patterns of disability vary according to the mental disorder, and recovery from functional limitations may be slower than from symptoms of disorder. Also non-specific levels of mental ill-health and low levels of some aspects of positive mental health have been related to work loss. Mental disorders are among the most important contributors to the global burden of disease and disability. Neuropsychiatric disorders measured by DALYs represent 11.5% of the global burden of disease (World Health Report 2001). In 1990, five of the leading ten causes of disability were mental disorders (unipolar depression, alcohol dependence, bipolar disorder, schizophrenia and obsessive-compulsive disorder).

8.2.1.2. Determinants of health

This group of indicators includes factors determining mental health outside the health care system. It includes (i) 'personal and biological factors', covering personal characteristics that may determine degrees of resilience and vulnerability to development of disease or ill-health, but which are not in themselves disease; (ii) health behaviours (life-style factors), which are generally subject to peoples own choices and (iii) living and working conditions, more to be viewed as the wider environment (physical, chemical, biological, social). For all these categories of determinants, selection criteria were a) their importance in determining a substantial share of (ill-) health, b) the degree to which they can be influenced, and c) the cost-effectiveness of the interventions involved.

14. Sense of mastery
15. Self-Esteem
16. Social support
17. Negative life-events
18. Childhood adversities

Certain features of temperament and personality are associated with higher levels of emotional well-being and more effective coping strategies. Cognitive skills and traits, "resilience", enable individuals to avoid breakdown when facing adverse events, and can be described as healthy mental abilities that protect against various forms of general and mental ill-health. The protective personal factors are not synonymous to pleasurable experiences, rather protectiveness is determined by the effect of a factor than its hedonic qualities. They may in fact be qualities of a person instead of experiences. Protective factors may not be visible, but in a time of crisis or in the presence of a particular stressor, they become obvious. Sense of mastery can be viewed as a form of perceived personal control. Personal control refers to a sense of control over the events in one's life. Low levels of sense of mastery have been linked to mental and general ill-health.

The link between stress and ill-health has led researchers to focus on the stress situation (the 'stressor' or 'objective' stress). Stress can be grouped into three categories: 1) performance demand, 2) loss and 3) 'role strain' or 'hassles'. 'Life-event' studies represent a conceptualisation of stress linked to onset of mental ill-health, especially depression. Life events can be defined as major occurrences in one's life that require some degree of psychological adjustment to. Studies have investigated major life events judged as undesirable, uncontrollable or life-threatening as risk factors for mental ill-health. There is clear evidence that serious childhood adversity increases the risk of physical diseases and recurrent psychiatric disorder throughout life. The most serious are child abuse and child sexual abuse. Having experienced multiple adversities in childhood is especially linked to poor health.

Social support is seen as a protective factor against illnesses when faced with various forms of stress. Evidence shows that social support, especially perceived social support, correlates strongly with measures on mental health, particularly when the individual experiences stress. Negative pressure from or interaction with social networks may, conversely, have negative effects on the health of an individual. Despite the fact that the level of received social support has connections to personality features, coping styles and socio-economic factors, lack of social support is associated with an increased risk for mental ill-health and ill-health in general, demonstrating usefulness as an indicator for a mental health monitoring system.

Social support is generally defined as availability of people whom the individual trusts and who make one feel cared for and valued as a person. The key issue in terms of health effects is whether social support is 'received' in some form (e.g. having someone to listen to one's troubles) or 'perceived' by the individual to exist (e.g. the belief that in times of trouble support could be expected). There are three types of attribute of social support: 1) emotional, 2) instrumental, and 3) informational and appraisal.

The term positive mental health refers to the emotional, affective aspects of well-being (affect balance, happiness, certain aspect of life satisfaction) and cognitive aspects (e.g. coping, optimism, certain features of life-satisfaction). Affective aspects such as of well-being and satisfaction to life, 'mental health wellness' have been shown to predict future health and mental health. "Energy, vitality' from the SF-36 is included here as a measure of affective aspects of positive mental health.

8.2.1.3. Health systems

This group includes indicators relating to prevention and health promotion as well as health services systems,

    19. Suicide prevention activities
    20. Mental health promotion
    21. Number of psychiatric beds
    22. Number of psychiatrists
    23. Number of child (and adolescent) psychiatrists
    24. Number of in-patient episodes due to mental health conditions
    25. Number of long-stay patients
    26. Involuntary placements
    27. Use of out-patient services
    28. Self-reported use of mental health services
    29. Use of antidepressants
    30. Use of antipsychotics
    31. Use of anxiolytics
    32. Use of hypnotics
    33. Disability pensions due to mental disorders
    34. Sickness allowance spells due to mental disorders
    35. Expenditure on mental health services

The proposed indicators in the 'resources' section are very 'robust' measures of the care system. All the concepts in this section have differing definitions due to the differences in the care systems, but some countries are closer to each other in these definitions than others. This hampers the definition of 'strong' indicators in all cases. Agreed standard definitions of very basic

concepts, e.g. 'bed', are urgently required (see **Chapter 5**). Although there are these problems of comparability, the data are mostly available.

Utilisation data cannot be used directly to estimate the prevalence and incidence of disorders. Use of mental health services by individuals may depend upon many other variables than the clinical condition of the patient; for example, the socio-demographic characteristics of the patient, and intrinsic characteristics of the services. According to epidemiological studies only a small proportion of individuals who satisfy the criteria for a mental disorder receive treatment. One should therefore be cautious in drawing too far-reaching conclusions from such data alone. The utilisation data may be of more use in serious disorders such as schizophrenia, and especially the more severe cases, because a greater proportion of these patients are admitted to hospitals compared to, for example, major depression.

National databases have been used to evaluate needs at a population level, e.g. the relative size of the long-stay in-patient population may indicate need for supported housing. Descriptive analysis and interpretation of service use data, combined with socio-demographic and epidemiological data can be useful for planning intervention strategies. National or regional databases exist in Member States to provide the necessary information. Data on the sale of drugs, and data on discharges from hospital are available in most countries. The concept of 'discharge', however, includes some pitfalls as it may indicate transition to another hospital as well as discharge into the community (that is, 'discharge' does not signify 'treatment episode').

The national or regional databases of use of psychiatric hospitals can provide the data on use of psychiatric beds. Discharges are taken as the best indicator to cover disease-specific hospital use, taking a public health point of view rather than a health care production point of view. There are some differences in the coverage of the databases; for example, data available at aggregate level at the OECD is not specified by speciality.

The data on psychotropic drugs is based on an international classification in use in many countries. Sale of psycho-pharmacological products is included as a policy-sensitive issue for cost-increase arguments, as well as for its possible effect of taking over parts of in-patient mental health care needs.

The indicators on pensions and sick leave due to mental disorders describe more the important background of work, social security systems and legislation than measures of disease. They are thus included here as measures linked to differences in country social systems.

8.2.2. MINDFUL shortlist

The ECHI project requested MINDFUL to draft a short-list of 15 to 20 mental health indicators in the order of priority. The following is the finalised list of 20 indicators provided to the ECHI.

1. Psychological distress
2. Psychological impairment
3. Energy and vitality - EVI
4. Mental disorders among children and adolescents (generic)
5. Major depression
6. Any anxiety disorder
7. Harmful and hazardous 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

8.3. Availability of the indicator data

The availability of data for these indicators is very irregular (see **Annex 1**). For some indicators there are almost complete time-series and break-downs, for some there are hardly any data at all. In general, health statistics data are far more available than population survey data. This is because many health statistics are collected routinely, annually in most cases, while population surveys are repeated very infrequently, if carried out at all. Furthermore, most international databases, such as Eurostat, WHO and OECD, provide mainly health data and statistics, which they receive from the Member States according to contracts with national statistical institutions. For population survey data there was only one database ('The World Database of Happiness') containing international data for the benefit of MINDFUL.

The availability of statistical data was surveyed in two different ways. Firstly, international databases were searched and the data directly transferred to the MINDFUL database. The two best databases were 'Eurostat Dissemination Database' and 'WHO European Health-for-All Database'; both contain extensive data tables for the following indicators: Suicide, Deaths of undetermined intention, Number of psychiatric beds, Number of psychiatrists, Number of child (and adolescent) psychiatrists, Number of in-patient episodes due to mental health conditions, and Number of long-stay

in-patients. Also, data on Drug-related deaths were available in EMCDDA. Data for the afore-mentioned indicators were not actively searched elsewhere, since Eurostat, WHO and EMCDDA receive their data automatically from Member States; more extensive data tables cannot be found elsewhere.

Secondly, statistical data not included in the international databases were searched for from national statistical institutions. In the first stage, websites of the institutions, and statistical year-books if available, were explored, and some data were found. In the second stage, during the spring of 2006, the institutions were asked to deliver the missing data by email, or at least to reveal its location. In most EU Member States, two or three different statistical institutions were contacted. They reacted variably; some delivered the data within a few days, some never replied despite reminders. In summary, most data were gained for 'Alcohol-related deaths' and 'Use of anti-depressants, anti-psyhotics, anxiolytics and hypnotics'. For the ten new EU Member States, this stage was carried out by the Public Health Institute of the Republic of Slovenia (see **Chapter 7**).

Two different methods were also used to investigate the availability of population survey data. Firstly, a systematic search was carried out using the 'PubMed' on-line service to track articles containing population survey data. Secondly, the 'HIS/HES' database was searched, and the survey investigators were contacted and asked for the data. Approximately half replied. Most data were found for the following indicators: 'Any anxiety disorder', 'Major depression', 'Psychological distress', 'Energy, vitality and happiness', for which data were collected in an extensive database, the afore-mentioned 'World Database of Happiness'.

There are three main problems concerning the availability of data. First, even if there are some data available, the definitions in many cases are different from those of MINDFUL. An enlightening example is the 'Alcohol and drug related deaths' data provided by Eurostat which include only the ICD-codes from the 'F' category ('mental and behavioural disorders'). MINDFUL's use of ICD-10 is much more detailed. Second, in many countries data for certain indicators are not collected at all because of difficulties in calculation (e.g. 'Disability pensions due to mental disorders', 'Expenditure on mental health services'). Third, MINDFUL's requirement for population surveys is that they should be nationwide and representative of the whole population. But most surveys represent only certain special groups or smaller areas, and the international comparability of survey data is poor, so only a small proportion of all the survey data available can be included in the MINDFUL database.

Eurostat is the source providing most data for MINDFUL. The New Cronos database contains useful data for the indicators 1: Suicide; 2: Events of undetermined intention; 21: Number of psychiatric beds; 22: Number of psychiatrists, and 24: Number of in-patient episodes due to mental health conditions. Data for these indicators are mostly available by age, sex, and 'NUTS-2'

regions, and there are data for most years since 1990. However, the completeness of the data depends on the country in question. The European 'Health-for-All database' of WHO contains some of the same data as New Cronos, but, in addition also contains data for indicator 25: Long-stay in-patients.

Other sources of international data are OECD and Nomesco, providing data for use of medicines (indicators 29-32) and the World Database of Happiness (indicator 12). Some fragments of data are available in various national statistical agencies and other sources. Some survey indicator data e.g. for domains 'Morbidity, generic' and 'Social and cultural environment' are available to some extent if otherwise partial data from different sources are merged.

