Prevention and promotion in mental health are essential steps in reducing the increasing burden due to mental disorders. The World Health Organization's activities in this area include generation, review and compilation of evidence on strategies for prevention and promotion, development of appropriate programmes and facilitation of partnerships and collaborations.

Prevention and Promotion in Mental Health

Mental Health: Evidence and Research

Department of Mental Health and Substance Dependence

World Health Organization

Geneva

Prevention and Promotion in Mental Health

Acknowledgement

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Preface

The World Health Organization (WHO) defines health as *"a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity".*

Thus, in order to attain health, improvement of the mental health of individuals is essential. This is all the more important because mental disorders are responsible for a high degree of burden due to illness. Owing to this growing burden of mental disorders, it is essential that effective preventive and promotional measures be taken in mental health to reduce the impact of mental disorders on the individual and society.

The Department of Mental Health and Substance Dependence in WHO, Geneva, has the goal of reducing the burden associated with mental and neurological disorders and to promote mental health worldwide. The Department has identified *prevention of mental disorders and promotion of mental health* as one of its priority project under the mental health *Global Action Programme (mhGAP)*. The project will identify the most effective strategies in this field across different cultures and help countries to implement and evaluate them.

A considerable amount of research in the field of prevention and promotion in mental health has been reported during recent years, but most of this research has come from the developed countries with very little from the developing countries. Moreover, since most of the preventive and promotional programmes cater to the local culture of the western world, it is not clear whether the strategies currently in place would be effective across different countries and cultures. Information is required to identify and assess those programmes that seem to hold the greatest promise and are supported by adequate evidence-based research.

There is also a felt need to set up an information-generating system to share information among researchers so that they do not go about "re-inventing the wheel". Once the knowledge base for standardized evidence-based programmes has been identified, governments will need to be urged to formulate and integrate policies and programmes related to prevention and promotion in mental health, according to their specific needs.

WHO has been involved in the field of prevention and promotion in mental health since its inception over 50 years ago. It has coordinated a variety of activities, meetings, and programmes on prevention and promotion in mental health. Over the years, there have been several resolutions passed by the World Health Assembly and WHO Regional Offices urging the Organization and its Member States to undertake steps towards prevention and promotion in mental health.

A meeting – *WHO Meeting on Evidence for Prevention and Promotion in Mental Health: Conceptual and Measurement Issues* – was convened in Geneva from 28-30th November 2001 to advance the work related to prevention of mental disorders and promotion of mental health. A group of experts from all WHO Regions discussed the definitional and conceptual issues around promotion and prevention, shared the current state of evidence to further develop the field, and advised WHO on its role in the area of prevention and promotion in mental health.

This document – based on the deliberations of the WHO meeting, the background papers and documents (Annexures 2 & 3) and other additional sources – highlights some of the basic issues in the field of prevention and promotion in mental health with special reference to the evidence base. It also outlines the role of WHO in advancing current knowledge and disseminating information among Member States, especially among developing countries. It is hoped that the information given here will assist in wider utilization of appropriate and effective interventions on prevention and promotion towards reducing the burden of mental disorders and in enhancing the mental health of populations. Policy-makers will also find this document useful as it provides an overview of some of the important issues that are often debated among researchers and policy-makers, with respect to prevention and promotion in mental health.

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What is prevention and promotion in mental health?

About 450 million people alive today suffer from mental disorders, according to estimates given in WHO's *World Health Report 2001*. One person in every four will be affected by a mental disorder at some stage of his or her life. Neuropsychiatric disorders account for 12.3 % of the Disability-Adjusted Life Years (DALYs) out of the total DALYs for all disorders. Unipolar depression, self-inflicted injuries and alcohol use disorders are among the top 20 leading causes for disease burden among all ages. Six neuropsychiatric conditions rank among the top 20 causes for disease burden in the 15-44-years age group. It is estimated that by the year 2020, depression will become the second leading cause for disease burden (Murray & Lopez, 1996). Given this grim scenario, it is not hard to understand why preventing mental disorders and promoting mental health is of immense interest not only among researchers, but also among policy-makers.

Mental disorders affect the functioning of the individual, resulting in not only enormous emotional suffering and a diminished quality of life, but also alienation, stigma and discrimination. This burden extends further into the community and society as a whole, having far-reaching economic and social consequences. Mental disorders are often associated with extended treatment periods, absence due to sickness, unemployment (for long or short periods), increased labour turnover, and loss of productivity leading to overall increased costs. In addition, because mental disorders are disabling and last for many years, they can take a tremendous toll on the emotional and socio-economic well being of family members caring for the people suffering from mental disorders. This burden is especially heavy for parents of chronically ill young persons. To reduce the burden of mental disorders, it is essential that greater attention be given to prevention and promotion in mental health at the level of policy formulation, legislation, decision-making, resource allocation and the overall health care system.

Concepts of prevention and promotion in the field of mental health

One of the initial dilemmas facing researchers and policy-makers in this field is conceptualising the definitions and boundaries within which the individual strategies can be developed. Often prevention of mental disorders is considered one of the aims and outcomes of a broader mental health promotion strategy. Prevention and promotion, though distinct entities, have overlapping boundaries.

Priority should be given to prevention and promotion in the field of mental health to reduce the increasing burden of mental disorders

Prevention of mental disorders

"To prevent" literally means "to keep something from happening". However, there are different notions about that "something" and they have been identified as the incidence of a disorder, its relapses, the disability associated with it, or the risks for a disorder – and this has led to confusion in the field of mental health regarding the term prevention (Mrazek & Haggerty, 1994). Historically, the public health concept of disease prevention has viewed prevention as *primary, secondary or tertiary* depending on whether the strategy prevents the disease itself, the severity of the disease or the associated disability. This system works well for medical disorders with a known etiology. Mental disorders, on the other hand, often occurs due to the interaction of environmental and genetic factors at specific periods of life. It becomes difficult even to agree on the exact time of

onset of a mental disorder, as the progression from the asymptomatic to symptomatic state may be insidious. Also, a person may suffer from the signs and symptoms of a mental illness and be dysfunctional, without fulfilling the required criteria to be diagnosed within a diagnostic system. Preventive strategies are usually directed against risk factors, hence need to be implemented at specific periods before the onset of the disorder in order to be maximally effective. However, once the disorder has developed, it is still possible to reduce its severity, course, duration, and associated disability by taking preventive measures throughout the course of the disorder.

Preventive strategies need to be implemented at specific periods before the onset of the mental disorder, in order to be maximally effective

Another way of conceptualising prevention strategies is based on a risk-benefit point of view, i.e. the risk to an individual of getting a disease against the cost, risk, and discomfort of the preventive strategy (Gordon, 1987). The following three categories of *primary prevention* have been identified:

■ **Universal prevention:**
targeting the general public or a whole population group.

■ **Selective prevention:**
targeting individuals or subgroups of the population whose risk of developing a mental disorder is significantly higher than that of the rest of the population.

■ **Indicated prevention:**
targeting persons at high-risk for mental disorders.

Secondary prevention refers to interventions undertaken to reduce the prevalence, i.e. all specific treatment-related strategies, and *tertiary prevention* would include interventions that reduce disability and all forms of rehabilitation as well as prevention of relapses of the illness.

Promotion of mental health

WHO defines health promotion as *"the process of enabling people to increase control over, and to improve their health"* (WHO, 1986).

Mental health promotion often refers to positive mental health, rather than mental ill health. Positive mental health is the desired outcome of health promotion interventions. However, this is not an universally accepted concept and there is debate about mental health promotion – its definition, its place within the overall concept of health promotion, and its boundaries with prevention of mental disorders. Mental health has been defined from the perspective of absence of mental illness, but so that this definition will conform to the definition of health, mental health needs to be redefined from the point of view of positive mental health in different contexts and cultures. Strategies for mental health promotion are related to improving the quality of life and potential for health rather than amelioration of symptoms and deficits. These should be recognized, not as strategies for tertiary prevention but as mental health promotion in its most positive sense (Secker, 1998).

A number of definitions or frameworks have been put forward to distinguish between mental ill health and positive mental health. *Mental health promotion* is any action taken to maximize mental health and well being among populations and individuals (Commonwealth Department of Health and Aged Care, 2000). Another definition is that the *promotion of mental health* is the operation by which we improve the place which mental health occupies on the scale of values of individuals, families or societies. This definition is based on the idea that when mental health is valued more, people tend to be more motivated to improve it (Sartorius, 1998). Hodgson et al. (1996) defined *mental health promotion* as the enhancement of the capacity of individuals, families, groups or communities to strengthen or support positive emotional, cognitive and related experiences. Other definitions have viewed *mental health promotion* as a reduction of morbidity from mental illness and the enhancement of the coping capacities of a member of a community.

Mental health promotion involves promoting the value for mental health and improving the coping capacities of individuals rather than amelioration of symptoms and deficits

Interface between prevention and promotion in the field of mental health

Prevention is concerned with avoiding disease while promotion is about improving health and well being. By identifying the positive aspects of mental health, one can highlight or target the areas to promote and the goals to be attained. It is important to target the positive aspects of mental health, together with targeting the illness. Preventive and promotional elements can be present within the same programme and hold different meanings for two groups of the targeted population. Thus, the two approaches may sometimes involve similar activities but produce different outcomes. For example, a mental health promotion intervention that is aimed at increasing well being in a community may have the effect of decreasing the incidence of mental disorders. Mental health promotion efforts have sometimes been advocated, because they are believed to reduce vulnerability to a disorder and sometimes as an end in itself without the potential to prevent a disorder.

The determinants of mental health include not only factors related to actions by individuals, such as behaviours and lifestyles, coping skills, and good interpersonal relationships, but also social and environmental factors like income, social status, education, employment, housing and working conditions, access to appropriate health services, and good physical health. Fostering of these individual, social and environmental qualities and the avoidance of the converse are the objectives of mental health promotion and prevention of mental disorders (Herrman, 2001).

Promotion and prevention are overlapping and complementary activities

There are a number of advantages for integrating promotion and prevention in the field of mental health. Preventing mental disorders not only involves targeting risk factors and early symptoms of the disease, but can also involve promoting associated activities that improve the overall quality of life of people and their society. For example, child abuse, sexual abuse and substance use have been found to be associated with a number of mental disorders. Promotional and preventive activities aimed at teaching parenting in secondary schools and supporting families can reduce child abuse and neglect and prevent future mental health problems. Joint work produces and stimulates more intersectoral collaboration and such strategies may result in multiple outcomes, reduced stigma and more cost-effective impact. Integrating prevention and promotion may help mobilize collective resources to influence health policy and increase public investment.