9. Mental health in EU health monitoring systems

K. Wahlbeck

9.1. Introduction

The European Treaties stipulate that a high level of human health protection should be inherent in all Community activities. To ensure this, valid and reliable information on population health is essential for the European Union. Mental health is an integral and important part of population health: it is estimated that one fourth of the 'population burden of disease' is due to mental ill health. Mental ill-health costs at the EU level are 3-4% of GDP, mainly through lost productivity. Good mental health is increasingly important for economic growth and population well-being in Europe. The transformation of Europe into an information society and technological changes in working life cannot successfully be achieved without giving population mental health special consideration.

Mental health information is, therefore, an important field within any health information system. Regrettably, most current health information systems are weak in the field of mental health. The MINDFUL project shows that data on mental health-related mortality and on psychiatric hospital use are available to a reasonable extent, but also that huge gaps exist, notably in the areas of mental health determinants, community-based mental health services and mental health expenditure.

A core aim of any mental health policy is to create knowledge and raise awareness on the extent of mental health problems in the population (including among specific groups in the population) and to develop population-level mental health promotion and mental disorder prevention. To be able to act on these aims, mental health policy is dependent on a sound mental health information system with a good coverage.

The European Commission has contributed to development of a mental health information system by launching public health projects under the 'Health Information' strand of 'Community Action for Public Health' (2003-2008) (Lehtinen 2004) and this activity will be continued under the new Public Health Programme for 2007-2013. The objective of the EU Public Health Programme is to provide Member States with appropriate health information in order to make comparisons and to support their national health policies. Several health information projects co-funded by the European

Commission have dealt with mental health issues. The project 'Establishment of a Set of Mental Health Indicators for the European Union' (1999-2001) was co-ordinated by STAKES (Korkeila 2003). It proposed a set of 36 indicators for monitoring mental health, aiming to integrate these indicators into the general 'European Community Health Indicators' (ECHI) system. From the beginning, it was also decided that the set should include indicators for both positive and negative mental health. Apart from statistical data, the indicator set included 14 indicators to be derived from population surveys.

Other core projects have included 'European Review of Suicide and Violence Epidemiology' (EUROSAVE) (1999-2003), co-ordinated by the University of Glasgow, which identified and evaluated the quality of existing European data sources for suicide and para-suicide, and made explicit recommendations on information quality, high-lighting especially the deficiencies in routine suicide data collection. The projects 'Mental Health Economics Network' (MHEEN) (2002-2004) and 'Mental Health Economics European Network Phase 2' (MHEEN2)[10] (2005-2007) have been actively developing indicators related to the economics of mental health. The 'Indicateurs de santé dans les régions en Europe Phase 2' (ISARE2)' project (2001-2004) established health indicators for inter-regional comparisons (Ochoa et al 2003). The 'Hospital (Activity) Data Project 2'[11] (2005-2008) is aiming to improve comparability of hospital indicators, including psychiatric in-patient indicators, and extending collection of hospital data to out-patient activities.

9.2. European health indicators

A European health information and knowledge system must build on a common set of agreed health indicators. Such indicators were developed during the two consecutive 'European Community Health Indicators' (ECHI) projects and are now refined within the 'European Community Health Indicators Monitoring' (ECHIM) project (2003-2008). The ECHI 2 project produced a list of around 400 health indicators, from which a shortlist containing 82 indicators was extracted (Kramers 2005). The ECHI lists cover the four main categories of health indicators: demographics and socio-economic data; health status; health determinants; and health systems. These main categories were adopted also in the MINDFUL project.

From the ECHI 2 shortlist, 40 indicators were found to be readily available and reasonably comparable between EU Member States. Data on these health indicators are available on the Commission website.[12] Regrettably,

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10 http://ec.europa.eu/health/ph_projects/2004/action1/action1_2004_26_en.htm
11 http://ec.europa.eu/health/ph_projects/2004/action1/action1_2004_32_en.htm
12 http://ec.europa.eu/health/ph_information/dissemination/echi/echi_en.htm

only two indicators from the MINDFUL set are included in these implemented health indicators. Both of these are mortality measures; i.e. standardised death rate from suicides and drug-related deaths. The Commission website for ECHI 2 short list indicators currently offers no data on psychiatric morbidity, no data on determinants of mental health and no data on mental health systems. A future sophisticated website for dissemination of the 'European Health Information and Knowledge System' is being developed by the EU-PHIX project[13] (2004-2007).

12 of the 35 MINDFUL indicators rely solely on population surveys for their collection (see **Chapter 8**). It is essential that these indicators are incorporated in the forthcoming 'European Health Survey System' (EHSS)[14]. This system consists of national health surveys, complemented by European common modules. The basic European survey is the 'European Core Health Interview Survey' (ECHIS), planned to be implemented for the first time in 2007. ECHIS consists of several modules: the annual 'Mini European Health Module' (MEHM), the 'European Module on Health Status' (EMHS), the 'European Survey Module on Determinants of Health' (ESMD), the 'European Survey Module on Care' (ESMC), and the 'European Background Module' (EBM). In addition, a set of complementary 'European Special Health Interview Surveys' (ESHIS), covering special topics of interest, e.g. mental health, has been planned. The MEHM has, since 2004, been implemented within the 'EU Statistics on Income and Living Conditions' (EU-SILC) survey. MEHM covers 'perceived general health', 'chronic illness' and 'functional limitation'.

The ECHIS modules have been developed and designed for the Commission. Sadly, the modules focus almost exclusively on physical health; mental health indicators are largely absent from the standard modules. Work to develop a European special mental health interview survey has not yet commenced, in spite of the clear need for work in this field. Preliminary ideas are that the special modules could be part of a future 'European Household Survey', to be initiated in 2009.

The 'Module on Determinants of Health' focuses on physical health and such behavioural determinants as exercise, nutrition, smoking, alcohol and drug use. These are important determinants also for mental health, but many psychosocial factors are of equal importance. Moreover, psychosocial factors interact with behavioural determinants; e.g. people with a high level of psychosocial risk factors use more alcohol, smoke more, and exercise less. In June 2006, the MINDFUL project strongly recommended that the Commission expand the 'Determinants' module to encompass five MINDFUL indicators: 'Sense of mastery' (7 items); 'Social support' (3 items); 'Negative Life-events' (12 items); 'Self-esteem' (10 items); and 'Childhood adversities' (4 items).

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13   http://ec.europa.eu/health/ph_projects/2003/action1/action1_2003_01_en.htm
14   http://ec.europa.eu/health/ph_information/dissemination/reporting/ehss_en.htm

With the exception of 'Self-esteem' and 'Childhood adversities', all these indi-cators are included also in the ECHI shortlist. Regrettably, the Commission officials decided not to include psychosocial health determinants in the module in spite of the massive evidence linking them to health (WHO 2004).

The decision to limit the ECHIS to traditional physical and behavioural determinants of illness may be signs of an individualistic and narrow view of health, which neglects the importance of societal and psychosocial factors. The aim of MINDFUL has been to raise awareness of the wide range of both risk and protective factors for mental health. To be able successfully to com-bat the European epidemic of mental ill-health, the rising use of psychi-atric services, and increases in sick-leave and early retirement due to men-tal disorders (Järvisalo et al. 2005), policy makers and citizens need infor-mation on mental health determinants. These include interview-derived data on positive mental health (e.g. MINDFUL indicators 'Sense of mastery' and 'Self-esteem'), data on psychosocial determinants (e.g. MINDFUL indi-cators 'Social support' and 'Negative Life Events') and data on 'childhood adversities' (also a MINDFUL indicator). Sadly, the current approach to building a European health-interview system fails to encompass such a broad view of health. MINDFUL stresses the need to acknowledge the wider context of mental health, including emotional well-being and positive men-tal health, in addition to monitoring psychiatric problems and disorders, but little of this broader approach to mental health monitoring has been in-corporated in the Commission's work to establish a European health infor-mation and knowledge system.

9.3. Relevant population surveys in Europe

In spite of low coverage of mental health by the ECHIS, some data on mental health can be derived from other European population surveys. Such sur-veys, repeated at regular intervals, with questions of at least some relevance for mental health, include the WHO 'Health Behaviour of School Children Survey' (HBSC), the 'Survey of Income and Living Conditions' (SILC), the 'EU Labour Force Survey' (LFS), the 'European Survey on Working Condi-tions' (ESWC); and the 'Survey of Health, Ageing and Retirement' (SHARE).

The **HBSC study**[15], which is performed by an international network of research teams in collaboration with WHO, started in 1982 (Aarø et al. 1986), and is carried out at four-year intervals. The last waves were in 2001/2002 (Currie et al 2004) and 2005/2006. The 2005/2006 survey was performed in all EU Member States as well as in Bulgaria, Romania and Turkey. The target population comprises young people attending school, aged 11, 13 and 15

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15   http://www.hbsc.org/

years. In each country about 1,500 respondents in each of the three age groups is targeted. Data collected include socio-economic and family circumstances, the school environment, peer relations, and health and well-being. Several of the HBSC indicators measure important mental health determinants: contextual components include the 'Family Affluence Scale' (a measure of socio-economic inequality), an item on communication with parents (a measure of parental support), items on size of friendship groups and frequency of contact with friends (measures of social network), and items on peer support in school and school pressure (a measure of perceived stress).

Health is measured by three subjective instruments, i.e. 'self-rated health', 'subjective health complaints' and 'life satisfaction'. Of special interest for monitoring mental health is 'life satisfaction', which is measured with the 10-step 'Cantril ladder' (Cantril 1965). Furthermore, the HBSC surveys young people's body image, experiences of bullying and physical fights, and alcohol and cannabis use, which all are connected to mental health. The HBSC study is a valuable source of information on psycho-social and socio-economic determinants of mental health and well-being of young people on a general level. However, it does not provide information for specific mental health indicators, such as aspects of positive mental health, psychological distress or impairment, or experience of adversity beyond bullying and fighting.

The current ECHIS proposal is weak in indicators on children's health, and there is a clear need to develop a system for monitoring health of children and adolescents at the European level. In any future indicator set for children and adolescents, mental health indicators should be a principal component; many of the HBSC indicators could be incorporated in such an indicator set.

The annual **EU Survey of Income and Living Conditions** (SILC) aims to provide comparable and timely statistics on income and living conditions for each EU Member State by household interviews. Specific aims include monitoring poverty and social exclusion. The EU-SILC was launched in seven Member States in 2003 and re-launched under regulation in twelve Member States in 2004. Since 2005, SILC covers all 27 Member States and Iceland, Norway and Turkey. Data collected include household income, social exclusion (arrears on housing and other payments, difficulty in making ends meet, affordability of consumer durables), physical and social environment, health status, access to health and dental care, labour-market data and housing. Ad-hoc modules are added to SILC to investigate particular areas of policy interest in more detail, if and when required. SILC currently provides data on some socio-economic determinants related to mental health. However, from a public health perspective it is paradoxical that use of dental care is covered by SILC, but not use of mental health services.

The **EU Labour Force Survey** (LFS)[16], initiated in 1960, is co-ordinated by Eurostat (European Commission, 2003) and has a legislative basis in several Commission Regulations. It is a survey of private households, mainly focusing on collecting comparable labour market information related to employment and unemployment levels. The target population is people of 15 years and above. Routinely, the LFS covers demographic background, labour status, employment characteristics and income. Data are collected quarterly. The basic LFS questionnaire does not provide much that is relevant to mental health, with the exception of data related to unemployment. An ad-hoc module on work-related health problems was used in the LFS in 1999.