Conceptually too, the characteristics of strategies and actions for prevention and promotion in mental health often overlap. The main characteristics of mental health promotional strategies are: drawing on health promotion theory to re-conceptualise mental health and illness; making a commitment to explore and value lay understandings of mental health; developing intersectoral

alliances aiming to address social and economic inequalities; and validating the participatory methods through evaluation research and development of strategies which are themselves consistent with health promotion principles (Secker, 1998). Some of the characteristics of mental disorder prevention strategies are: interventions done primarily to help individuals to have positive effects on the family and society; it often becomes difficult to demarcate primary from secondary prevention since the borderline between disease and disability is not clear; preventive measures can reduce the severity of the disorder and remove disability even if impairment is not wholly avoidable (Sartorius & Henderson, 1992).

Possible reasons for keeping promotion and prevention programmes in the field of mental health conceptually separate are: as the target population for prevention is often smaller and more sharply defined, keeping the two separate facilitates giving adequate attention to both; fund-raising for smaller preventive or promotional strategies is easier than for larger strategies that combine the two; and it is also easier for policy-makers to assess the outcomes.

Prevention and promotion in the field of mental health within overall public health

Preventive and promotional strategies can be used by clinicians targeting individual patients and also public health programme planners targeting large population groups. The health, social and economic impact of public health programmes related to promotion and prevention has been documented (IUHPE, 1999; Marmot, 1999; Rootman et al., 2001). However, within the health sector, there is still an imbalance between the amount of resources devoted to curative interventions and resources devoted to public health related preventive and promotional activities. In view of the evidence supporting implementation of programmes related to prevention and promotion in health, it is essential that more funds be made available for such programmes at the public health level.

Support for a population approach to mental health emerged with the WHO document on *Global Strategy for Health for All by the Year 2000* (WHO, 1981), which linked health improvements to overall social and economic development. The emphasis was expanded with the *Ottawa Charter* (WHO, 1986) and the *Jakarta Declaration* (WHO, 1997). Although health promotion and prevention of illness have strong acceptance within public health, they have often failed to incorporate mental health components within their framework. This lack of emphasis on mental health is surprising, considering the evidence of strong linkages between mental and physical health. Policy-makers and practitioners need a greater understanding of the links between mental well being and physical health in order to implement programmes effectively.

The relationship of depression with cardiovascular illnesses and vice versa is well documented. Mental disorders like depression, anxiety, and substance use disorders can also complicate existing physical disorders, as patients suffering from mental disorders may have poor compliance rates and may fail to adhere to their treatment schedules. Head injury can affect the personality and cause mood disorders. Moreover, patients with these mental disorders are at increased risk of psychosomatic conditions. Education, employment, social well-being, availability of food, housing and other public health-related factors play an important role in preventing mental disorders and promoting mental health. These factors are also responsible for better physical health. Again, a number of behaviours like smoking and sexual activities can be linked to development of physical disorders like carcinoma and HIV, which in turn can lead to mental health problems. Thus a number of strategies for prevention and promotion in mental health deal with human behaviours and physical disorders and are discussed in the published literature and also in this document.

There are advantages of combining preventive and promotional programs in mental health with those in overall public health, and some of them have been outlined in the Institute of Medicine Report (Mrazek & Haggerty, 1994). Such combinations help in tackling physical disorders with co-morbid mental disorders more effectively. Again, effective social and public health programs and policies that tackle general health problems also act on mental health conditions, thus combining the two makes it more efficient. Issues like poverty, crime, and teenage pregnancy have implications not only for physical health but also for mental health. It also reduces the stigma attached with mental health. Finally, such combinations benefit the resource-poor countries in streamlining their budgets for prevention and promotional activities.

One of the concerns about combining preventive and promotional programmes in mental health with those in public health is that the relevance of mental health might get lost within the larger area of health. Integrating the two may lead to diversion of allotted mental health funds to other health conditions. However, the strategy of integrating mental health within the larger public health interventions generally serves well and should always be explored. The shift towards public health should be dependent on each country's economic and political situation, as well as on the availability of resources. A stepwise process towards integrating physical and mental health is required. Current advocacy on the increasing burden of mental disorders and on the availability of effective interventions together with intersectoral collaborations is to include mental health as a central part of public health. The optimal strategy should combine specific interventions for various mental health problems with horizontal action crosscutting physical and mental health issues where co-morbid risk and protective factors need to be tackled. Good evidence-based effective strategies suitable for a specific country and culture need to be adopted and adapted and mental health experts should be involved in advocacy, monitoring and surveillance.

Combining prevention and promotion programs in mental health within overall public health strategies reduces stigma, increases cost-effectiveness, and provides multiple positive outcomes

How to generate evidence for the effectiveness of prevention and promotion in the field of mental health?

Public health measures during the late 19th and 20th century – for example, better sanitary measures, vaccination, and improved perinatal care – were impressive demonstrations of prevention methods that led to improvements in the health of the population. These successes created the hope that similar successes might be possible in the field of mental health. From the beginning of the 20th century, a worldwide mental hygiene and later mental health movement evolved. However, the more systematic development of preventive programs by mental health professionals, health promoters and other practitioners started in the 1970s and 1980s, especially in North America and Western Europe. In those days the emerging preventive practices were dependent on global knowledge about the mental health problems in society, the expected community needs, values and ideology, and some insight into educational processes. The scientific base was weak, with little or no attention being paid to evidence-based outcomes. This situation changed dramatically during the late 1980s and 1990s when the field was confronted with a growing pressure for accountability, and prevention and promotion emerged as a specific domain of science. Concepts such as "evidence-based practice", "evidence-based prevention", and "evidence-based promotion" were introduced, following the general trend of "evidence-based" medicine.

However, there is a debate across the world about what constitutes evidence (McQueen, 2001). In *the Guide to Community Preventive Services: Systematic Reviews and Evidence-Based Recommendations* (CDC, 2000), "evidence" includes information that is appropriate for answering questions about the effectiveness of an intervention; the applicability of an effectiveness data; the intervention's positive or negative side-effects; and the economic impact and barriers to implementation.

Evidence not only provides validity for effectiveness of strategies, but also stimulates decisions and actions

Randomized Controlled Trials (RCTs) and quasi-experimental designs are considered as evidence-based study designs and are largely used to assess interventions in developed countries. However, evidence can be drawn from various other sources and somewhat more flexible criteria may be applied. The awareness of what type of evidence is provided is crucial before a strategy is used for different purposes (advocacy, research, and fund-raising). The available evidence then needs to be assessed for each of those specific objectives in a separate manner, for example, when evidence is used as an advocacy tool to influence policies, it requires to be assessed from a simplified point of view with less emphasis on the science behind it and more emphasis on the evidence related to the implementation and outcome of the programme. This adaptation is required to fit the specific needs of policy-makers. Similarly, evidence on cost-effectiveness would be useful for policy makers, donors and fund-raisers and the evidence about the scientific basis for researchers.

Often evidence is not the only factor by which strategies are determined and implemented. The political relevance of an issue at times affects the decision to use a strategy. Given the short political time frame that most governments prefer, a delay in gathering evidence can lead to a programme not being implemented or, more typically, the programme being implemented without an evidence base.

The arguments in favour of evidence-based prevention and promotion in the field of mental health are:

- Growing awareness of the epidemiology of mental disorders and mental health-related problems and of their large financial and social burden on society has urged governments and nongovernmental organizations to develop and implement effective preventive measures.

- Societal pressure for increased accountability for spending public funds calls for both evidence of effectiveness and cost-effectiveness. This calls for information on what works best and under what conditions.

- The pressure to shift governmental funds from health care or other budgets to prevention and promotion has evoked resistance. Skepticism about the possibilities of effective prevention in mental health, criticism of its weak scientific base, and the need to protect health care budgets have raised a call for proof that such interventions can be effective.

- Growing numbers of preventive programs and strategies have urged policy-makers, health managers and program providers to select "best practices", which requires objective standards for comparison. Given the existing diversity in efficacy and effectiveness of prevention programs, consumers have to be informed about the best available preventive services and be alerted on possible negative side-effects.

- Evaluations of the outcomes of preventive interventions and mental health promotion are subject to a diversity of possible biases, leading to incorrect conclusions. Solid evidence and standards for evidence are needed to prevent such incorrect conclusions. Available resources for preventive interventions being scarce, evidence of the program's outcomes will lead to more efficient use of resources.

- Frequently, preventive and promotional interventions are addressed at large population groups using indirect intervention strategies, and are aimed at assessing long-term outcomes. These features hinder their proper assessment; specific monitoring systems are needed to make the effects visible.

- Mental health promotion, like other sectors of health promotion, requires intersectoral action, i.e. participation and investments by sectors outside mental health. Sustainable investments can only be expected when such partners can be confident that these will generate outcomes that are also relevant to their interests (e.g. social or economic benefits).

Over recent decades there has been considerable progress in developing concepts and research methodology in the prevention and promotion field. There is evidence that prevention and promotion programmes in the field of mental health can be efficacious. In the light of these advances there is an accelerating interest among researchers, governments and policy-makers to increase the availability of effective evidence-based programmes.

However, there are a number of limitations. Owing to large differences in the efficacy of the programmes, researchers lay stress on regular evaluation of outcomes. Some of the effective programmes have limited reach among the target populations and the effect-sizes are moderate. Most of the preventive and promotional interventions are still to be tested for efficacy in population and cultural groups that are different from those in which the strategies were initially applied.

The strategy of finding convincing evidence varies depending on *what* needs to be proven ("subject") and *why* ("aims"). Within the context of health promotion and prevention of illness, information is needed on a variety of issues. Before starting the process of designing promotive and preventive programs, as much information as possible needs to be collected on the following issues:

- prevalence and incidence of mental disorders or mental ill health;

- populations and individuals at risk;

■ health, social and economic outcomes of problems or disorders;

■ community perceptions of risk and the need for preventive actions;

■ biological, psychological, and social risk and protective factors;

■ developmental trajectories of health and disease;

■ co-morbidity and multi-problem trajectories.

To work on the design, implementation and dissemination of preventive interventions and policies, evidence is needed on issues such as:

■ Do interventions work in real life situations? (efficacy and effectiveness)

■ What are their costs and potential negative side-effects?

■ Are interventions and policies cost-effective?

■ What are the barriers and facilitators to effectiveness?

■ For whom is an intervention effective and for whom not?

■ Does the implementation of quality guidelines improve effectiveness?

The study of these issues calls for varying research strategies. For example, a large well-designed epidemiological survey using valid indicators is needed to provide evidence on the prevalence of depression in a country. However, a series of randomized controlled trials (RCTs) are required to develop rigorous evidence on the efficacy of a prevention program for depression, which is to be implemented nationally. To provide scientific evidence on *descriptive issues* requires different research methods from those used to obtain evidence on *causal* relationships or from those providing proofs of the effectiveness of an intervention.