The **European Survey on Working Conditions** (ESWC)[17] is carried out by the 'European Foundation for the Improvement of Living and Working Conditions' every five years. Data have been collected in 1990/91, 1995/96, 2000 and 2005. The target group is employees and self-employed people, interviewed face-to-face outside working hours. Around 1,500 workers are interviewed in each country. The ESWC covers all EU Member States and Bulgaria, Croatia, Romania and Turkey. ESWC provides an overview of the state of working conditions throughout Europe, and includes questions on working time, work organisation, pay, work-related health risks and health outcomes, and access to training. The survey focuses on physical work-related health and safety risks, but also includes items connected to work-related stress, perceived control of own work situation, exposure to bullying or discrimination, and subjective health effects of work. These items contribute with information on some important work-related mental health determinants.

The **Survey of Health, Ageing and Retirement** (SHARE)[18] is a European survey on health, socio-economic status, and social and family networks, of individuals aged 50 or over, with 13 participating EU Member States. The first wave of face-to-face data collection from households was in 2004, and the second round will be implemented in 2006-2007. The sample size is approximately 2000 individuals per country. Data collected include health variables (e.g. self-reported health, physical functioning, cognitive functioning, health behaviour, use of health care facilities), psychological variables (e.g. psychological health, well-being, life-satisfaction), economic variables (e.g. current work activity, job characteristics, opportunities to work past retirement age, sources and composition of current income, wealth and consumption, housing, education), and social support variables (e.g. assistance within families, transfers of income and assets, social networks, volunteer activities (Börsch-Supan et al. 2005). The mental health module of SHARE is a good

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16 http://forum.europa.eu.int/irc/dsis/employment/info/data/eu_lfs/index.htm
17 http://www.eurofound.eu.int/ewco/surveys/
18 http://www.share-project.org/

source of data on mental health of the 50+ population, especially in regard to prevalence of depressive symptoms, cognitive problems and use of mental health services, but it covers only a minority of the Member States.

9.4. EU Structural Indicators

Each spring, the Commission has to present a synthesis report to the EU Council. The report includes a set of structural indicators to reflect overall development towards the strategic goals of the EU. The structural indicators cover the areas of general economic background, employment, innovation and research, economic reform, social cohesion, and environment. Due to the broadness of the data set, some data relevant to mental health are included. In this respect, the structural indicators on unemployment and poverty rates may be the most interesting.

The public health indicator proposed to be included in the structural indicator data set is "healthy life years" [19] (a.k.a. "disability-free life expectancy"), a composite indicator combining information on mortality and morbidity. It is an estimate of the number of years that a person is expected to live in good health. The calculation of the 'healthy life years' indicator is based on data gained by a single question in MEHM, which since 2004 has been included also in the SILC survey. This single question has, since 2004, been formulated as follows: "For at least the last six months, to what extent have you been limited because of a health problem in activities people usually do?" In the calculation of the healthy life years indicator, a healthy condition is defined by the absence of limitations in functioning / disability.

The structural indicator database does not include any indicator of public mental health. It is also unclear to what extent population mental health affects the single activity-limitation question used for the calculation of the 'healthy life years' indicator. The development of a composite indicator, covering major aspects of mental health, and incorporating this indicator in the yearly EC report, would be a major step forward. Regrettably, for the time being, no consensus exists on how to build such an over-arching, and yet comparable indicator, for monitoring public mental health. As loss of productivity due to premature death (MINDFUL indicators 1-4) and loss of working ability (MINDFUL indicators 13, 33, 34), are major consequences of ill mental health in the population, any composite mental health structural indicator should encompass these aspects. Further research and development work is needed to establish the feasibility and validity of a composite structural mental health indicator.

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19 http://ec.europa.eu/health/ph_information/indicators/lifeyears_data_en.htm

9.5. International mental health and relevant non-health monitoring systems

From the Member States perspective, the 'EU Health and Information Knowledge System' belongs to a set of partially overlapping health information systems. Traditionally, Member States deliver data to the WHO 'Health for All Database'. The OECD is working on a 'System of Health Accounts'[20] (SHA) to monitor health expenditure, and OECD has also proposed a set of mental health care quality indicators (Herman et al. 2004). WHO also covers national mental health systems with global data collected by the WHO-AIMS instrument (WHO 2005).

Population mental health has strong socio-economic determinants, which the proposed EU health and knowledge information system largely fails to cover. Consequently, to get the full picture of population mental health, data must be retrieved from additional non-health international information systems. Relevant information can be found in the EU sustainable development indicators, the OECD social indicators, and the work on social protection indicators within the EU, and indicators on social cohesion by the Council of Europe (Council of Europe 2005).

The **EU sustainable development indicators**[21] support monitoring of the EU sustainable development strategy. Approximately 120 indicators are available, covering, among others, areas such as public health, poverty and social exclusion. The indicator set closely connects mental health to EU sustainable development, as it includes standardised suicide mortality by sex.

The **OECD social indicators**[22] are a set of 34 indicators, covering employment, societal equity, general health and social cohesion. From a mental health monitoring point of view, the social cohesion indicators are highly relevant. These include subjective well-being, social isolation, group membership, teenage births, drug use and related deaths, and suicides. With the exception of teenage births, each of these is closely related to a corresponding MINDFUL indicator. The OECD indicator on subjective well-being is calculated using life-satisfaction (proportion of respondents with life-satisfaction from 7 to 10) and happiness data (proportion of respondents with happiness recorded as 'very happy' or 'quite happy'), and thus corresponds to MINDFUL indicator 12 ('Happiness'). Much of the OECD data on social cohesion is derived from the 'World Values Survey'. 'Drug-related deaths' is based on the 'European Monitoring Centre for Drugs and Drug Addiction' (EMCDDA) data, and is identical to MINDFUL indicator 3.

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20 http://ec.europa.eu/health/ph_information/dissemination/hsis/hsis_10_en.htm

21 http://ec.europa.eu/health/ph_information/dissemination/sdi_data/sdi_en.htm

22 http://www.oecd.org/document/24/0,2340,en_2825_497118_2671576_1_1_1_1,00.html

The **EU Social Protection Indicators**[23] were adopted in June 2006 by the EU Social Protection Committee. The aim is to monitor the social protection and social inclusion. The indicator set consists of 11 primary social protection indicators for monitoring poverty rate, long-term unemployment, jobless households, employment gap of immigrants, early school leavers, housing, and child well-being. Although many of the indicators relate to particular mental health determinants, none is directly an indicator of mental health.

9.6. Mental health data collection in Member States

All internationally defined indicators are dependent on the data collection systems of the Member States. The MINDFUL Project analysed the availability of time-series for mental health indicators in the 25 EU Member States since 1990. Mortality data on suicide and data on the number of psychiatric beds were readily available, but other data were scarce. Clearly, there is a need for Member States to develop their mental health monitoring systems.

In this work transferability of survey items is a challenge due to linguistic and cultural issues. Many mental health survey items are sensitive to subtle changes in meaning introduced by translation procedures, and there may exist cultural differences in the interpretation and sense of appropriateness of survey questions. Pilot data collection for the ECHIS has been performed in several Member States, and preliminary conclusions indicate that the some mental health-related items of the 36-item Short Form Health Survey (SF-36)[24] are especially sensitive to linguistic and cultural differences between countries. Further work is needed to develop comparable survey items in the different European languages.

9.7. Future developments

Mental health has individual, social, ethical, economic and societal precursors and consequences that should be addressed in all Member States. Adequate and comparable information on mental health at a population level will be an indispensable pre-requisite for tackling these problems, in targeting measures effectively towards required priorities, and in monitoring progress to agreed goals.

MINDFUL has clearly demonstrated the need for further development of policy-relevant European mental health monitoring, to support the aims of the Commission's 'Green Paper on Mental Health', the implementation of

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23   http://ec.europa.eu/employment_social/social_inclusion/indicators_en.htm
24   http://www.rand.org/health/surveys_tools/mos/mos_core_36item.html

the WHO 'Mental Health Action Plan for Europe', and major EC policies, such as the 'Lisbon Agenda'.

MINDFUL has also shown that, in many cases, mental health data are simply not available. And when available, they are mostly non-comparable between Member States, due to differences in data collection, indicator definitions and health systems. However, the project also proposes solutions to increase comparability. Even if valid international cross-sectional comparisons are difficult to implement, progress in public mental health can still be monitored by analysing time trends using a longitudinal set of population based mental health indicators.

Any future work should build on the ECHI-2 indicator set and previous Commission-funded work on mental health indicators. Work is needed to support further harmonisation of mental health indicators and to secure the development and retrieval of data on determinants of mental health. It is necessary to make full and co-operative use of existing EC and non-EC data collection activities. Special emphasis should be put on policy-relevant indicators, such as indicators of positive mental health, and data on vulnerable groups at risk of developing mental ill-health. Work to develop a structural mental health indicator should commence and the mental health contribution to the 'healthy life years' indicator needs to be explored in detail.

The current state of mental health monitoring in the EU indicates that there is a lack of co-ordination of and support to Member States. The introduction of a policy-relevant mental health monitoring system requires infra-structure support. A 'European Mental Health Observatory', supported by the Commission, is needed to establish leadership, and ensure comparability of mental health monitoring in EU. Such an observatory could be associated with the 'European Center for Disease Prevention and Control' (ECDC) and closely collaborate with international organisations such as WHO and OECD. Such an Observatory could be built according to the model of the 'European Monitoring Centre for Drug and Alcohol Abuse' (EMCDDA), which has successfully developed and implemented monitoring of drug abuse.

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ANNEX 1

ANNEX 2

ANNEX 3

ANNEX 4

Annex 1: Metadata tables

GROUP	DOMAIN	INDICATOR
Health status	Cause specific mortality	1a. Suicide (SDR)
		1b. Suicide (CDR)
		2a. Deaths of undetermined intent (SDR)
		2b. Deaths of undetermined intent (CDR)
		3. Drug related deaths
		4. Alcohol related deaths
	Morbidity, disease specific	5. Any anxiety disorder
		6. Major depression
		7. Harmful and hazardous drinking
		8. Suicide attempts
	Morbidity, generic	9. Psychological distress
		10. Mental disorders and adjustment among children and adolescents
		11. Energy, vitality
		12. Happiness
		13. Psychological impairment
Determinants of health	Personal conditions	14. Sense of mastery
		15. Self-Esteem
	Social and cultural environment	16. Social support
		17. Negative life-events
		18. Childhood adversities
Health systems	Prevention, health protection and promotion	19. Suicide prevention
		20. Mental health promotion
	Health resources	21. Number of psychiatric beds
		22. Number of psychiatrists
		23. Number of child (and adolescent) psychiatrists
	Health care utilisation; psychiatric care and social services	24. Number of in-patient episodes due to mental health conditions
		25. Number of long-stay patients
		26. Involuntary placements
		27. Use of out-patient services
		28. Self-reported use of mental health services
		29. Use of antidepressants
		30. Use of antipsychotics
		31. Use of anxiolytics
		32. Use of hypnotics
		33. Disability pensions due to mental disorders
		34. Sickness allowance spells due to mental disorders
	Expenditure	35. Expenditure on mental health services

Suicide (SDR)

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	SOURCES
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

Notes
- Cause of death data are derived from death certificates. The medical certification of death is an obligation in all EU Member States. MS's code the information of the death certificate into ICD codes (Eurostat data).
- All SDR rates have been standardised on the European Standard Population, except rates for Cyprus that have been standardised on the World Standard Population.
- MINDFUL's recommendation is that mean of the entire population of each year is used in calculating ratios / 100000.

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).

Groupings of available data
- Age: less than 65, total
- Sex: male, female, total

Suicide (CDR)

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
- Crude death rate per 100000 inhabitants, total population (CDR)

Availability and time coverage

COUNTRY	TIME COVERAGE	SOURCES
Austria	1994-2003	1
Belgium	1994-1997	1
Cyprus	2002	1
Czech Republic	1994-2003	1
Denmark	1994-2001	1
Estonia	1999-2003	1
Finland	1994-2003	1
France	1994-2002	1
Germany	1994-2003	1
Greece	1994-2003	1
Hungary	1999-2003	1
Ireland	1994-2003	1
Italy	1994-2002	1
Latvia	1999-2003	1
Lithuania	1994-1997, 1999-2003	1
Luxembourg	1994-2003	1
Malta	2000-2003	1
Netherlands	1994-2003	1
Poland	1999-2003	1
Portugal	1994-2003	1
Slovakia	1999, 2001	1
Slovenia	1999-2003	1
Spain	1994-2003	1
Sweden	1994-2003	1
United Kingdom	1994-2000	1

Groupings of available data
- Age: 5 year age groups
- Sex: male, female, total
- Regional: Member States and NUTS 2 regions

Notes
- Cause of death data are derived from death certificates. The medical certification of death is an obligation in all EU Member States. MS's code the information of the death certificate into ICD codes (Eurostat data).
- MINDFUL's recommendation is that mean of the entire population of each year is used in calculating ratios / 100000.

Data sources
- Eurostat, Dissemination Database.

Deaths of undetermined intention (SDR)

Description
• Deaths where available information is insufficient to enable a medical or legal authority to make a distinction between accident, self-harm and assault. They include deaths due to self-inflicted injuries, but not poisoning, when not specified whether accidental or with intent to harm. A direct cause of death. This indicator adds information to the whole suicide problem; it is often meaningful to contemplate the suicide and deaths of undetermined intention figures together.

Definitions
• Cause of death: ICD-10 codes Y10-Y34
• Standardised death rate per 100000 inhabitants, total population (SDR, European Standard Population) for the whole Member States

Availability and time coverage
• AT, CZ, DE, ES, FI, IE, NL, PT, SE 1994-2003; FR, IT 1994-2002; DK 1994-2001; UK 1994-2000; BE 1994-1997; LT 1994-1997, 1999-2003; EE, HU, LV, PL, SI 1999-2003; GR 1994, 1997-2001; LU 1994-1998, 2000-2003; MT 2000-2003; SK 1999-2001

Groupings of available data
• Sex: male, female, total

Notes
• Cause of death data are derived from death certificates. The medical certification of death is an obligation in all EU Member States. MS's code the information of the death certificate into ICD codes (Eurostat data)
• MINDFUL's recommendation is that mean of the entire population of each year is used in calculating ratios / 100000.

Data sources
• Eurostat, Dissemination Database.

Deaths of undetermined intention (CDR)

Description
• Deaths where available information is insufficient to enable a medical or legal authority to make a distinction between accident, self-harm and assault. They include deaths due to self-inflicted injuries, but not poisoning, when not specified whether accidental or with intent to harm. A direct cause of death. This indicator adds information to the whole suicide problem; it is often meaningful to contemplate the suicide and deaths of undetermined intention figures together.

Definitions
• Cause of death: ICD-10 codes Y10-Y34
• Crude death rate per 100000 inhabitants, total population (CDR)

Availability and time coverage
• AT, DE, FI, IE, LU, NL, PT 1994-2002; DK, ES, FR, SE 1994-2001; UK 1994-2000; BE 1994-1997; CZ, EE, HU, LT, LV, PL, SI 1999-2002; GR 1994, 1997-2000; IT 1994-2000, 2002; MT 2000, 2001; SK 1999-2001

Groupings of available data
• Age: 5 year age groups
• Sex: male, female, total
• Regional: Member States and NUTS 2 regions

Notes
• Cause of death data are derived from death certificates. The medical certification of death is an obligation in all EU Member States. MS's code the information of the death certificate into ICD codes (Eurostat data)
• MINDFUL's recommendation is that mean of the entire population of each year is used in calculating ratios / 100000.

Data sources
• Eurostat, Dissemination Database.

Drug related deaths

Description
• Drug related deaths and mortality among drug users. The definition refers to those deaths that are caused directly by the consumption of drugs of abuse. These deaths occur generally shortly after the consumption of the substance(s).

Definition
• Cause of death: the following ICD-10 codes: Harmful use, dependence, and other mental and behavioural disorders due to: opioids (F11), cannabinoids (F12), cocaine (F14), other stimulants (F15), hallucinogens (F16), multiple drug use (F19). Accidental poisoning (X41, X42), intentional poisoning (X61, X62), or poisoning by undetermined intent (Y11, Y12) by: opium (T40.0), heroin (T40.1), other opioids (T40.2), methadone (T40.3), other synthetic narcotics (T40.4), cocaine (T40.5), other and unspecified narcotics (T40.6), cannabis (T40.7), lysergide (T40.8), other and unspecified psychodysleptics (T40.9), psychostimulants (T43.6).
• Crude death rate (CDR) per 100000 inhabitants

Availability and time coverage
• AT, DE, DK, ES, FR, GR, IT, LU, PT, SI 1990-2002; FI, IE, NL, SE, UK 1990-2001; BE 1990-1997; CZ 1998-2002; EE 1997-2002; LV 2000-2002; LT 2002; PL 1997-2000

Groupings of available data
• Sex: male, female, total

Notes
• Cause of death data are derived from death certificates. The medical certification of death is an obligation in all EU Member States. MS's code the information of the death certificate into ICD codes.
• The definition is established by EMCDDA.

• Numbers from different countries are not directly comparable because differences remain in case definition and recording methods. National definitions usually refer to acute deaths directly related to drug consumption ("overdoses", "poisonings" or "drug-induced"). Note that, in a few countries, the figures include also a limited number of cases of deaths indirectly related to drug use (e.g. AIDS, accidents with positive toxicology).
• Crude death rate calculation by MINDFUL using Eurostat's population statistics (average population).

Data sources
• EMCDDA - European Monitoring Centre for Drugs and Drug Addiction.

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, IE 1990-2004; DE 1991-2004; EE 1990, 1995, 2000, 2003; ES 1999-2003; HU 2002; LT 1990, 1995, 2000, 2004; LU 1999-2004; NL 1996-2004; PL 2002; SE 1997-2003; SI 1990, 1995, 2000, 2003.

Groupings of available data
- Sex: male, female, total: AT, DE, ES, FI, LU

Notes
- Cause of death data are derived from death certificates. The medical certification of death is an obligation in all EU Member States. MS's code the information of the death certificate into ICD codes.
- In Luxembourg, Netherlands and Sweden the numbers of deaths are reported in two-digit ICD-10 only (eg. G62 instead of G62.1). However, this results in only minor effect on the total number of deaths.

- In Germany ICD-9 was in use until 1997, in Austria until 2001 and in Ireland it still is. The set of ICD-9 that corresponds ICD-10 in the case of alcohol related deaths is 291, 303, 305.0, 357.5, 425.5, 535.3, 571.0, 571.1, 571.2, 571.3, E860. Furthermore, since 1998 P04.3 and X45 are replaced by Q86.0, T51.0 and T51.9 in Germany. However, this results in only minor effect on the total number of deaths.
- CZ: Specialised system of monitoring of alcohol related deaths does not exist. Information on deaths related to the listed diagnoses are available as a part of routine mortality data but in fact it does not cover all alcohol related deaths. Some cases can get a diagnosis from the Y10-Y34 category or from other somatic category.
- Crude death rate calculation by MINDFUL using Eurostat's population statistics (average population).

Data sources
- AT: Statistics Austria
- DE: Destatis
- EE: Ministry of Social Affairs
- ES: National Statistics Institute
- FI: Statistics Finland
- HU: OPNI - National Institute of Psychiatry and Neurology, Dept. of Statistics
- IE: Central Statistics Office Ireland
- LT: Lithuanian Department of Statistics
- LU: Statec
- NL: Statistics Netherlands
- PL: Institute of Psychiatry and Neurology
- SE: Socialstyrelsen
- SI: Statistical Office of the Republic of Slovenia.

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 any anxiety disorder during past 12 months; instrument: CIDI-SF.

Availability and time coverage
• BE, FR, IT, ES 2002; DE, NL 2003; DE 1999, NL 1996; FI 2001

Groupings of available data
• Sex: male, female, total: DE 1999, NL 1996; FI 2001

Notes
• Age range: 18-79 years: DE 1999; 30+: FI 2001; 18-64: NL 1996

Data sources
• BE, FR, IT, ES 2002: Demyttenaere K, Bruffaerts R, Posada-Villa J et al. Prevalence, severity, and unmet need for treatment of mental disoders in the World Health Organization World Mental Health Surveys. JAMA 2004: 291: 2581-2590.
• DE 1999: Jacobi F, Wittchen HU, Holting C, Hofler M, Pfister H, Muller N, Li R. Prevalence, co-morbidity and correlates of mental disorders in the general population: results from the German Health Interview and Examination Survey (GHS). Psychol Med 2004: 34:597-611.
• NL 1996: Bijl RV, Ravelli A, van Zessen G. Prevalence of psychiatric disorder in the general population: results of the Netherlands Mental Health Survey and Incidence Study (NEMESIS). Soc Psychiatry Psychiatr Epidemiol 1998:33: 587-595.
• FI 2001: Pirkola, S, Isometsä E, Suvisaari J, Aro H, Joukamaa M, Koskinen S, Aromaa A, Lönnqvist J. DSM-IV mood-, anxiety- and alcohol use disorders and their comorbidity in the Finnish general population. Results from the Health 2000 Study. Soc Psychiatry Psychiatr Epidemiol 2005:40:1-10.

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.

Availability and time coverage
- DE, FR, GR 2001; NL 1996, FI 1996, 2001

Groupings of available data
- Sex: male, female, total: FI 1996, 2001
- Age: 30-44, 45-54, 55-64, 65-74, 75-84, 85+: FI 2001

Notes
- Age range: 18-74 years: DE, FR, GR 2001; 15-75: FI 1996; 30+: FI 2001; 18-64: NL 1996

Data sources
- DE, FR, GR 2001: Korkeila J et al: Piloting a minimum data set of mental health indicators for Europe.
- NL 1996: Kruijshaar ME, Hoeymans N, Bijl RV, Spijker J, Essink-Bot ML. Levels of disability in major depression: findings from the Netherlands Mental Health Survey and Incidence Study (NEMESIS). J Affect Disord. 2003 Oct; 77(1):53-64.
- FI 1996: Lindeman S, Hämäläinen J, Isometsä E, Kaprio J, Poikolainen K, Heikkinen M, Aro H. The 12-month prevalence and risk factors for major depressive episode in Finland: representative sample of 5993 adults. Acta Psychiatr Scand. 2000 Sep;102(3):178-84.
- FI 2001: Aromaa A, Koskinen S, ed. Health and functional capacity in Finland. Baseline results of the Health 2000 health examination survey. Publications of the National Public Health Institute B3/2002.