The required quality of evidence also varies according to the type of program for which the evidence is needed. In other words: What is at stake? How important is it to avoid errors in judgment, while taking decisions on preventive actions? For example, suppose a local health promoter and a local elementary school have developed a new action program to reduce bullying. After two years of implementation the school is satisfied about the program and observes a drop in bullying behavior. Correctly or wrongly, in normal practice, this will offer enough "evidence" to decide for continuation of the program, even in the absence of longitudinal data from control schools. However, when a national agency, responsible for national school policies, has to decide on a national experiment on the implementation in a group of 20 pilot schools, it would be important to have evidence available on its efficacy in at least one or two schools, based on controlled studies. Solid evidence becomes even more important when the question arises if such a successful program should be implemented nationwide in all schools. To take such a far-reaching decision, convincing evidence should be available that the program has shown its effectiveness, including cost-effectiveness, across a number of sites spread all over the country. To make such a decision, evidence should be available from several original controlled studies and some replication studies across the country.

In conclusion, the quality of evidence depends on the type of action one wants to trigger by the offered evidence and the program's financial, social and ethical implications. This does not apply only to the situation of a scaling-up process, but also to preventive interventions in general, when the individual consequences for participants are far-reaching (e.g. risk of serious negative side-effects, or risk of a lower effect than already existing preventive treatments).

Research Methods

It is apparent that in order to gather good evidence an intervention has to go through a number of assessments regarding its outcomes. These might require many years of research and involve assessment of an intervention over different study designs that sequentially improve the quality of the evidence. There are a number of research methods that have been used to study the efficacy of interventions. The level of evidence decreases as one goes down the list of study designs starting from RCTs and other randomized studies, multiple time series designs, single time series design, non-equivalent control study, pre-post design only, consensus study, and qualitative study. There are many other study designs but in the following boxes only some of them are briefly described as illustrative examples.

Randomized Controlled Trials

An RCT is an evaluation design that includes the establishment of an experimental and a control group by random assignment of subjects from the study population with pretest and post-test measures in both groups.

In spite of the ongoing debate on the criteria of judging evidence, the most acceptable evidence-based research in health promotion and disease prevention is still the randomized controlled trial (RCT). Some examples of RCTs in prevention strategies are the *Prenatal/Early Infancy Project* (Olds et al., 1986, 1988) and the *Perry Preschool Program* (Schweinhart & Weikart, 1992).

The advantages of RCTs are that they have high internal validity, e.g. an RCT can control for spontaneous remission and placebo effect and it ensures that the participants' responses are unbiased estimates of the average responses of the whole population, if they could have been assigned to one of the two groups.

The disadvantages of RCTs are that in evaluating programmes on a national level, there are many situations where randomization is not economically, culturally or ethically feasible. RCTs tend to have limited feasibility in real life situations. They are often not a feasible design to study mental health promotion strategies, as such strategies are implemented in real, dynamic and large communities using multiple strategies and not in highly controlled settings using single-component interventions. They require well-trained researchers, adequate funding, and a significant amount of time to replicate across regions and countries.

Developing countries have the greatest need for affordable and sustainable preventive strategies. However, it tends to be difficult to carry out RCTs in these countries. The lack of RCTs in many developing regions can be reversed by funding, training and capacity building so that RCTs may be carried out effectively to add to the body of available evidence on prevention and promotion. The Institute of Medicine Report (Mrazek & Haggerty, 1994) on prevention interventions for mental disorders has listed 38 different RCTs, though some are not related to major psychiatric disorders. RCTs have revealed that cognitive behaviour therapy, when administered by properly trained mental health professionals, can be successful in preventing the onset of depression or anxiety-related symptoms in universal, selected and indicated population groups.

Although RCTs are desirable, there remain many situations – especially in low-income countries – where RCTs based on strict criteria are unlikely to be carried out owing to the lack of trained manpower, constraints of funding, and inadequate research infrastructure. In some cases, the existing cultural and social practices do not lend themselves to be assessed by a randomized controlled trial. Simpler alternatives to standard randomized controlled trials are other types of experimental design and quasi-experimental designs.

Other experimental designs

- **Randomized delayed intervention crossover design (waiting list).** This is an evaluation design that includes the establishment of an experimental group and a comparison group by using a waiting list procedure. Eligible subjects are randomly assigned to the experimental group and the waiting list group. This design includes at least pretest and post-test measures in both groups. The duration of the waiting period in the control (waiting list) group equals at least the length of the period between the pretest and the post-test in the experimental group. After this waiting period, the control group becomes an experimental group as well. An example of a waiting-list controlled intervention is the evaluation of a multi-system *social skills group training for aggressive children* (Pepler et al., 1995).

- **Community Intervention Trial.** This evaluation design includes the establishment of an experimental situation and a control situation through random assignment of individual social units (e.g. schools, classrooms, workplaces, communities) from the study population of social units, and with pretest and post-test measures in both situations. Generally, the effect of a community intervention on both the individual level and on the social system level is studied by using multi-level analysis and testing the interaction effects between levels.

    For those cases where no randomization is possible, quasi-experimental designs can be very helpful in providing evidence-based information, as described below.

Quasi-experimental designs

- **Time-series design.** This design involves an intervention group only and the outcome data are measured at multiple data points prior to the intervention and after the intervention, typically one to two years before and after. A time-series design involves examination of fluctuations in the rates of a targeted condition (outcome variable) over a long period, in relation to the rise and fall of one or more interventions. The design aims to test if there are significant and enduring changes in the trend of outcome values after exposure to the intervention. This type of design allows establishing the periodicity, the pattern of outcomes, and the degree of outcome stability. The use of multiple data observation points increases the power of the design to make causal inferences. Moreover, such a design requires little adaptation for real-life practice and the results can be linked to the real world – thus conserving ecological validity and, at the same time, avoiding the ethical problem of using control groups.

- **Multiple time-series design.** They combine different time points (time-series design) with the inclusion of a comparison group. The comparison group in some cases helps to control historical effects.

    The advantages of time-series design and multiple time-series design are: the periodicity and pattern of the outcomes can be evaluated; a degree of outcome stability is present; there are multiple data points for assessment of the effects of the intervention; the studies have no ethical problems and address some of the ecological validity issues; and they include comparison groups.

    The disadvantages of the time-series design and multiple time-series design are: choosing an insufficient number of data points can lower the power of measurement of the outcomes; different time periods are needed to confirm pre- and post-variations; no controls are present; and there is a need for several observations in both groups.

    Time-series designs and multiple time-series designs have been particularly useful to capitalize policy and regulatory changes due to the interventions. For example, data from the World Bank indicate that in countries, such as Canada and the United Kingdom, tax increases lead to a steep increase in cigarette prices and, subsequently, a substantial fall in consumption. Conversely, lower taxes increased cigarette consumption in South Africa during a period of ten years (World Bank, 1999). Although some would argue that this type of design illustrates the point very convincingly, one cannot be completely sure that this increase in consumption is only due to lowered taxes. It could be explained, for example, by increased product availability or promotion by advertising.

- **Non-equivalent control group design.** This adds a comparison group to the previous design and often a series of follow-up measures. The inclusion of a comparison group (although not randomly assigned) might improve the chances of attributing observed effects to the programme as one can rule out some alternative explanations. Non-equivalent control or comparison groups can make use of simple pre-post measures or more long-term follow-ups that measure the outcome at more than one point in time.

    One example of a pre-post measure with a matched but not equivalent group is a multi-component community intervention programme implemented in two countries to help women quit smoking (Secker-Walker et al., 2000). Other evaluations using non-equivalent control groups are the *North Karelia Project or the Swedish Educational Programme*. The Swedish Educational Programme (Rutz et al., 1989, 1992a,b) provided education to general practitioners on the symptoms, etiology, diagnosis, prevention and treatment of depression. In another quasi-experimental design with a non-equivalent control group, Elias and colleagues (Bruene-Butler et al., 1997) evaluated the effects of the *Improving Social Awareness – Social Problem Solving* (ISA–SPS) study.

    The advantages of a non-equivalent control design are that it adds a comparison to the design; it is more likely to rule out other explanations; ethical problems are addressed; it is conducted in a real life setting and is not under strict laboratory-like parameters, i.e. ecological validity is maintained.

    The disadvantages of non-equivalent control design are that it needs matching; there is a need for follow-up measurements in both groups; and there are difficulties in choosing analytical techniques.

- **Pre-post designs.** These include an experimental group without a control or comparison group. The programme impact is assessed by the difference between before and after the intervention. There is little control on validity and a number of other different explanations are plausible when attributing an effect to the intervention. An example of a pre-post design is the *EDAP Puppet Program* (Irving, 2000), which was targeted to change the attitudes and stereotypes about body size among elementary schoolchildren.

    The advantages of a pre-post design are that formative evaluation is possible in a short time interval, and it provides some causal estimation and new hypotheses.

    The disadvantages of a pre-post design are that there is no control over alternative explanations to the outcomes, and there are regression artefacts (if matches are drawn from non-equivalent populations, the results will be flawed unless the measure on which the individuals are matched provides a perfectly reliable and valid representation of the dimension on which the individuals are selected).

In some areas, the requirements for evidence of prevention and promotion may need to be reviewed to include "*best practices*" concepts. These practices often have some anecdotal evidence but have often not been studied with strict criteria, as in RCTs or any of the study designs mentioned above. Best practice documents are also based on evidence suggested by clinical experiences, traditional practices, prior service delivery programmes, descriptive studies, and reports by expert committees. Examples of these include good practices of child-rearing, mental health benefits of breastfeeding, and family and social support systems.

In countries where research capacity and programme development are underdeveloped, the solution might be in adapting evidence-based programmes from similar cultural backgrounds and creating alliances with other health-related research centres. Such alliances may create research that crosscuts different health sectors and increases the possibility of fund-raising. This would have the added value of moving away from a single disease, using programmes that can influence several health problems and allow more cost-effective use of scarce resources.

Evidence-based interventions and programmes

There remains the need for a methodology that helps to generate evidence in different situations and for different types of interventions. The methodologies described earlier are all relevant but have their strengths and weaknesses. Based on methodological rigour and replication of results in several settings, a distinction should be made between the following: (a) evidence-based, effective interventions that are ready to be implemented, (b) interventions that are probably effective but still need more research, (c) interventions that have not been sufficiently evaluated and thus are unclear in terms of their effectiveness, and (d) well-researched interventions that have been found to be ineffective.

Some of the examples of prevention and promotion strategies that have the best probability of being effective in mental health are outlined here. These strategies have been listed according to the target population. Some illustrative examples are provided.

For mothers during pregnancy and perinatal period:

■ Perinatal and postnatal visits by nurses and community workers to mothers in order to prevent poor child care, child abuse and postnatal depression and improve child-parent attachment and good parenting skills.