Harmful and hazardous drinking

Description

• Harmful and hazardous use of alcohol signifies heavy drinking that is associated with an increased risk for alcohol dependence and alcohol related negative health outcomes. Excessive use of alcohol is common among persons with mental disorders.

Definition

• A health interview survey indicator. AUDIT-5 is a five item measure that can be administered as a self-report scale or used in an interview. AUDIT is derived from Alcohol Use Disorders Identification Test.

Availability and time coverage -

Groupings of available data -

Notes

• AUDIT-5 has proven to provide a more valid and reliable estimate of alcohol dependence than CAGE. Neither of the measures have been tested in the general population. MINDFUL recommendation is that CAGE should be replaced by AUDIT-5.

Data sources

• No data available.

Suicide attempts

Description

• Suicide is an important public health issue; data on suicide attempts supplement the information already provided by mortality data.

Definition

• A health interview survey indicator. Lifetime occurrence of suicide attempt. Age and sex adjusted prevalence of cases giving positive answer to the specific question: Have you ever attempted suicide? The data is reported as percentage of respondents having attempted suicide during lifetime.

Availability and time coverage

• DE, FI, FR 2001; GR 1998, 2001, 2004

Groupings of available data

• Sex: male, female, total : GR 1998, 2004

Notes

• Age range: 18-74 years: DE, FI, FR, GR 2001

Data sources

• DE, FI, FR, GR 2001: Korkeila J et al: Piloting a minimum data set of mental health indicators for Europe.
• GR 1998, 2004: University Mental Health Research Institute (UMHRI) Athens, Greece.

Psychological distress

Description
• A non-specific dimension of psycho-pathology, 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.

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

Groupings of available data
• Sex: male, female, total: DE, FI, FR, GR 2001; AT, BE, DE, DK, ES, FI, FR, GR, IE, IT, LU, PT, SE, UK 2002; IE 2000, SE 1992; male, female: UK 1999
• Age: 15-25, 26-44, 45-64, 65+: AT, BE, DE, DK, ES, FI, FR, GR, IE, IT, LU, PT, SE, UK 2002; 15-44, 45-64, 65-74. 75+: SE 1992

Notes
• Age range: 18-74 years: DE, FI, FR, GR 2001; 15+AT, BE, DE, DK, ES, FI, FR, GR, IE, IT, LU, PT, SE, UK 2002; 18-79: FI 1995; 18+: IE 2000; 18-64: NL 1996; 14-95: NL 2001-2004; 15-93: SE 1992; 16+: UK 1992, 1998; 18-64: UK 1999
• Suggested population norm for the mean score: 76. A score of 52 or less on the MHI-5 scale is taken to indicate a case of mental ill-health.

• Each country may be advised to define national cutpoints, because the results from the pilot study and Eurobarometer imply culture based differences in the responses.

Data sources
• DE, FI, FR, GR 2001: Korkeila J et al: Piloting a minimum data set of mental health indicators for Europe
• AT, BE, DE, DK, ES, FI, FR, GR, IE, IT, LU, PT, SE, UK 2002: The European Opinion Research Group (EORG): Eurobarometer 58.2. The mental health status of the European population, 2003.
• FI 1995: Aalto A-M, Aro AR, Teperi J. RAND-36 as a measure of Health-Related Quality of Life. Reliability, construct validity and reference values in the Finnish general population. Helsinki: Stakes, Research Reports 101, 1999.
• IE 2000: Blake C, Codd MB, O'Meara YM. The Short Form 36 (SF-36) Health Survey: normative data for the Irish population. Irish Journal of Medical Science. 2000 Jul-Sep; 169(3):195-200.
• NL 1996: Bijl RV, Ravelli A. Current and residual functional disability associated with psychopathology: findings from the Netherlands Mental Health Survey and Incidence Study (NEMESIS). Psychological Medicine 2000:30:657-668.
• NL 2001-2004: Statistics Netherlands
• SE 1992: Sullivan M, Karlsson J. The Swedish SF-36 Health Survey III. Evaluation of criterion-based validity: results from normative population. J Clin Epidemiol. 1998 Nov;51(11):1105-13.
• UK 1992, 1998: Bowling A, Bond M, Jenkinson C, Lamping DL. Short Form 36 (SF-36) Health Survey questionnaire: which normative data should be used? Comparisons between the norms provided by the Omnibus Survey in Britain, the Health Survey for England and the Oxford Healthy Life Survey. Journal of Public Health Medicine. 1999 Sep; 21(3):255-70.
• UK 1999: Jenkinson C, Stewart-Brown S, Petersen, Paice C. Assessment of the SF-36 version 2 in the United Kingdom. J. Epidemiol. Community Health 1999;53;46-50.

Mental disorders and adjustment among children and adolescents

Description

• Mental disorders in childhood and adolescence are common and comprise internalising, externalising, conduct and attention deficit disorders. Mental disorders can seriously affect individual's ability to conduct normal and socially active life including work and leisure time activities. Good adjustment is defined here as prosocial behaviours manifested as good peer relationships and a low level of emotional symptoms.

Definition

• Strengths and Difficulties (SDQ) screens for internalising, externalising, 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 includes 25 items (emotional, conduct, hyperactivity/inattention, and prosocial behaviour) and assessment of 5 domains of functioning. The predictive algorithm generates "unlikely", "possible" or "probable" ratings for psychiatric disorders described above. There are three versions of SDQ: 1) parent, 2) teacher and 3) self-rate scales.

Availability and time coverage

• DE, FI, IT, PT, SE 2004; DE 2002, 2004

Groupings of available data

• Sex: male, female: IT, PT

Notes

• MINDFUL's recommendation is that the scores from parent ratings are prioritised among 10-year old children. In the absence of parent ratings teacher ratings are used. Self-rate measures are used among adolescents, i.e. persons ≥ 13 years of age. The "total difficulties" score is used as an indicator of likelihood of a diagnosis.

• MINDFUL recommendation is that the scores of prosocial behaviours are used as a measure of adjustment.
• Data from the Nordic countries among 7-year olds are based on parent ratings and among 15 year olds on self-ratings.
• Data from Southern Europe among 7 to 8-year olds are based on teacher ratings.
• Data from Germany are based on parent ratings in a sample of 6 to 16-year olds.

Data sources

• Obel, C, Heiervan, W., Rodriguez, A et al.The Strength and Difficulties Questionnaire (SDQ) in the Nordic countries. European Child and Adolescent Psychiatry 2004;13:32-39, Suppl 2.
• Marzocchi, GM, Capron, C., Di Pietro, M, Tauleria, W., Duyme, M., Frigerio, A. et al The use of the Strengths and Difficulties Questionnaire (SDQ) in Southern European countries. European Child and Adolescent Psychiatry 2004; 13:40-46, Suppl 2.
• Woerner W, Becker A, Rothenberger A. Normative data and scale properties of the German parent SDQ. European Child & Adolescent Psychiatry 2004; 13:3-10, Suppl 2.

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.

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

Groupings of available data

• Sex: male, female, total: DE, FI, FR, GR 2001; AT, BE, DE, DK, ES, FI, FR, GR, IE, IT, LU, PT, SE, UK 2002; IE 2000, SE 1992; male, female: UK 1999
• Age: 15-25, 26-44, 45-64, 65+: AT, BE, DE, DK, ES, FI, FR, GR, IE, IT, LU, PT, SE, UK 2002; 15-44, 45-64, 65-74. 75+: SE 1992

Notes

• Age range: 18-74 years: DE, FI, FR, GR 2001; 15+: AT, BE, DE, DK, ES, FI, FR, GR, IE, IT, LU, PT, SE, UK 2002; 18-79: FI 1995; 18+: IE 2000; 18-64: NL 1996; 15-93: SE 1992; 16+: UK 1992, 1998; 18-64: UK 1999
• Suggested population norm for the mean score: 70

Data sources

• DE, FI, FR, GR 2001: Korkeila J et al: Piloting a minimum data set of mental health indicators for Europe

• AT, BE, DE, DK, ES, FI, FR, GR, IE, IT, LU, PT, SE, UK 2002: The European Opinion Research Group (EORG): Eurobarometer 58.2. The mental health status of the European population, 2003.
• FI 1995: Aalto A-M, Aro AR, Teperi J. RAND-36 as a measure of Health-Related Quality of Life. Reliability, construct validity and reference values in the Finnish general population. Helsinki: Stakes, Research Reports 101, 1999.
• IE 2000: Blake C, Codd MB, O'Meara YM. The Short Form 36 (SF-36) Health Survey: normative data for the Irish population. Irish Journal of Medical Science. 2000 Jul-Sep;169(3):195-200.
• NL 1996: Bijl RV, Ravelli A. Current and residual functional disability associated with psychopathology: findings from the Netherlands Mental Health Survey and Incidence Study (NEMESIS). Psychological Medicine 2000:30:657-668.
• SE 1992: Sullivan M, Karlsson J. The Swedish SF-36 Health Survey III. Evaluation of criterion-based validity: results from normative population. J Clin Epidemiol. 1998 Nov;51(11):1105-13.
• UK 1992, 1998: Bowling A, Bond M, Jenkinson C, Lamping DL. Short Form 36 (SF-36) Health Survey questionnaire: which normative data should be used? Comparisons between the norms provided by the Omnibus Survey in Britain, the Health Survey for England and the Oxford Healthy Life Survey. Journal of Public Health Medicine. 1999 Sep;21(3):255-70.
• UK 1999: Jenkinson C, Stewart-Brown S, Petersen, Paice C. Assessment of the SF-36 version 2 in the United Kingdom. J. Epidemiol. Community Health 1999;53;46-50.

Happiness

Description

• Happiness is defined as the degree to which an individual judges the overall quality of his life-as-a-whole favourably. Within this concept two components of happiness are distinguished: hedonic level of affect (the degree to which pleasant affect dominates) and contentment (perceived realisation of wants). These components represent respectively "affective" and "cognitive" appraisals of life and are seen to figure as subtotals in the overall evaluation of life, called overall happiness.

Definition

• A health interview survey indicator. Current occurrence and extent of happiness. Age and sex adjusted mean score of a single question with four response alternatives: Taking all things together, would you say you are: very/quite/not very/not at all happy?
• Count: very happy=4…not at all happy=1

Availability and time coverage

• AT 1990, 1999, 2002; BE, CZ, DK, FR, NL, PT 1990, 1999; EE, LT, LV 1990, 1996, 1999; FI 1990, 1996, 2000; DE 1998-1999; GR, LU, MT 1999; HU 1990-1991, 1998-1999; IE 1990-1991, 1999, 2001, 2003; IT 1990-1991, 1999; PL 1990, 1992-1993, 1997, 1999, 2003; SI 1991-1992, 1995, 1999; SK 1990, 1998-1999; ES 1990, 1995, 1999-2000; SE 1990, 1996, 1999-2000; UK 1990-1991, 1998.

Groupings of available data -

Notes

• The origins of the data in World Database of Happiness are mainly The World Values Study survey series (*http://www.worldvaluessurvey.com/*) and Euromodule (*http://bibliothek.wz-berlin.de/pdf/2001/iii01-401.pdf*)

Data sources

• Veenhoven, R. World Database of Happiness, Trends in nations, Erasmus University Rotterdam.

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

Availability and time coverage

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

Groupings of available data

• Age: 15-44, 45-64, 65-74. 75+: SE 1992
• Sex: male, female, total: IE 2000, SE 1992; male, female: UK 1999

Notes

• Age range: 18-74 years: DE, FI, FR, GR 2001; 14-95: DE 2002; 18-79: FI 1995; 18+: IE 2000; 15-93: SE 1992; 16+: UK 1992, 1996; 18-64: UK 1999
• Suggested population norm for the mean score: 89.

Data sources

• DE, FI, FR, GR 2001: Korkeila J et al: Piloting a minimum data set of mental health indicators for Europe
• DE 2002: Morfeld M, Bullinger M, Nantke J, Brahler E. [The version 2.0 of the SF-36 Health Survey: results of a population-representative study] Soz Präventivmed. 2005;50(5):292-300 German.
• FI 1995: Aalto A-M, Aro AR, Teperi J. RAND-36 as a measure of Health-Related Quality of Life. Reliability, construct validity and reference values in the Finnish general population. Helsinki: Stakes, Research Reports 101, 1999.

• IE 2000: Blake C, Codd MB, O'Meara YM. The Short Form 36 (SF-36) Health Survey: normative data for the Irish population. Irish Journal of Medical Science. 2000 Jul-Sep;169(3):195-200.

• SE 1992: Sullivan M, Karlsson J. The Swedish SF-36 Health Survey III. Evaluation of criterion-based validity: results from normative population. J Clin Epidemiol. 1998 Nov;51(11):1105-13.

• UK 1992, 1996: Bowling A, Bond M, Jenkinson C, Lamping DL. Short Form 36 (SF-36) Health Survey questionnaire: which normative data should be used? Comparisons between the norms provided by the Omnibus Survey in Britain, the Health Survey for England and the Oxford Healthy Life Survey. Journal of Public Health Medicine. 1999 Sep;21(3): 255-70.

• UK 1999: Jenkinson C, Stewart-Brown S, Petersen, Paice C. Assessment of the SF-36 version 2 in the United Kingdom. J. Epidemiol. Community Health 1999;53;46-50.

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). Mastery is a psychosocial resource that promotes resilience to mental ill 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 (score ranges between 7 and 28), in which score less than 20 indicates low sense of mastery, and score less than 12 indicates pessimism.

Availability and time coverage
• DE, FI, FR, GR 2001

Groupings of available data -

Notes
• Age range in the pilot study: 18-74 years
• The pilot study used a five item version of the Sense of Mastery (score ranges between 0 and 20), which was later changed into the seven item version. The cutpoint for low mastery in the pilot study is 12.

Data sources
• Korkeila J et al: Piloting a minimum data set of mental health indicators for Europe

Self-Esteem

Description

• Self-esteem is defined as one's sense of worthiness as a person and it functions as an anxiety buffer. Self-esteem is associated with measures of temperament and it has a negative correlation with neuroticism and a positive correlation with extraversion. Low self-esteem is positively associated with experience of uncontrollable stress, risk of depression, depression, and various measures of general health.

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). A four-point likert scale is used that gives a range from 1 to 4 with a total range from 10 to 40.

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.

Groupings of available data -

Notes

• Some of the samples in the 53 nation study were rather small and caution should be used when comparing the results between countries.
• Self-esteem is also measured in the European School Survey Project on Alcohol and Drugs (ESPAD) survey covering 30 countries.

Data sources

• Scmitt David P, Allik J. Simultaneous administration of the Rosenberg Self-Esteem Scale in 53 Nations: Exploring the Universal and Culture-Specific Features of Global Self Esteem. Journal of Personality and Social Psychology 2005;Vol.89;4, 623-642.

Social support

Description

• Social support is defined here as the perceived availability of people whom the individual trusts and who make one feel cared for and valued as a person. Low level of perceived support is associated with ill-health (both e.g. depression and somatic diseases).

Definitions

• A health interview survey indicator. Current occurrence and extent of social support. Age and sex adjusted mean score of the 3-item Oslo Social Support Scale (OSS-3).

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

Groupings of available data -

Notes

• Age range: 18-74 years: DE, FI, FR, GR 2001; 15+: AT, BE, DE, DK, ES, FI, FR, GR, IE, IT, LU, NL, PT, SE, UK 2002
• Data is available for sum scores on the Oslo-3 social support scale. The reliability measures of Oslo-3 have been low (Cronbach´s α = 0.6). Therefore MINDFUL recommendation is that the items should be presented separately

Data sources

• DE, FI, FR, GR 2001: Korkeila J et al: Piloting a minimum data set of mental health indicators for Europe.
• AT, BE, DE, DK, ES, FI, FR, GR, IE, IT, LU, NL, PT, SE, UK 2002: The European Opinion Research Group (EORG): Eurobarometer 58.2. The mental health status of the European population, 2003.

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.

Availability and time coverage
• DE, FI, FR, GR 2001

Groupings of available data -

Notes
• Age range in the pilot study: 18-74 years.

Data sources
• Korkeila J et al: Piloting a minimum data set of mental health indicators for Europe.

Childhood adversities

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.

Definitions
• 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.

Availability and time coverage
• No data available.

Groupings of available data -

Notes
• MINDFUL's recommendation is that the presence of any adversity among persons aged 18 or more is used as an indicator.

Data sources -

Suicide prevention

Description

• Current national activities on suicide prevention. «Activity» is defined as specified actions in order to prevent suicides through the use of various methods. «National» is defined as a comprehensive approach within a country in different settings.

Definition

• Countries with national suicide prevention activities=1.

Availability and time coverage

• Whole EU surveyed in 2003-2004

Groupings of available data -

Notes

• The comprehensiveness and coordination of national suicide prevention activities vary considerably between the countries. In Austria, Czech Republic, Denmark, France, Germany, Lithuania, Sweden and the United Kingdom, national programmes with a variety of strategies have been established. Since the end of the 1990's Finland does not have its national programme in action, but national and regional strategies remain.

Data sources

• Wasserman D, Mittendorfer Rutz E, Rutz W, Schmidtke A. Suicide prevention in Europe; The WHO European monitoring survey on national suicide prevention programmes and strategies. National and Stockholm County Council's Centre for Suicide Research and Prevention of Mental Ill-Health (NASP), 2004.

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 utilises defined methods in order to achieve specified goals and objectives in different settings.

Definition

• Countries with above mentioned activity are marked in numbers 1-3: targeting bullying in school=1, parenting=2, social skills training=3. Should a country have all of the three activities, it would be marked 123.

Availability and time coverage

• Whole EU surveyed in 2004

Groupings of available data -

Notes -

Data sources

• IMHPA Country stories.

Number of psychiatric beds

Description
• Beds accommodating patients who are formally admitted or hospitalised to an institution for psychiatric treatment and/or care, and who stay for a minimum of one night in the hospital or institution providing in-patient care.

Definitions
• Rate per 100000 inhabitants

Availability and time coverage
• BE, CZ, EE, FI, LT, LV, SE, SI, SK 1990-2004; AT, CY, DK, FR, IE, IT 1990-2003; DE 1991-2004; GR 1990-1997, 1999-2000; HU 1990-1994, 1996-2004; LU 1990-1998; MT 1997-2004; ES, NL, PL 1990-2002; PT 1990-1998, 2000-2003; UK 1990-1997.

Groupings of available data -

Notes
• Despite the description, there are national differences in defining a psychiatric bed, which impairs the comparability of the data
• MINDFUL's recommendation is that mean of the entire population of each year is used in calculating ratios / 100000.
• During recent years there have been indications of a reinstitutionalisation process comprising increase of placements in institutions within social or private sector services, increasing incarceration of psychotic patients in prisons and increasing number of forensic psychiatric beds in some countries.
• Nursing and residential care facilities are not included

Data sources
• WHO, European Health for All Database.

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

Groupings of available data -

Notes
• MINDFUL's recommendation is that mean of the entire population of each year is used in calculating ratios / 100000.
• Registered medical specialists are licensed, not necessarily economically active. Thus retired, unemployed, working abroad etc. are included. Trainees are excluded.
• Child psychiatrists are not included, except in countries where "child psychiatry" is not a separate speciality (e.g. the UK)

Data sources
• Eurostat, Dissemination Database.

Number of child (and adolescent) psychiatrists

Description
- Registered medical specialists in child and adolescent psychiatry

Definitions
- Rate per 100000 inhabitants

Availability and time coverage
- BE 2002-2004; CY 1995, 2000; CZ 2000-2003; DE 1991-2004; DK 1990-2003; EE 1990, 1995; FI 1990-2003; FR 1990-2004; GR 1995-2001; IE 1994-2005; LT 1991-2003, LU 1995-2004; LV 1992-2003; PL 2003; PT 1990-2004; SK 1998-2003; SE 2000-2003; UK 1992-2004

Groupings of available data -

Notes
- MINDFUL's recommendation is that mean of the entire population of each year is used in calculating ratios / 100000.
- Registered medical specialists are licensed, not necessarily economically active. Thus retired, unemployed, working abroad etc. are included. Trainees are excluded.
- Finland is the only MS where adolescent psychiatry is a separate sub-specialty.

Data sources
- Eurostat, Dissemination Database.

Number of in-patient episodes due to mental health conditions

Description
- Number of all discharges (full-time or part-time) for all mental and behavioural disorders during a year.

Definitions
- ICD-10; F00-F99
- Rate per 100000 inhabitants

Availability and time coverage
- DK, FI, LT, SE 1990-2004; AT, CY, ES, SI 1990-2003; BE 1996-1997; CZ 1991-2004; EE, LV 1998-2004; DE 1993-2003; GR 1990-1999; HU 1994-2004; IT 1997-2002; LU 1998-2003; PL 1992-2003; PT 1993-2004; SK 1996-2004

Groupings of available data -

Notes
- MINDFUL's recommendation is that rate per 100000 of total population is calculated.

Data sources
- WHO, European Health for All Database.

Number of long-stay patients

Description
- Number of mental patients staying continuously in hospitals 365+ days.

Definitions
- ICD-10; F00-F99
- Rate per 100000 inhabitants

Availability and time coverage
- CZ, FI 1990-2004; SI 1990-2003; SE 1990-2002; DK, LT 1991-2004; BE 1996-1997; HU 1994-1999, 2001-2004; IE 1991, 2001, 2003-2004; IT 1994; LV 1996-2004; NL 1990-1992, 1994-1996; SK 1999-2004

Groupings of available data -

Notes
- MINDFUL's recommendation is that mean of the entire population of each year is used in calculating ratios / 100000.

Data sources
- WHO, European Health for All Database.

Involuntary placements

Description
- Patients committed to involuntary psychiatric hospital treatment

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

Availability and time coverage
- BE, SE 1998; AT, FR, IE, NL, UK 1999; DE, DK, FI, LU, PT 2000

Groupings of available data -

Notes:
- Data from official sources is often provided by national health reports, health departments or statistical bureaux, and thus is based on differing definitions of or methods used to calculate involuntary placements.
- The legislature regulating the use of involuntary measures differs significantly between the EU Member States. From mental health policy and human rights aspects the use of commitment is an important aspect of psychiatric services for monitoring purposes.
- Involuntary placement on the grounds on psychiatric treatment is implemented in various types of institutions in the Member States. These institutions include psychiatric hospitals, psychiatric wards in general hospitals, forensic wards and psychiatric nursing homes. Patients may be committed to general hospitals due to co-morbidity in some countries.
- Some Member States run agencies or statistical bureaux that record or provide data on the involuntary placement or treatment of the mentally ill, whereas others do not. Annually updated rates of involuntary placements (detailed for regular and/or emergency cases as well as for sociodemographic and diagnostic characteristics) are essential for evaluating national policies.