  ☑ *The Prenatal/Early Infancy Project* (Olds et al, 1986, 1988) highlights the importance of preventive strategies that help in improving the maternal and child functioning when applied during pregnancy and after childbirth. The program targeted 394 pregnant women from low-income areas of New York. There were regular home-visitations by a nurse during the period of pregnancy till the child was 2 years old. The subjects were followed prospectively until the children reached the age of 15 years. The goals of the program were to improve maternal and child functioning through improvement of health behaviour – better parenting practices, providing social support and encouraging the use of community support; helping the mothers to achieve higher educational and employment levels and reduce unwanted pregnancies; improvement of cognition and language development in children along with decrease in psychological and behavioural problems. The reported mental health related outcomes were reduced smoking and better social support for the mothers and reduced child abuse, better vocational adjustment and better educational achievement in the children.

■ Early monitoring of growth development by mothers, along with proper maternal advice to prevent poor intellectual development of low birth-weight babies by educators and nurses can help to prevent intellectual disabilities.

  ☑ *The Infant Health and Development Programme* (1990) focused on preventing health problems, developmental disabilities and learning and behavioural problems associated with infants with low birth-weight. A total of 985 infants were divided into low birth-weight and normal birth-weight groups and within each group one-third were assigned to an experimental group and the rest to a control group. The groups were followed up till 36 months. Both the experimental and control groups received regular paediatric care to assess development. The experimental group received specific curriculum based child development activities and other parenting skills. At 36 months, the experimental group showed better cognitive competence and lower behavioural problems.

■ Early stimulation programs by mothers have been found to prevent slow developmental growth in preterm infants and to improve physical growth and behavioural modifications. WHO has promoted mother-child interaction for better psychosocial development in children (WHO, 1998). In the *Tactile / Kinaesthetic Stimulation Study* (Field et al, 1986) preterm low birth-weight babies receiving tactile and kinaesthetic stimulation gained more weight than the control group and also were hospitalised for fewer days.

■ Promotion of breast-feeding has been advocated by the joint *WHO/UNICEF Baby-Friendly Hospital Initiative* (Naylor, 2001). Breast-feeding is supposed to improve bonding and attachment between the infant and the mother and a recent cohort studies with a large sample size found breast-feeding to have significant benefit to child development (Quinn et al, 2001).

■ Nutrient supplements to prevent neurological impairment have been found to be useful. For example, iodine deficiency is the most common cause of preventable brain damage (Hetzel et al, 1987; Hetzel, 2002). Cretinism is a known detrimental effect of iodine deficiency. However, meta-analytical studies have revealed that iodine deficiency affects the intelligence level of even the apparently healthy population living in an iodine deficient area (Bleichrodt & Born, 1994). Iodine supplementation programmes through iodination of water or salt to prevent cretinism and other forms of iodine deficiency disorders have been used in many countries with success (Sood et al, 1997; Mubbashar, 1999). WHO has recommended Member States to take necessary steps to prevent iodine deficiency disorders in its *49th World Health Assembly Resolution* (WHO, 1996) and advised universal salt iodination in recent publications (WHO, 2001a).

■ Alcohol abuse during pregnancy has been associated with low birth weight babies, foetal alcohol syndrome and other intellectual disabilities in the babies (Floyd et al, 1999). Counselling on alcohol abuse to pregnant women along with skills development and supporting environments have been recommended, to prevent alcohol abuse related disorders and malformations in babies (Loney et al, 1994).

For children, adolescents and schools:

■ It is possible to improve self esteem and life skills through pro-social behaviour, school-based curricula and improvement of school climate. Training teachers to improve detection of problems and facilitate appropriate intervention provides additional advantages.

  ☑ An example is the *Perry Preschool Program* (Schweinhart & Weikart, 1992) where 123 selected African-American 4 year old children were randomly assigned to daily participation in a High/Scope curriculum in preschool, over a 1-2 year period, along with weekly home visits by trained teachers. The risk factors being addressed were academic failure, early behavioural problems and low commitment to school. The intervention was associated with positive effects on academic performance and social adjustment. Follow-up at 19 years of age showed lower deviant behaviour and greater social competence.

  ☑ In another study, Gottfredson & Gottfredson (1992) found that improving the structure of training in school and using innovative methods of increasing cooperation between the students and teachers helped in reducing drug use, delinquent behaviour and increased attachment to school.

■ Aggressive behaviour and violence can be reduced through parent training, "good behaviour" focused interventions in elementary schools, and comprehensive mental health promotion programs in primary and middle schools.

✅ *The social skills group training for aggressive children* (Pepler et al 1995) provided broad-based skills, targeting children's aggressive behaviours within the family, school and peer systems. Seventy-four aggressive children were randomly allocated to an experimental group (who would immediately receive the intervention) and a delayed intervention group (wait list control group). On the short term, children in the intervention group were reported by teachers to have fewer externalising behaviour problems compared to the control group. This was not reported by family and peer ratings. The wait list control group received the intervention 15 weeks after the end of the intervention in the experimental group. Time analyses on the measures of the intervention group over nine months indicated that there was a marginal maintenance of treatment gains over nine months.

■ Psychosocial interventions like cognitive-behavioural therapy and family-based group intervention for children (7-14 years) have been found to prevent development of anxiety disorders amongst those children who are anxious but have no existing anxiety disorder (Dadds et al, 1997).

■ Promoting body size acceptance among school children has helped in reducing negative images about self in school children.

✅ *The EDAP Puppet Program* (Irving, 2000) attempted to change attitudes and stereotypes about body size among elementary school children. 145 children completed the evaluation of the program that was implemented in 12 schools reaching over 2,400 students. Comparison measures between attitudes before and after the exposure to the program indicated that the programs' most important message was "not to tease others" and "be a good friend". Figure rating scale data suggested that the program reduced negative stereotypes about large body shapes.

■ Depression at adolescence has a high risk for recurrence into adulthood and is also associated with the risk of development of personality or conduct disorders (Harrington & Dubicka, 2002). A resilience building school-based program for secondary school children, found that adolescents in the program had lower levels of depression and hoplessness in comparison to the control group (Shochet et al, 2001). Proactive teaching of cognitive techniques, to "at risk" school children, was found to reduce depressive symtoms and conduct problems, and improve academic achievement (Jaycox et al, 1994).

■ Studies have shown that it is possible to prevent suicide through a comprehensive school-based prevention program. In a 5 year longitudinal study done in Miami (Zenere & Lazarus, 1997), 330 000 public school children and adolescents were selected. A comprehensive strategy aimed at reduction of suicide was developed. It included components to modify school policy, provided teacher training, parent education, stress mangement and life-skills curriculum and introduced a crisis team in each school. The results showed 63 % reduction in suicide rates and 64 % reduction in suicide attempts.

■ Reducing alcohol consumption and smoking in youth through intervention during the early elementary and middle school years had been found to be effective in the *Adolescent Alcohol Prevention Trial* (Hansen & Graham, 1991)

■ Life skills training has been found to enhance self-efficacy and to prevent substance abuse and behavioural problems and WHO has promoted life skills training in schools (WHO, 1993). Bruene-Butler et al (1997), evaluated the effects of the *Improving Social Awareness – Social Problem Solving (ISA–SPS)*. This program focused on enhancing individual skill and promoting

social competence in children during their transition to middle school. Improvements were found in coping with stressors related to middle school transition and behaviour, and decreases of psychopathology at six-year follow up, in the experimental group. In the comparison group, boys reported increased rates of alcohol consumption and violent behaviour and the girls had higher rates of cigarette smoking and vandalism.

For adults and elderly:

■ Brief physician advice and other forms of brief interventions have been found to be effective in reducing alcohol use in the *WHO Project on identification and management of alcohol-related problems* (Babor & Grant, 1992). Brief intervention has also been tried to reduce smoking (Russell et al, 1979; Kottke et al, 1988). The interventions varied from a simple advice by the physician; advice along with distribution of an information leaflet; counselling and discussion of problem-solving strategies over a few sessions. None of the methods were for long periods of time and even the simplest advice by the physician during the first visit was found to be effective.

■ Strategies to prevent alcohol and other substance use through the use of mass campaigns.

✅ MacKinnon et al (2000), examined the effect of 5 years of alcohol warning labels on adolescent drinking behaviour, knowledge and attitudes. From 1989 through to 1995, over 30,000 students completed questionnaires about the awareness of, exposure and recognition of the alcohol warning label, beliefs about the risks listed on the warning, the consequences of alcohol use, and self-reported driving after drinking. Results show increases in warning awareness, exposure, and recognition memory during the examined period. These effects became stable approximately 3.5 years following implementation of the warning. There was no beneficial change attributable to the warning in beliefs, alcohol consumption, or driving after drinking.

✅ Another example is that of a community intervention program implemented in two countries to help women quit smoking (Secker-Walker, et al., 2000). Through community coalitions, task forces and support groups, a video was demonstrated showing the process of quitting smoking. Free smoking cessation classes were made available to help women to help quit smoking. Primary care physicians, dentists, dental hygienists and public health personnel were trained in smoking cessation interventions. In the intervention counties, compared with the comparison counties, the odds of a woman being a smoker after 4 years of program activities were 0.88; women smokers' perceptions of community norms about women smoking were significantly more negative; and the quit rate in the past 5 years was significantly greater.

■ Depression and schizophrenia account for the majority of suicides due to psychiatric disorders (Roy, 2000). Suicide prevention through the prescription of antidepressant and anti-psychotic drugs to individuals with mental disorders can thus be of benefit.

✅ *The Swedish Educational Programme* (Rutz et al, 1989; Rutz et al, 1992a) provided education to general practitioners on symptoms, etiology, diagnosis, prevention and treatment of depression. The intervention was implemented in the Swedish island of Gotland, and the evaluation used the population of Sweden as a whole as the comparison group (non-matched). The program implementation and 3-years follow-up, led to a more accurate diagnosis and treatment of depression by the general practitioners (i.e. increased recognition of depression, increased prescription of anti-depressants and decreased prescription of anxiety treatment), and suicide rates decreased from 19.7 per 100,000 inhabitants to 7.1 per 100,000 after three years. Importantly, for health system costs, the programme reported a 70 % reduction of in-patient days.

■ Prevention and management of post-traumatic stress disorder through a short cognitive-behavioural program among victims of vehicular and industrial accidents (Fecteau & Nicki, 1999; Bryant et al, 1998) have been found to be beneficial.

■ Legislation for wearing helmets and seat belts are promoted in order to reduce head injuries and other physical injuries that may lead to mental disorders and disabilities. Cameron et al (1994) found that since the introduction of mandatory bicycle helmet laws in Victoria there was a 70% reduction in head injuries.

■ Reducing dysfunctional marital communication through education and skills training among young couples. One such programme the *Prevention and Relationship Enhancement Programme* (Renick et al, 1992) found that targeted couples had greater relationship satisfaction, less sexual difficulties and fewer divorces.

■ Marital stress has been found to be increased during pregnancy (Cowan & Cowan, 1992). Marital and parenting counselling to couples and "would-be" parents are beneficial to prevent marital stress and child abuse and promote better parenting skills.