- Currently, only some Member States provide time series. The reliability and validity of these time series are unknown, however, and require further analysis.
- Nevertheless, available data suggest that in most Member States the rates of involuntary placement (or the percentages on total admissions to psychiatric inpatient care) have remained relatively stable during the last decade – in contrast to the increasing total number of involuntary placements.

Data sources
- Salize H, Dreßing H, Peitz M. Compulsory Admission and Involuntary Treatment of Mentally Ill Patients - Legislation and Practice in EU-Member States. Research Project, European Commission - Health & Consumer Protection Directorate-General 2002.

Use of outpatient services

Description
- Number of visits to psychiatric outpatient care (outpatient service or unit within specialised psychiatric care) during a year

Definitions
- Rate per 100000 inhabitants

Availability and time coverage
- CY, SK, LT 1990, 1995, 2000, 2004; CZ 2004; DK 1997-2004; EE 1990, 1995, 2000, 2003; ES 2002; FI 1994-2004; GR 1997; HU 1990, 1995, 2003; IE 1997-2000; 2000-2004; LV 2000-2004; NL 1999; PL 1995-2003; PT 1998; SE 1998; SI 1990, 1995, 1998-2002; SK 2004; UK 1999

Groupings of available data -

Notes
- Rate per 100000 inhabitants calculation by MINDFUL using Eurostat's population statistics (average population).
- Finland: Outpatient visits in psychiatry include outpatient visits in specialised health care within the specialty of psychiatry in all municipal hospitals, including specialist-led health centres. Psychiatric care/mental health visits in specialised health care include visits within the specialties of psychiatry, child psychiatry and adolescent psychiatry. The population data refer to year-end data.

Data sources
- GR, IE, NL, PT, SE, UK: Establishment of a set of mental health indicators for European Union, Annex VII: Data on existing indicators and results of the pilot survey. European Commission, 1998
- CY: Ministry of Health
- CZ: ÚZIS CZ
- DK: Sundhedsstyrelsen
- EE: Ministry of Social Affairs
- ES: Ministerio de Sanidad y Consumo
- FI: Stakes, SotkaNET
- HU: Central Statistical Office
- LT: Lithuanian Health Information Centre
- LV: Mental Health Government Agency
- PL: CSO Poland
- SI: Statistics Slovenia
- SK: ÚZIS SK.

Self-reported use of mental health services

Description
- Spontaneous help-seeking due to mental health problem. Includes any source of help, both professional and non-professional.

Definition
- A health interview survey indicator. Age and sex adjusted prevalence of cases answering positively to the question about help-seeking due to mental health problems during the past 12 months.

Availability and time coverage
- AT, BE, DE, DK, ES, FI, FR, GR, IE, IT, LU, NL, PT, SE, UK 2002

Groupings of available data
- Sex: male, female, total

Notes
- Age range: 15+

Data sources
- The European Opinion Research Group (EORG): Eurobarometer 58.2. The mental health status of the European population, 2003.

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.

Availability and time coverage
- AT 1999/2000; BE 1997-2002; CZ 1990-2002; DE 1998, 2000; DK 1994-2005; ES 2000; FI 1990-2005; FR 2000; GR 1995; HU 1995-2002; IE 2000; IT 2000; PT 2000-2002; SE 1990-2005; UK 2000

Groupings of available data -

Notes
- Some countries provide data only on "packages" (containing different number of doses).
- The sale and actual use of psychotropic drugs - above all antidepressants - are not always the same.
- In some countries (e.g. Germany) St. John's Wort (Hypericum perforatum) is used in significant amount in depression instead of ordinary antidepressants.

Data sources
- BE, CZ, HU, PT: OECD Health Data
- DK: Danish Medicines Agency
- FI: National Agency for Medicines
- SE: Medical Products Agency
- ES, IE, IT, UK, AT, DE, FR, GR: Establishment of a set of mental health indicators for European Union, Annex VII: Data on existing indicators and results of the pilot survey. European Commission, 1998.

Use of antipsychotics

Description
• A class of drugs used to treat psychosis. Common conditions with which antipsychotics might be used include schizophrenia, mania and delusional disorder. Antipsychotics also have some effects as mood stabilisers, leading to their occasional use in treating mood disorder (particularly bipolar disorder) and organic mental disorders even when no signs of psychosis are present.

Definition
• Average number of defined daily doses (DDD) of antipsychotics (ATC class NO5A) per day during a year per 1000 inhabitants. Calculation is based on the volume of sales to pharmacies and hospitals by wholesalers.

Availability and time coverage
• AT 1999/2000; BE 1999; DE 1998; DK 1994-2005; FI 1990-2005; GR 1995; SE 1990-2005

Groupings of available data -

Notes
• Some countries provide data only on "packages" (containing different number of doses)

Data sources
• DK: Danish Medicines Agency
• FI: National Agency for Medicines
• SE: Medical Products Agency
• AT, BE, DE, GR: Establishment of a set of mental health indicators for European Union, Annex VII: Data on existing indicators and results of the pilot survey. European Commission, 1998.

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.

Availability and time coverage
• AT 1999/2000; CZ 1990-2002; DE 1998; DK 1994-2005; EE 1995, 2000, 2003; FI 1990-2005; GR 1995; HU 1995-2002; PT 2000-2002; SE 1990-2005

Groupings of available data -

Notes
• Some countries provide data only on "packages" (containing different number of doses)

Data sources
• CZ, HU, PT: OECD Health Data
• DK: Danish Medicines Agency
• EE: State Agency of Medicines
• FI: National Agency for Medicines
• SE: Medical Products Agency
• AT, DE, GR: Establishment of a set of mental health indicators for European Union, Annex VII: Data on existing indicators and results of the pilot survey. European Commission, 1998.

Use of hypnotics

Description
• Hypnotics form a class of drugs which induce sleep; they are used in treating sleeplessness.

Definition
• Average number of defined daily doses (DDD) of hypnotics (ATC class NO5C) per day during a year per 1000 inhabitants. Calculation is based on the volume of sales to pharmacies and hospitals by wholesalers.

Availability and time coverage
• AT 1999/2000; BE 1997-2002; CZ 1990-2002; DE 1998; DK 1994-2005; EE 1995, 2000, 2003; FI 1990-2005; GR 1995; HU 1995-2002; PT 2000-2002; SE 1990-2005

Groupings of available data -

Notes
• Some countries provide data only on "packages" (containing different number of doses)

Data sources
• BE, CZ, DK, HU, PT: OECD Health Data
• DK: Danish Medicines Agency
• EE: State Agency of Medicines
• FI: National Agency for Medicines
• SE: Medical Products Agency
• AT, DE, GR: Establishment of a set of mental health indicators for European Union, Annex VII: Data on existing indicators and results of the pilot survey. European Commission, 1998.

Disability pensions 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.

Availability and time coverage
• AT 1999-2000; DE 1998-1999; DK 1999-2004; FI 1990-2004; GR 1994, 1996-1999; IE 1999; NL 1999; PT 1999; SE 1998; UK 1998-1999

Groupings of available data -

Notes
• In Denmark the definition is the new cases of disability pension due to mental disorders each year.

Data sources
• DK: Ankestyrelsen
• EE: PRAXIS - Centre for Policy Studies
• FI: Kela
• AT, DE, GR 1994, IE, NL, PT, SE, UK: Establishment of a set of mental health indicators for European Union, Annex VII: Data on existing indicators and results of the pilot survey. European Commission, 1998.
• SK: ÚZIS SK.

Sickness allowance due to mental disorders

Description
- Proportion of sickness allowance days per employee during a year due to all mental and behavioural disorder.

Definition
- Percentage of national sickness allowance days per employee during a year due to mental disorder (ICD-10 codes F00-F99) out of all sickness allowance spells beginning during each year.

Availability and time coverage -

Groupings of available data -

Notes -

Data sources
- No data available according this definition (only sickness allowance spells data available in some countries).

Expenditure on mental health services

Description
- Total national expenditure on mental health services

Definition
- Total expenditure on mental health services. Percentage out of the total health budget

Classifications -

Availability and time coverage
- BE, CZ, FR, HU, IE, LT, LU, LV, MT, NL, SE, SK, UK 2000
- BE, CY, CZ, FR, HU, IE, LT, LU, LV, MT, NL, PT, SE, SK, UK 2004

Groupings of available data -

Notes
- Figures for the mental health budget are not reported separately in AT, DE, DK, EE, ES, FI, GR, IT, PL, SI

Data sources
- BE, CZ, FR, HU, IE, LT, LU, LV, MT, NL, SE, SK, UK 2000: WHO, Mental Health Atlas 2001
- BE, CY, CZ, FR, HU, IE, LT, LU, LV, MT, NL, PT, SE, SK, UK 2004: WHO, Mental Health Atlas 2005.

Annex 2: A selection of other EC-cofunded mental health projects

Report on the mental health status in the European Community
The aim of the project was to collect, analyse and report the information on existing mental health and well-being indicators and data from the EU Member States. The project used different approaches, such as survey techniques, analyses of utilisation data, analysis of socio-economic indicators, and combinations of techniques. Different types of data were included, such as demographic, social stress, health and social functioning indicators, indicators reflecting the subjective experience, demand of services and data describing morbidity and mortality. As a final report the document titled "the Mental Status of Europe's population" was prepared.

Status of Health Monitoring for Adults with Intellectual Disability in the Member States, POMONA 1
This project aimed to determine the health indicators that are in place across the Member States related to the health of people with intellectual disability, to consult on practices, referring to scientific evidence, about optimal indicators for this population and to propose a set of health indicators for people with intellectual disabilities across the Member States. In the final report relevant indicators were outlined.

Health indicators for people with intellectual disabilities: using an indicator set, POMONA 2
The project – POMONA 2 - aims to apply the set of health indicators by gathering information about health among samples of people with intellectual disabilities in the participating Member States. It will disseminate project activities and findings at Member State, European and international levels. Outcomes include an agreed plan to develop evidence-based best practice in training for health professionals.

Monitoring Suicidal Behaviour in Europe, MONSUE
This project aims to assess the frequency and risk factors of suicidal behaviour and its repetition in Europe, determine the groups at risk, methods, "hot spots" and individual and social causal factors and their changes over time. Project will develop proposals for the implementation of strategies to reduce this behaviour and finally test the effect of specific measures.

European Policy Information Research for Mental Disorders, EPREMED
The EPREMED proposal involves a large group of experts already collaborating together and it will translate into a substantial increase in the scientific publications, an improvement and an increase of dissemination practices, and more well-trained personnel. It should contribute to the consolidation of a larger, multidisciplinary European mental health policy information research network that serves to the needed dialogue between all stakeholders in mental health policy in Europe.

Treatment of mentally ill or disordered persons in European prison systems – Needs, programmes and outcomes, EUPRIS

This project aims to provide essential information for adequately meeting the psychological and mental health care needs of mentally disordered prisoners is important for primary and secondary prevention of mental ill-health, and might contribute substantially to a better social integration after release from prison. It will gather structured information on the current state and routine practices in the EU-Member States and additional countries participating in the study, resulting in a thorough overview of the issue, a description of the most crucial information deficits as well as in the identification of models of best practice.

A European Platform for Mental Health Promotion and Mental Disorder Prevention: Indicators, Interventions and Strategies, EMHPA

This project builds on the work of the previous EC funded IMPHA project which aimed to improve information on mental health (MH) and develop mental health promotion (MHP) and mental disorder prevention (MDP). The 2 year project, with partners in 28 countries aims to: 1) create a European Platform for MHP and MDP; 2) develop indicators and strategies for MH; and 3) disseminate and implement information and action across Europe. The Platform will provide a comprehensive strategy for MHP-MDP.

Implementation of Mental Health Promotion and Prevention Policies and Strategies in EU Member States and applicant countries, EMIP

The focus of the project was on exchange of information with stakeholders identified by the networks in Member States at national level followed by support by the networks to planning and implementation activities at national, regional and local levels in Member States concurrently in EU Member States, EEA and Applicant Countries.

Secretariat Support for European Commission Mental Health Working Party, SUPPORT

The project provides policy, scientific and logistical support to the European Commission mental health agenda.

Annex 3: Description of the previously defined survey indicators

Psychological distress

Elevated levels of psychological distress have been linked to increased mortality. Psychological distress is a risk factor for various illnesses. Non-specific psychological distress as a dimension of psychopathology can be straightforwardly and cost-effectively measured in the general population. Elevated scores on these scales indicate that something is wrong, but they were not developed to yield specific diagnoses. Furthermore, psychological distress seems to express more accurately the urgency with which treatment was needed, while diagnoses gave information about help eventually needed (1). The MHl-5 has comparable psychometric performance to the GHQ-12, and can be used to measure and compare mental health in defined populations. Operational advantages of the MHl-5 over the GHQ-12 are that it is in the public domain, is part of a general health measure (SF-36) and is shorter (2). The MHl-5 provides an estimate comparable to other measures of psychological distress, associated with service use and decreased level of functioning (3,5,6). A comparison between MHl-5 and GHQ-12 found that both instruments were equally sensitive to socio-economic characteristics and to levels of social support.

References:
1. Korkeila J. Measuring Aspects of Mental Health. Stakes: Themes 2000; 6.
2. McCabe CJ, Thomas KJ, Brazier JE, Coleman P. Measuring the mental health status of a population: a comparison of the GHQ-12 and the SF-36 (MHl-5). Br J Psychiatry 1996; 169:517-21.
3. Ware JE, Snow KK, Kosinski M, Gandek B. SF-36 Health survey Manual and Interpretation Guide. New England Medical Center. MA, Boston: The Health Institute, 1993.

4. Shaw, J et al. Comparison of the Depression Screening Characteristics of the CES-D, MHI-5, and MCS-12 in Primary Care. AHSR Annual Meeting 2000: Behavioural Health
5. Bijl, RV, Ravelli, A. (2000) Current and residual functional disability associated with psychopathology: findings from the Netherlands Mental Health Survey and Incidence Study (NEMESIS). Psychological Medicine 2000; 30: 657-668.
6. Korkeila J, Lehtinen V, Dalgard OS, Kovess V, Madianos M, Salize HJ. Piloting a minimum data set for mental health indicators for Europe. (in press Journal of Mental Health).

Energy, vitality

Well-being has been linked to better general and mental health, promotion and prevention activities may increase the level of well-being. The four item Energy, vitality (EVI) scale from RAND-36 will be used for measuring well-being. EVI has been widely used in population surveys (1,2). Routine use of the SF-36 in a general hospital psychiatric outpatient clinic has been found feasible, and the results were reliable, valid, and helpful to clinicians (3,4). EVI scores are associated positively with other measures of quality of life and low level of symptomatology (1,2) and negatively with mental health (4).

MINDFUL Recommendation: Cutpoint for population norm: 70, cutpoint for disorder: 62.

References:
1. Ware JE, Snow KK, Kosinski M, Gandek B. SF-36 Health survey Manual and Interpretation Guide. New England Medical Center. MA, Boston: The Health Institute, 1993.
2. Bijl, RV, Ravelli, A. (2000) Current and residual functional disability associated with psychopathology: findings from the Netherlands Mental Health Survey and Incidence Study (NEMESIS). Psychological Medicine 2000;30:657-66.

3. Adler DA, Bungay KM, Cynn DJ, Kosinski M. Patient-based health status assessments in an outpatient psychiatry setting. Psychiatr Serv. 2000;51:341-8.
4. Lehtinen V, Sohlman B, Kovess-Masfety V. Level of positive mental health in the European Union: results from the Eurobarometer 2002 survey. Clin Pract Epidemiol Ment Health 2005 Jul 21;1:9.

Role limitation due to emotional problems

Mental ill-health is a significant cause of disability and the importance of disability caused by mental disorders is increasing. Mental ill-health is also significantly associated to lost workdays (1). Three item survey measure from RAND-36 will be used. This scale includes questions number 5 (a, b, c) (Role limitations due to emotional problems). The scale has been widely used in several population surveys (2,3). Routine use of the SF-36 in a general hospital psychiatric outpatient clinic has been found feasible, and the results were reliable, valid, and helpful to clinicians (4).

References:
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CIDI-SF (The World Health Organization Composite International Diagnostic Interview Short-Form)

Depressive disorders are prevalent in the general public. The prevalence of depression is increasing and significance of depression as a cause for disability is increasing. Anxiety disorders are prevalent in the general public. Majority of mental ill-health in the general public consists of anxiety-depressive states.

CIDI-SF is a structured psychiatric diagnostic instrument for diagnosing psychiatric disorders in the general population WHO (1,2). CIDI has been widely used in several nations and across cultures (3,4,5). Pilot testing in a nationally representative telephone survey found that the full set of CIDI-SF scales can be administered in an average of seven minutes compared to over an hour for the full CIDI (1). 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 (1).

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Life Events

Life events can be defined as major occurrences in one's life that require psychological adjustment to some degree. Studies have investigated major life events judged as undesirable, uncontrollable or life threatening as risk factors for mental ill-health and physical illnesses. The List of Threatening Events is a 12-item survey measure probing various stressful events in a person's life (1). It has been used in several population surveys (2,3,4,5).

References:

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Suicide attempts

Suicide attempt is an important outcome variable concerning mental ill-health. A single item question in the CIDI is used for measuring attempts.

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Sense of mastery

Sense of mastery is a form of perceived personal control. Personal control refers to a sense of control over the events in one's life. Sense of mastery can be viewed as a form of perceived personal control. Low levels of sense of mastery have been linked to mental and general ill-health. Sense of mastery acts as a mediator between stress factors and various health outcomes. Low level of mastery has been shown to have a positive correlation with mental and general ill-health (1,2,3,4,5).

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Social support

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. 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) (2). The project has considered the use of Sarason`s Brief Social Support Questionnaire (BSSQ), which provides an estimate of perceived social support and the heterogeneity of the social network. There are both three and six item versions of the BSSQ. However, there are no available clear cutpoints as the scale has mostly been used as a continuous variable. BSSQ has better psychometric properties than the composite Oslo-3 scale that has been considered as the other alternative. The use of BSSQ would require more information on its scoring than has been available and it takes a longer time to use than the Oslo-3, which has already been incorporated in the EC HI-shortlist. The choice of adopting

the Oslo-3 as a measure of social support was made based on these practical reasons.

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Annex 4: New indicators defined by MINDFUL to be added to the previously defined set

The indicators to be added to the previous set of mental health indicators include 1) harmful and hazardous alcohol drinking (AUDIT-5) to replace dependence (CAGE), 2) self-esteem as a measure of positive mental health, 3) mental health among children and adolescents (SDQ), and 4) childhood adversities.

Harmful and hazardous drinking

Harmful and hazardous drinking is important for prevention purposes. The previously suggested indicator regarding use of alcohol was CAGE as a measure of the likelihood of dependence. CAGE has not performed well in studies of the general population, because CAGE reflects the public conceptions of alcohol use more than actual likelihood of dependence.

AUDIT-5

Excessive use of alcohol and alcohol dependence is commonly associated with mental ill-health, excessive use is also important concerning general health. The original AUDIT 10-item questionnaire was developed from a six-country collaborative project (1). Audit-5 is a five item measure that can be administered as a self-report scale or used in an interview. AUDIT is derived from Alcohol Use Disorders Identification Test. AUDIT 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 (2) and it includes items 1, 2, 4, 5 and 10 from the original version. The AUDIT-5 has been used in two previous studies that focused on health service users (2,3). It has not been used in studies regarding the general population. The five item version has given a reasonable accuracy for screening patients in primary care (2).

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Self-esteem

Global self-esteem is defined as one's overall sense of worthiness as a person. Self-esteem is negatively associated with neuroticism (negative emotionality) and functions thus as an anxiety buffer. Self-esteem consists of two dimensions: self-liking (the self as a social object, sense of self as a good person, as socially relevant contributing to group harmony) and self-competence (self as a causal agent, sense of self-confidence and capability, efficaciousness). Individualistic cultures may give emphasis to self-competence whereas collectivist cultures may give emphasis to self-liking. Attachment styles are thought to be associated with self-esteem. 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.

Rosenberg's Self-esteem Scale is a 10-item survey indicator. It displays a transparent factor structure and has been translated to most Indo-European

languages. The index enables the assessment of school-aged children's mental health status. SES was recently used in a survey study among 53 nations from different cultures. Rosenberg Self Esteem Scale is the most widely used measure of self-esteem.

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Childhood adversities

Childhood adversities are significantly associated with both physical and mental ill health. Most of the studies on childhood adversities have used ad hoc questions and the validated scales are usually lengthy. National Comorbidity study used four items for measuring adversities.

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. (see above chapter N). In a large population based study the presence of any adversity was significantly associated with major depression among men and women (OR= ca. 3) and cardiovascular diseases among women (OR= ca. 9).

MINDFUL suggests the adoption of four items used in the National Comorbidity Survey in the Life Event History Section (1) despite the lack of data on reliability of the this particular set of questions. The items are the following:

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.

Reference:
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Psychiatric disorders and adjustment in children and adolescents

Mental disorders in childhood and adolescence are common and comprise internalizing, externalizing, conduct and attention deficit disorders. Mental disorders can seriously affect individual's ability to conduct normal and socially active life including work and leisure time activities. Good adjustment is defined here as prosocial behaviours manifested as good peer relationships and a low level of emotional symptoms.

Mental health among children and adolescents

Strengths and difficulties questionnaire (SDQ) measures psychiatric disorders in childhood and adolescence are common in the population. SDQ screens for internalizing, externalizing, conduct and attention deficit disorders. In addition to likelihood of disorders, the SDQ gives an estimate of adjustment. Good adjustment is defined here as prosocial behaviours manifested as good peer relationships and a low level of emotional symptoms. 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. The SDQ has been used in

several population surveys (1,2,3,4,5, 6,7,8,9,10).

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 behaviour) and assessment of 5 domains of functioning. The predictive algorithm generates "unlikely", "possible" or "probable" ratings for psychiatric disorders described above.

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For future consideration

Relationships with parent figures, parenting style

There is evidence of association between relationships with parental figures, i.e. various parental child-rearing styles, and the occurrence of mental disorders and general health status. The Parental Bonding Instrument – a self-report questionnaire – was designed to obtain retrospective data from adults on the main dimensions of parent-child interaction when they were children (1). The PBI consists of 25 items to be assessed separately for mother and father, measuring parental styles as remembered by the respondents during their first 16 years covering three domains: 1) being understood, 2) babying, and 3) strictness. Originally, the PBI has been intended to measure the two parental styles of overprotection and care (2).

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