■ Retrenchment and job loss can cause depression, anxiety and a lot of other problems like alcoholism, marital stress, child abuse and even can lead to suicide. Counselling of such groups can be beneficial as was seen in the *JOBS Project for the Unemployed*. The group receiving adequate counselling managed to cope better, had fewer depressive symptoms and managed to find better jobs (Vinokur et al, 1992).

■ Programmes to reduce job burn-out by providing stress management skills and occupational stress management training for personnel at risk (e.g. nursing personnel, bus drivers, teachers, blue collar workers) have been found to be useful. In the *Caregiver Support Program* (Heaney, 1992) the care-givers and house managers of homes providing support to the persons with mental illness and developmental disabilities were taught better coping skills and results showed reduced incidence of depressive and somatic complaints amongst the caregivers.

■ Counselling during the pre-retirement stage to reduce social problems and depression in the elderly has been attempted, though definite evidence for its effectiveness is not available.

■ Programmes to cope with widowhood and bereavement have helped in reducing depressive symptoms and facilitated better adjustment. The *Widow-to-Widow Program* showed that widows who received one-to-one support and were helped in locating community resources developed relationships quicker than the control group and showed fewer depressive symptoms after 2 years (Vachon et al, 1980).

Outcome assessment

Generation and evaluation of evidence depends critically on selection of suitable outcome measures. The following outcome measures have been used commonly in studies involving prevention and promotion in mental health.

Health impact

■ Reduction of incidence and prevalence of mental disorders

■ Improvement of quality of life

■ Improved physical and mental health of mother, child and other specific populations

■ Increased coping skills and self-efficacy

■ Better psychological adjustment

Social impact

■ Increase in social skills, social support and peer attitude

■ Better academic performance

■ Reduction in substance abuse, delinquency, school dropout, child abuse, divorce, absenteeism

■ Reduction in stigmatization and better understanding and acceptance of the mentally ill by the family and society

■ Increase in number of mutually supported programmes in the community

Economic impact

■ Increase in economic benefits and productivity for the individual and community

■ Reduction in in-patient days in hospital

■ Reduction in costs incurred for treatment

■ Reduction in lost work-days

■ Reduction in expenditure on judicial system and public welfare services.

Cost-effectiveness

Economic considerations including the issue of cost-effectiveness, have a potentially important contribution to make to the evidence for prevention and promotion in mental health, not only for resource allocation purposes but also for better understanding the long-term financial benefits of interventions to the individual, family, community and society. For example, antisocial behaviour including conduct disorder in childhood is a major predictor of how much an individual will cost society. The cost is large and falls on many agencies, yet few agencies contribute to prevention, which could be cost effective (Scott et al, 2001). Health care agencies commonly perceive economic benefits of prevention in terms of reduced hospital admissions and other forms of treatment at the level of the individual. However, indirect costs of mental disorders such as work disability or family burden may far outweigh the direct costs of care and treatment. For example, an educational programme to prevent depression and suicide introduced on the island of Gotland in Sweden resulted in a significant reduction in the suicide rate and produced considerable economic savings to society (a cost-benefit ratio of 1:30 in direct costs of care, but 1:350 in terms of productivity gains and mortality reductions) (Rutz et al, 1992b).

This fact needs to be conveyed to health care agencies, funding agencies and authorities planning budgets for programmes related to prevention and promotion in mental health, ideally via experimental studies illustrating the benefits of early interventions in targeted persons compared to those of controls. Such

Cost-effectiveness is an important component of evidence for prevention and promotion in mental health

studies are able to highlight the economic burden and costs of a given condition and its prevention at the level of family, the community, school, law enforcement agencies, health care agencies and industry. But to be informative, they need to be carried out in the relevant settings and countries, as costs may vary considerably from one to another.

Although the generation of cost-effectiveness evidence is often best approached through long-term prospective studies (e.g., a randomized control group, long-term follow-up, etc.), the time and costs of undertaking this type of research limits the availability of such type of data. Indeed, experimental controlled trials may not always be feasible because of ethical considerations or sample size requirements. In such circumstances, modelling studies, which attempt to simulate a clinical trial using publicly available data sources, provide a useful alternative approach to generating evidence on the costs and consequences of preventive interventions. Although subject to a number of concerns relating to the over-simplification of (public health) reality, diversity of data sources, and the need for multiple assumptions relating to key parameters, modelling studies do not require recruitment and follow-up of subjects and can therefore be undertaken much more quickly. Such models can provide decision-makers with an overall estimation of the expected health gains of an intervention strategy (e.g. reduced incidence of a mental health condition, or averted disability) as well as the costs associated with obtaining this health gain (e.g. administrative costs, training, early identification).

There are currently very few reliable data on the costs or cost-effectiveness of alternative mental health preventive strategies in different WHO regions. By conducting a range of appropriate experimental and modelling studies, however, such an evidence base can be constructed in a way that will offer policy-makers and health care managers important population-level information on the short- and longer-term costs and effects of different intervention options. Such a programme of evidence generation is currently under way at WHO (www.who.int/evidence/cea). Preventive interventions that can be implemented and sustained at a reasonable cost whilst generating clear health gains in the population can be expected to represent a cost-effective use of resources relative to more resource-intensive, treatment-based approaches.

What is the role of World Health Organization?

WHO has been active in the area of prevention and promotion in mental health over many decades. Its past activities and future roles are outlined below.

The mandate and past activities

The WHO Constitution stipulates core functions related to these areas. These include:

"To foster activities in the field of mental health, especially those affecting the harmony of human relations";

"To promote maternal and child health and welfare and to foster the ability to live harmoniously in a changing total environment";

"To study and report on, in co-operation with other specialized agencies where necessary, administrative and social techniques affecting public health and medical care from preventive and curative points of view, including hospital services and social security";

"To assist in developing an informed public opinion among all peoples on matters of health".

Over the past decades there have been numerous World Health Assembly (WHA) Resolutions, which have been related to prevention and promotion in mental health. The most relevant are: *WHA27.53* (1974), *WHA28.84* (1975), *WHA29.21* (1976), *WHA39.25* (1986) and *WHA45.10* (1992). These Resolutions urged Member States to take steps to prevent mental illness and promote mental health and requested the Director-General to undertake steps to provide information and guidance regarding suitable strategies (see Annex 2). Even as recently as in 2002, the 109th Session of the Executive Board of the WHO urged the Director-General to *"facilitate effective development of policies and programmes to strengthen and protect mental health".* It called for *"coalition building with civil society and key actions in order to enhance global awareness-raising and advocacy campaigns on mental health"* (WHO, 2002a). The Resolution was discussed and adopted in the 55th World Health Assembly, in May 2002.

Some WHO Regional Committee Resolutions have also dealt with the subject of prevention and promotion in mental health: for example, *CE128.R12* (2001) of the Pan American Health Organization, *EUR/RC38/R6* (1988) for the WHO European Region, and *WPR/RC39.R13* (1988) and *WPR/RC52.R5* (2001) for the WHO Western Pacific Region. These resolutions urged the countries within their Regions to undertake strategies in prevention of mental disorders and promotion of mental health, and to implement the principles stated in the different WHA Resolutions (see Annex 2).

World Health Assembly Resolutions have repeatedly urged Member States to take steps to prevent mental disorders and promote mental health

While speaking at the *European Conference on Promotion of Mental Health and Social Inclusion* in October 1999 at Tampere, Finland, the WHO Director-General stressed the importance of not only addressing the mental health issues and problems in Europe, but also Europe's opportunities and responsibility in assisting the rest of the world to develop cost-effective, equitable and humane ways to promote mental health and care for the mentally ill. She said: *"…implementation of cost-effective interventions for treatment, prevention and promotion is urgent…"* and she added: *"…we must see mental health promotion and mental*

health services as parts of a continuum, not as opposite and conflicting poles." She stressed the role of the family in mental health promotion and treatment. The WHO Director-General also spoke at length on the topic of promotion of mental health and prevention of mental disorders at the *Inaugural World Conference on the Promotion of Mental Health and the Prevention of Mental and Behavioural Disorders* in Atlanta, Georgia, USA, in December 2000. She said that promotion and prevention "…are complementary parts of a spectrum of interventions needed to achieve good mental health outcomes. And a balance is needed between them with emphasis on a multisectoral and multidisciplinary approach."

> *"…Promotion and prevention are complementary parts of a spectrum of interventions needed to achieve good mental health outcomes…"* – DG, WHO

In the 54th World Health Assembly in 2001, Health Ministers from Member States who participated in a *Ministerial Round Table Conference on Mental Health*, discussed the integration of mental health into primary care and education of the public on mental health. The Ministers identified means by which WHO could provide technical support to countries at global/regional levels. They suggested that WHO "should document effectiveness of interventions with special reference to prevention, treatment and patient satisfaction."

WHO's *World Health Report 2001,* which focuses on mental health, also laid stress on prevention and promotion programmes in mental health. It outlined certain interventions that have been found beneficial in this field and called for enhanced research in this area.

Over the past decades, WHO has involved itself in a number of activities related to prevention and promotion in mental health. Expert group meetings have been organized. WHO has also collaborated with other organizations in this field. Many reports and publications along with guidelines has also been produced (see Annex 2).

There have also been a number of other important books, documents and reports related to these fields. A list of selected publications is given in Annex 3.

Future role

> WHO's role is to generate evidence, develop strategies and create partnerships to implement prevention and promotion in mental health

WHO views prevention and promotion in mental health as one of the priorities of the Department of Mental Health and Substance Dependence and has incorporated it as one of the programs under its *Global Action Programme (mhGAP)* (WHO, 2002b). The future role of WHO can be broadly divided into three areas of activities – generate, review and compile evidence for prevention and promotion in mental health; develop appropriate strategies and programmes; facilitate partnerships and collaboration.

Generate, review and compile evidence on strategies for prevention and promotion in the field of mental health, especially from the developing countries.

Though there are numerous articles on prevention and promotion and, from time to time, efforts have been made to assimilate them, a comprehensive review of literature related to evidence-based research in these two areas is required. This information would be a resource for researchers, help discussions at the international level, and also serve as an advocacy tool for programme planners while discussing their programmes with their respective governments.

The evidence for effectiveness of prevention and promotion is least available in areas that have the maximum need, i.e., developing countries and areas affected by conflicts, where there is an increasing burden of mental health-related problems. WHO, in association with other institutes and organizations, plans to compile a comprehensive knowledge base on existing programmes in order to facilitate new research. This knowledge would be disseminated in a user-friendly way so that policy-makers and programme planners can easily understand and use it. Special effort will be made to develop research capacity and conduct research in developing countries, keeping their needs and specificities in mind.

Natural or human-made disasters and conflicts generate a huge number of psychosocial and mental health problems that cause enormous strains on society. These conflicts tend to be in the poorest regions of the world and the associated burden of mental health problems leads to severe financial strains on the already impoverished monetary situation in these countries. It therefore makes sense to gather evidence about any existing programmes in these areas and develop effective programmes for preventing or promoting mental health in these situations.

> Evidence is least available from areas that have the maximum need, i.e., developing countries and areas affected by conflicts

Attention will also be paid to practices that have been found to be ineffective or inappropriate on the basis of all kinds of evidence. Information on these will be shared among researchers in order to prevent wastage of precious resources in trying to develop these practices.

Develop appropriate strategies and programmes

The vast differences between countries in available mental health resources have been highlighted by the *Project Atlas* (WHO 2001b, 2001c). Based on that information, the *World Health Report 2001* categorized countries in to three scenarios based on their mental health resources (low, medium and high) and recommended strategies to improve the situation. Some of the recommendations – like providing treatment through primary and community care, educating the public, involving communities, families and consumers in care provision, developing policies and legislation, initiating school and workplace-related mental health programmes, and supporting more research – can all lead to prevention and promotion in mental health. Programmes need to be implemented based on the available resources within the country. In low-income countries, for example, it might involve formulation of appropriate alcohol-related policies (in areas where alcohol is a major cause of mental health problems for the individual and family), formulation of policies related to working mothers, initiation of mental health legislation, development of services, support to nongovernmental organizations, development of proper housing and industrial policies that do not cause disruption of the local culture and family values, and establishment of controls and laws related to the availability of pesticides and social support facilities for the elderly (Murthy, 1998). In the medium and high-resource countries, it might involve developing more

effective training and treatment facilities at primary and community care level, launching more evidence-based programmes, involving the family and consumers to a greater extent, making better use of the mass media for advocacy and public education, developing specialized services, and strengthening existing legislation.

Some of the factors to be considered for implementing these programmes are:

■ **Effectiveness of evidence.** The programmes selected for implementation should be evidence-based and should have proven efficacy.

■ **Cultural appropriateness and acceptability.** The concept of what constitutes mental illness varies amongst cultures based on local beliefs and practices. A programme aimed at preventing certain mental health-related problems might not be appropriately suited in such conditions if the programmes have not been tested across cultures. It is crucial to identify the needs in a population. These can be assessed by the prevalence, the seriousness of the problem, the demand for services, or the community's concern. It is essential that disseminated programmes be based on the needs of each specific situation. Next, it is important to set out clear targets for interventions, to select the right strategies that fit a specific societal and cultural situation, and to include other relevant parties, such as primary health care workers and the community. In particular cases, prevention practices should build on existing resource bases such as traditional healers, make use of strong family coalitions, or engage other organizations. Building new alliances, within and across sectors is very important to improve the intervention's reach and develop sustainable strategies.

■ **Financial and personnel requirements.** The programmes should be developed, keeping in view the resources available in the country.

■ **Level of technological sophistication and infrastructure requirement.** Although there are many high-technology programmes in developed countries in the field of prevention and promotion in mental health, their generalizability and feasibility of application in the developing countries need to be assessed. Preventive and promotive programmes should be compatible with the current capacities and future projections for technology and infrastructure.

■ **Overall yield and benefit.** The aim of all the strategies is to deliver low-cost programmes with a high benefit to the majority of the population in need. Existing programmes that fit those criteria have to be identified to make them available at the lowest cost to the largest number of people. However, the selection of programmes to be implemented should be based on their relative contribution and not to the cost alone.

■ **Potential for large scale application.** When evaluating and recommending evidence-based programmes, it is important to consider not only the outcomes of the intervention but also its potential to be implemented on a large scale. Issues like transferability of the intervention, its acceptability potential, barriers that need to be overcome, applicability in the new culture, and affordability in terms of costs and manpower are crucial and require consideration before deciding on recommendation and implementation. WHO will encourage testing programmes across different cultures and community settings before implementing them on a large scale.

Facilitate partnerships and collaboration

Prevention and promotion in mental health, cannot be undertaken by a single organization or one particular sector. It requires all organizations and sectors with a responsibility for mental health to work together. Besides WHO, these include professional associations, other international organizations, national governments, nongovernmental organizations, health industry and prospective donors to help the successful implementation of the programmes. WHO is optimally positioned to forge strategic links with all these bodies and develop effective programmes for prevention and promotion in mental health. The vast network and technical expertise of WHO would be ideal to carry out such a function both at regional and country level.

■ **Professional associations and prevention research groups.** These bodies need to be mobilized to undertake research in the development of evidence-based effective strategies. These strategies might differ across countries, and culturally accepted strategies would obviously have the best chance of succeeding.

■ **Other international organizations.** The concept of prevention and promotion in mental health should be promoted among other international developmental organizations. There is potential to include these issues in their policy framework and activities, if sufficient evidence for their links with overall development are provided.

■ **Governments.** WHO would have to assess the individual needs of countries and recommend the most effective strategies to suit the resources available within countries. They would also require technical advice and assistance in developing and implementing programmes at national and local levels.

■ **Nongovernmental organizations.** These organizations can play a key role in developing and implementing pilot projects in different areas. They can also play an important role in advocacy.

■ **Health industry.** Pharmaceutical companies and insurance companies need to realize the potential for supporting programmes related to prevention and promotion in mental health and provide monetary and technical support wherever possible.

■ **Donors.** There is a need not only for developing research capacity but also a need for developing and implementing pilot projects and carrying out assessment. These activities require time and money and prospective donors would have to be mobilized to fund such projects. Increased resources should be available for mental health-related activities, of which a significant proportion should be earmarked for preventive and promotional activities. However, it must be clear that the evidence base is a crucial element to make decisions on what to support.

WHO's *World Health Report 2001* recommended building networks with other sectors and organizations to develop programmes and conduct evidence-based research as one of its ten recommendations for improvement of mental health in countries. It will need a collective effort on the part of each country and organization to translate this recommendation from paper to practice, so that effective programmes for the promotion of mental health and the prevention of mental disorders can be implemented.

Prevention and promotion require the collective efforts of all organizations and sectors with responsibility for mental health

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Annex 2

Chronological description of WHO's activities and publications in prevention and promotion in the field of mental health

Summary of the relevant portions of the Resolutions of the World Health Assembly

■ The 27th World Health Assembly 1974, in its Resolution **WHA27.53** proposed that a multidisciplinary programme be organized to explore the influence of psychosocial factors on health in general and particularly on mental health. Issues related to the prevention, available resources and rehabilitation facilities for the mentally retarded and elderly psychiatric patients were discussed in two separate meetings of experts.

■ The 28th World Health Assembly 1975, in its Resolution **WHA28.84** recognized that *"…effective methods for reduction of mental health related morbidity and its consequences"* were available and urged Member States *"to promote the skills, knowledge and attitudes in health workers functioning at different levels of the health system that will enable them to carry out appropriate tasks necessary for the management of the mentally ill and for the promotion of mental health".* It also urged the Director-General to seek further information on the epidemiology of mental disorders, *"including identification of factors associated with increased risk of mental disorders and with prevention of such disorders, and disseminating such information."*

■ The 29th World Health Assembly of 1976, in its Resolution **WHA29.21** requested the Director-General to initiate a programme in the area of psychosocial factors and their influence on health and the functioning of health services. Three types of work were carried out in pursuance of that request. First, a series of workshops were held to look into the issue. Second, activities were undertaken to facilitate the application of existing knowledge in improving the provision of health and psychosocial care. A collaborative study in six countries on the prevention and reduction of social disabilities in people with mental disorders was initiated. Finally, a review was done to assess the available evidence on factors and interventions that promote healthy family functioning.

■ The 39th World Health Assembly in 1986, adopted Resolution **WHA39.25,** in which it requested the Director-General of the WHO to conduct activities to prevent mental disorders, including – *"the development and dissemination of materials and technical guidance on the application of measures to prevent mental and neurological disorders and psychosocial problems; the organization of training programmes that will help to ensure that available knowledge and experience reach all those concerned, both professional and non-professional health workers; the stimulation, coordination and conduct of research to develop further methods of prevention and explore ways in which these can be most effectively used."*

■ The 45th World Health Assembly of 1992, adopted the Resolution **WHA45.10,** urging Member States *"to initiate or strengthen comprehensive national programmes for disability prevention and rehabilitation integrated into primary health care, taking into account all physical and mental disabilities".*

■ The 54th World Health Assembly 2001, brought together the Health Ministers from all Member States to participate in a Ministerial Round Table Conference on Mental Health. All the Ministers of Health discussed integration of mental health into primary care and educating the public on mental health issues. The Ministers identified ways in which WHO could provide technical support to countries at global/regional levels. They suggested that WHO *"should document effectiveness of interventions with special reference to prevention, treatment and patient satisfaction."*

Summary of the relevant portion of the Resolutions of WHO Regional Committees

■ In the 39th Regional Committee Meeting of the Western Pacific Region held in 1988, Resolution **WPR/RC39.R13** was adopted urging Member States of the Region to strengthen their *"national policies and programmes to develop measures for the prevention of mental, neurological and psychosocial problems".* It also urged to improve information systems and research facilities and to improve training facilities.

- In the 38th Regional Committee Meeting of the European Region held in 1988, Resolution **EUR/RC38/R6** was passed in which Member States were urged *"to include specific proposals for the promotion of mental health and for the prevention of mental, psychosocial and neurological disorders in their health policy and mid-term programme planning, as an integral part of the strategy for achieving the health for all targets."* It requested the Regional Director to *"pursue actively the development and strengthening of collaboration between Regional Office and Member States in activities to promote mental health and to prevent these disorders including the development and standardization of appropriate indicators for monitoring progress in the implementation of preventive programmes."* It asked for improving training facilities of personnel to facilitating the promotion of mental health and pre-vention of disorders.

- In the 128th Session of the Executive Committee of the Pan American Health Organization held in 2001, a Resolution **CE128.R12** was passed, urging the Member States to *"reinforce multisectoral approaches to mental health, thereby reinforcing collaboration with all other sectors involved in mental health care and promotion…"*

- The 52nd Regional Committee Meeting of the Western Pacific Region held in 2001, in its Resolution **WPR/RC52.R5**, recalled and reaffirmed two of its previous resolution WPR/RC36.R17 and WPR/RC39.R13 on *"prevention of mental and neurological disorders and psychosocial problems".* It urged Member States to involve general health as well as other non-health sectors *"in supporting mental health and preventing mental disorders".*

WHO's role in prevention and promotion in the field of mental health: activities and publications

A brief account of the work carried out by WHO in the field of prevention and promotion in mental health is sum-marized chronologically in this section.

1949
1st Session of the Expert Committee on Mental Health emphasized encouragement of the application of psychiatric knowledge to preventive work.

1950
2nd Session of the Expert Committee on Mental Health devoted further attention to the preventive aspect espe-cially within the public health sphere. It defined "mental health" and "mental hygiene" and reviewed the problems faced by public health workers while dealing with prospective parents, women, aged, children, patients with communicable diseases, immigrants. It outlined some training methods for public health workers. Prevention of alcohol related disorders was also taken up for discussion.

1951
WHO/UNESCO study-group on "Mental hygiene in nursery school" met to discuss training of teachers for promoting mental health in schools.

1952
Issues like maternal care and mental health, alcoholism, child guidance facilities for the mentally retarded were discussed.

1955
A principal part of WHO's mental health programme was directed towards prevention and therapeutic psychiatry of children.

1956
The 5th Expert Committee Meeting focused on the role of psychiatric hospitals in preventive management and development of national programmes.

1958
An Expert Committee on Social Psychiatry and Community Attitudes reviewed the role played by general public opinion on psychiatric patients, hence on curative and preventive work in psychiatry.

1959
Studies were conducted in Europe and the Eastern Mediterranean Region to identify preventable causes of addiction to drugs.

1960
A detailed review of WHO's mental health programme from 1949-1959 was reviewed by an expert committee and concluded that the programme had focused on the preventive use of psychiatric knowledge; development of psychiatric services and training, amongst many other issues.

1962
WHO and Mental Health, 1949-1961. WHO Chronicle, 16: 75-84 (1962). – This article provides an overview of the work done by WHO since its origin to 1961. Prevention and promotion in mental health was an issue in which WHO had worked since the beginning.

1964
The field of mental health was included in the WHO's programme of medical research and a scientific group convened to set priorities stressed that firm scientific foundations for practical programmes of prevention and therapy were lacking and research was needed urgently.

Seminar on Public Health Practice and the Prevention of Mental Illness. EURO. Copenhagen. EURO 278 (1964). – Public health practice and the prevention of mental illness was the subject of a WHO seminar held in London in July. Different mental health professionals and administrators discussed the role of various mental health services in combating mental illness. The theory and principles of prevention were discussed especially with respect to child and adolescent and the elderly.

1966
An expert committee discussed prevention and treatment issues of alcohol and drug dependence. Consultations were also held on the topic of suicide prevention.

1968
A study on the prevention of suicide was published in the *Public Health Papers* series.

1969
Suicide prevention was discussed in consultations held in London and Manchester. As a part of the WHO-assisted psychophysiological study of children with a high-risk of mental disorders, an investigation was started in Mauritius with the aim to prevent mental breakdown among children at risk.

1970
A series of international symposia on society, stress and disease were initiated by WHO and the University of Uppsala, Sweden to look into the relationship between man and environment. The aims were to identify psychosocial stresses that are detrimental to health, identify the characteristics of the high-risk groups and summarize the knowledge of the mechanisms involved with possibilities for prevention of mental illness.

1973
In the European Region, the WHO convened a working group to look into the role of the primary physician in the prevention of mental disorders in the community and in the treatment and rehabilitation of mentally ill patients. Suicide prevention was also discussed in another meeting.

1975
On the basis of the Resolution passed in the WHA
in that year a number of activities were undertaken especially in the fields of training, development of resources and programme development in different Regions.

1978

A project was initiated to assess the effectiveness of various types of self-help groups as a form of community participation in health promotion.

1981

Social dimensions of mental health. WHO. Geneva (1981). – The series of papers present the value of mental health; the role mental health technology plays in improving general health care; and the importance of research in the field of preventing mental and neurological disorders.

An outline of the possible scope and the role of WHO in future work in the field of mental health promotion was circulated among institutions, non-governmental organizations in order to gather further knowledge on the issue in the document.

1984

WHO coordinated activities for the promotion of the mental health and psychosocial development of children in many countries. Promotion of mental health also received a lot of importance in a number of Member States.

1985

In the 77th Session of the WHO Executive Board, a Report by the Director-General was presented outlining the evidence on prevention of mental, neurological and psychosocial disorders in document EB77/23 (1985). It proposed *"a series of specific measures of proven effectiveness which could be undertaken."* They fell into three groups: measures by the health sector at the community level, measures by other social sectors at community level and measures that can be taken at governmental level. It also finalized a draft resolution for the 39th World Health Assembly.

1988

In the 83rd Session of the Executive Board, the Director -General presented the Report on "Prevention of Mental, Neurological and Psychosocial Disorders" (EB83/7), as a response to the request made to the Director-General in the WHA Resolution 39.25 of 1986. The Report was in three parts. The first part provided a summary of views expressed during the discussions in the Regional Committees and a summary of action proposed by Regional Committees *"…to facilitate national and regional efforts in line with these resolutions; secondly, a summary of the action taken at global and interregional levels in response to resolution WHA39.25; and thirdly, in conclusion a brief recapitulation of the issues raised in the document".* The Report concluded by stating that *"…countries were fully aware of the major public health problem that mental, neurological and psychosocial disorders represent. Countries are also aware of the existence of effective measures for their prevention, and that the wide application of these measures could diminish the devastating effects of these disorders for health and social productivity of individuals, communities and nations."* The governing bodies of the Organization indicated that preventive activities be incorporated and also requested the Director -General and the Regional Directors *"…to strengthen their collaboration with countries in this field, programme formulation and implementation at country level."* The final conclusion of the Report was that though some activities had been undertaken at Regional and global level, *"…there was a vast potential for an enhancement of WHO's role in national efforts and for WHO's more active involvement and effectiveness in coordinating research, disseminating information and organizing training programmes…"*

The background document (EUR/RC38/10) to the 38th Regional Committee Meeting of the European Region was published in which prevention of mental, neurological and psychosocial disorders was discussed.

The document cautioned: *"The scope for primary prevention of mental disorders at the present stage of knowledge should not be overstated. In the past, overly optimistic claims have tended to provoke a negative response from mental health professionals, who are aware of the difficulties involved. Primary prevention action calls for a cautious, pragmatic approach and a constant readiness to submit promising hypotheses to the test of empirical research."*

1989

Protection and Promotion of Mental Health: Extracts from the work of WHO, 1948-1988. WHO. Geneva. MNH/POL/88.10 Rev.1 (1989). – the document provides a brief description of the work carried out by WHO in the field of prevention and promotion in mental health from its origin till 1988.

1990

A task force on mental health promotion and education was set up in Europe. Different programmes for prevention and control of drug and alcohol abuse were undertaken.

1992

Work on WHO measurements for the quality of life was initiated.

1993

Guidelines for the primary prevention of mental, neurological and psychosocial disorders. Principles for primary prevention. WHO. Geneva. WHO/MNH/MND/93.21.(1993) – It provides concepts and definitions, methodological issues, cost-benefit analysis and selection of priorities in relation to prevention of mental disorders. This was a part of the series of fascicles that were published in response to the Resolution WHA39.25 adopted by the 39th World Health Assembly and the resolutions AFRRC38/R1, EM/RC35/R.8, EUR/RC38/R6, SEA/RC41/R5 and WPR/RC39.R13 adopted by WHO Regional Committees.

1995

Protection and Promotion of mental health: Perspectives of the WHO Mental Health Programme in the course of 1994-1995. WHO/MNH/91.3 addendum 1. – WHO reaffirmed its commitment to the promotion of mental health and prevention of mental disorders by pledging support to the development and application of technology necessary for that purpose. Promotion of mental well being was emphasized and methods like stress reduction and techniques to prevent de-motivation of health staff were discussed.

1998

Primary prevention of mental, neurological and psychosocial disorders. WHO. Geneva (1998). – WHO published a compilation of all its work in the field of prevention in a book. The book outlines the principles and concepts of prevention, indicators for assessment and provides specific guidelines for prevention of mental retardation caused due to iodine deficiency, Down's syndrome, fetal alcohol syndrome, phenylketonuria; epilepsy; suicide and burnout. All its activities with respect to integration of mental health into primary and community care, training of primary care personnel in mental health, activities specifically aimed at prevention of alcohol and drug abuse, suicide and mental retardation are aimed at mental health promotion and prevention of mental illness.

1999

WHO and the European Commission to collaborate in the field of mental health. Press Release WHO/24. – In April, 1999, the WHO and the European Commission agreed to collaborate in the field of mental health especially mental health promotion in the meeting – *"Balancing mental health promotion and mental health care in Europe".*

Balancing mental health promotion and mental health care: A joint World Health Organization/ European Commission Meeting. Report. Brussels, Belgium, 22-24 April 1999. WHO. Geneva. MNH/NAM/99.2 (1999). – A Report was published at the end of the deliberations and showed that a consensus had been reached regarding what balance between mental health care and mental health promotion activities in Europe would be appropriate and what policy should be developed in the years to come in order to meet the needs of both the population, and of the profession answering these needs.

While speaking at the *European Conference on Promotion of Mental Health and Social Inclusion* held in October 1999 at Tampere, Finland, the Director-General of WHO stressed the importance of not only addressing the mental health issues and problems in Europe but also Europe's opportunities and responsibility in assisting the rest of the world to develop cost-effective, equitable and humane ways to promote mental health and care for the mentally ill. She said: *"…implementation of cost-effective interventions for treatment, prevention and promotion is urgent. We need to document and disseminate specific cost-effective strategies which are targeting specific major diseases such as depression, schizophrenia and epilepsy." She added: "…we must see mental health promotion and mental health services as parts of a continuum, not as opposite and conflicting poles."* She stressed on the role of the family in mental health promotion and treatment.

Raising awareness, fighting stigma, improving care. Press Release WHO/ 67WHO. (1999). – The Director-General of WHO unveiled new WHO global strategies for mental health in Beijing in November. She stressed on raising awareness about the mental health problems and to fight stigma. She said that WHO would promote wider use of effective intervention and essential drugs that have proven to help control psychiatric disorders and neurological diseases. She also announced that WHO would launch global campaigns targeting depression/suicide prevention, schizophrenia and epilepsy.

2000

The Director-General of WHO spoke at length on the topic of promotion of mental health and prevention of mental disorders at the *Inaugural World Conference on the Promotion of Mental Health and the Prevention of Mental and Behavioural Disorders* held in Atlanta, Georgia, in December. She said that promotion and prevention *"…are complimentary parts of a spectrum of interventions needed to achieve good mental health outcomes. And a balance is needed between them with emphasis on a multisectoral and multidisciplinary approach."* She added that the *"…balance will need to take into consideration historical, social, cultural and ethical considerations and of course, the availability of resources. Many interventions indeed fulfil both the objectives, prevention of mental disorders in vulnerable populations and promotion of mental health among others."* She asked experts to *"develop best practice guidelines, that can then be implemented by governmental and non-governmental organizations in the field."* She also cited examples and stressed on the role played by the family, school and work place in the promotion of mental health and prevention of illness.

2001

The Pan American Health Organization produced a technical document as a part of their 53rd Regional Committee Meeting held in July 2001. Prevention of mental disorders especially depression, suicide and violence was stressed. The Committee suggested various methods for developing mental health resources and outlined the parameters for promotion of mental health and development of preventive interventions for mental disorders through – improved legislation and policies in keeping with international recommendations, improved dissemination of knowledge and reduced stigma and inequality in comparison to general health. The deliberations were presented in the document CD43/15 and eventually were passed in the Resolution CE128.R12.

The 52nd Regional Committee Meeting of the Western Pacific Region was held in August 2001. The discussions held during the meeting were published as document WPR/RC52/14 and the Resolution WPR/RC52.R5 was passed as a result of those discussions. The Meeting discussed *"intersectoral approach to mental health promotion and the prevention and treatment of illness"* and *"the integration of treatment for mental disorders into general health services and a more informed understanding of mental health in the wider community."*

Belgian Presidency, European Commission, World Health Organization. Resolution adopte in the Conference on coping with Stress and Depression related Problems in Europe. (2001). – In a recently concluded conference on *Coping with stress and depression related problems in Europe* held in Brussels by the Belgian Presidency with the collaboration of the European Commission and WHO, the Resolution was taken on a strong support for evidence-based prevention strategies for mental illness promotion of positive mental health, as well as support for linking social policy and intersectoral actions to prevention of mental illness and promotion of mental health. The Director-General of WHO in this conference spoke at length on many issues related to mental health like burden, poverty, ageing population and stigma. She noted that many countries were integrating mental health *"into general health care and preventive services"* and that many European countries *"…have been spearheading this trend – charting out bold new pathways to improve care and prevention."* – **The Director-General's Speech at the conference: Coping with Stress and Depression in Europe. Brussels, Belgium, 25 October 2001.WHO. (2001).**

The World Health Report 2001. Mental Health: New Understanding, New Hope. WHO. Geneva. (2001). – The World Health Report 2001 called for research in developing more effective drugs, effective psychological and behavioural treatments and *"more effective prevention and promotion programmes."* It also suggested research into cost-benefit analyses and implementation and dissemination research to look into the *"factors likely to enhance the uptake and utilization of effective interventions in the community."* According to the Report strategies to improve mental health and prevent mental disorders *"can also contribute to the reduction of other problems such as youth delinquency,*

child abuse, school dropout and work days lost due to illness." Some interventions are outlined – interventions targeting factors determining or maintaining ill-health like programmes that enhance the quality of parent-infant interaction that help in psychosocial and cognitive development of babies; interventions targeting population groups like elderly; interventions targeting particular settings like schools. Other activities towards mental health promotion include those related to raising public awareness, involving the mass media, involving self-help groups, non-governmental organizations and other community resources in provision of care and enactment and implementation of legislation. Prevention and promotion are also issues that form a part of its recommendations related to provision of care at primary level and education of the public.

Strengthening mental health promotion. Fact Sheet 220 (2001). – WHO also highlighted basic issues in relation to mental health promotion for children, adolescents, in working life and employment and in the elderly population.

◼ Annex 3

Annotated bibliography of selected publications

Primary prevention in mental health: An annotated bibliography. Eds. J.C. Buckner, E.J. Trickett, S.J. Corse. DHHS, NIMH, Maryland. (1985). This provides a systematized collection of works done in this field till 1985. It not only provides references but also abstracts of the articles.

The prevention of mental-emotional disabilities. National Mental Health Association, Virginia. (1985). This presents a collection of papers submitted to the NMHA Commission on the Prevention of Mental-Emotional Disabilities. It summarizes the knowledge base and recommends specific steps.

Preventing mental illness. J. Newton. Routledge & Kegan Paul, London. (1988). This book reviews the research done in the field of prevention with focus on depression and schizophrenia. Preventive strategies are discussed and recommendations suggested.

Prototype action-oriented school health curriculum for primary schools. Unit 7-9. WHO, EMRO. (1988). This is one in a series of books published by EMRO, WHO as a part of the Action-Oriented School Health Education Project. It provides primary school teachers with guidelines to steps to tackle various problems faced by primary school children. This particular book deals with social and mental health.

Epidemiology and the prevention of mental disorders. B. Cooper, T. Helgason. Routledge, London and New York. (1989). The book provides a detailed assessment of the issues related to prevention and promotion in mental health. WHO's view in the prevention of mental disorders is outlined in a separate chapter.

Reducing Risks for Mental Disorders: Frontiers for Preventive Intervention Research. P.J. Mrazek, R.J. Haggerty, Institute of Medicine. National Academy Press, Washington D.C. (1994). The study mandated by the US Congress reviewed advances in the field of prevention of a number of disorders including mental disorders. It provides definitions for prevention and framework for designing, conducting and analysing interventions intended to prevent mental disorders. It pointed out that mental disorders have a variety of etiology, so it is difficult to assume that any one particular strategy would suffice in the prevention of one type of mental disorder. Prevention of mental disorders would require the combination of biological, social and environmental strategies in various degrees. Though some knowledge was available regarding the means of prevention of mental disorders, a lot needed to be known and the knowledge base for prevention strategies needed to be expanded.

Preventing mental illness: Mental health promotion in primary care R. Jenkins, T.B. Ustün. John Wiley and Sons, Chichester (1998). A book on the proceedings of a conference organized by the Department of Health of the Institute of Psychiatry in collaboration with the Royal Institute of Public Health and Hygiene and co-sponsored by the WHO was also published. The book presented an evaluation of the action programmes undertaken at primary care level with respect to prevention of mental illness and promotion of mental health. It illustrated the significance of primary care in mental health promotion and the way in which it optimizes the resources of the community to serve best the wide range of mental health problems.

Themes from Finland: Promotion of Mental Health on the European Agenda, Report from a Consultative Meeting, Helsinki, Finland, January 1998. Lahtinen, E. Theme 4/1998. (1998). The report presents different viewpoints on promotion of mental health and outlines the European mental health promotion policies and trends. It also summarizes knowledge with respect to mental health promotion in children, elderly, work.

The Evidence of Health Promotion Effectiveness: Shaping Public Health in a New Europe International Union for Health Promotion and Education. Jouve Composition & Impression, Paris (1999). The report identifies the effectiveness of health promotion over the past 20 years, and seeks to assess the political, social, economic and health impacts of interventions across the world. The impact of mental health promotion is manifold. There is improvement in psychological health – in the form of increased quality of life, competence, self esteem, reduction in learning and behavioural problems. Physical health improvement is seen in the domains of improved maternal and child health, reduction in the number of low birth weight babies or pre-term deliveries, reduction in teenage

pregnancy and risk for sexually transmitted diseases. The improvement in psychological and physical health leads to reduction of psychiatric symptoms like somatization, anxiety, depression, etc. The social impact can be seen in the increase in social skills, assertiveness, academic performance, employment, peer sociability, reduction in divorce, child abuse, substance abuse, unsafe sex, absenteeism from work or school, among others. The economic benefits are reaped in the form of reduced number of lost man-days, reduced health care expenditure and increased productivity.

Mental Health Promotion and Prevention National Action Plan. Commonwealth Department of Health and Aged. A Joint Commonwealth, State and Territory Initiative. Commonwealth Department of Health and Aged Care, Canberra (1999). This presents major *"initiatives that will take forward new directions for improving the mental health outcomes of the Australian population."* It presents the policy framework for promotion and prevention at both national and state level and incorporates the best scientific evidence about effective prevention programs and suggests research and development where further evidence is needed.

Framework for Promoting Mental Health in Europe. E. Lahtinen, V. Lehtinen, E. Riikonen, J. Ahonen. Oy Kotkan Kirjapaino Ab, Hamina (1999). The document is the report of the *"Key Concepts Project"* and undertaking of the European Commission and the European Network on Mental Health Policy. The project was aimed to define and evaluate the central concepts and propose priorities of promotion of mental health in Europe. The document served as the background material in *"European process of raising the value and visibility of mental health".*

Issues in preventive psychiatry. G.N. Christodoulou, D. Lecic-Tosevski, V.P. Kontaxakis. Karger, Basel. (1999). This contains a selection of papers on preventive psychiatry presented at the 10th World Congress of Psychiatry. It outlines preventive strategies adopted by selected countries on some specific disorders.

Themes from Finland: Measuring Aspects of Mental Health. Korkeila, J. Theme 6/2000. (2000). This presents a review of current literature *"seeking associations between mental health, psychological distress and mental disorders on the one hand and different individual, social, economic, ecological and service-related characteristics on the other."* The focus being on *"the appraisal of mental health at population level, giving special weight to an assessment useful for mental health promotion".*

National Action Plan for Promotion, Prevention and Early Intervention for Mental Health: A Joint Commonwealth, State and Territory Initiative under the Second National Mental Health Plan. Commonwealth Department of Health and Aged Care (2000). This document from Australia outlines a *"strategic framework and plan for action to address the promotion, prevention and early intervention priorities and outcomes outlined in the Second National Mental Health Plan. It contains strategies to promote mental health, to reduce mental health problems and mental disorders and to intervene as early as possible to minimize the impact of the symptoms of mental health problems and mental disorders."*

Promotion, Prevention and Early Intervention for Mental Health: A Monograph. Commonwealth Department of Health and Aged Care. (2000). This is the companion document to the previous publication. It provides the theoretical and conceptual framework for the Action Plan.

Promoting Mental Health. Victorian Health Promotion Foundation, Australia. VicHealth, (2000). This is a kit designed to support community groups and organizations involved in mental health promotion. It describes the concept of mental health promotion and outlines VicHealth's *Mental Health Promotion Plan 1999-2002.*

Seeds of Hope: Twelve years of Early Intervention in Africa. P.S. Klein. Unipub Forlag, Oslo. (2001). This document summarizes the main results of 12 years of child development research focusing on the long term effects of early family-based intervention in a slum area in Addis Ababa, Ethiopia. The book gives a detailed description of the theoretical and methodological approach as well as intervention strategies

Themes from Finland. European Mental Health Agenda: Future Perspectives, Seminar Report, Helsinki, Finland, November 2000. J. Lavikainen, E. Lahtinen, V. Lehtinen. Themes 2/2001. (2001). The seminar brought together a large number of participants from different countries to discuss the actions required to *"further develop and strengthen mental health issues in the context of the European Union and also more globally."* Mental health promotion and monitoring systems were two major issues discussed in the seminar besides others.

Proceedings of the European Conference on Promotion of Mental Health and Social Inclusion, Tampere, Finland, October 1999. J. Lavikainen, E. Lahtinen, V. Lehtinen. Ministry of Social Affairs and Health. Edita Ltd, Helsinki. (2001). It contains the speeches, presentations and recommendations of the conference. It also has a copy of the Resolution adopted in the conference.

Mental Health Promotion: Coming in from the Cold. L. Friedli. Health Development Today, 5: 9-11. (2001). It outlines a framework for mental health promotion strategy – set aims and objectives, map existing initiatives, identify gaps, identify key settings and target groups through local needs assessment, identify policy initiatives with supporting goals, involve key stakeholders whose commitment will be essential to delivery, select interventions, find evidence to support the approach taken, identify indicators to assess progress, monitoring facilities and identify current resource facilities to address the situation.