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EDITORIAL

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WPA NEWS

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The World Psychiatric Association (WPA)

The WPA is an association of psychiatric societies aimed to increase knowledge and skills necessary for work in the field of mental health and the care for the mentally ill. Its member societies are presently 130, spanning 113 different countries and representing more than 150,000 psychiatrists. The WPA organizes the World Congress of Psychiatry every three years. It also organizes international and regional congresses and meetings, and thematic conferences. It has 64 scientific sections, aimed to disseminate information and promote collaborative work in specific domains of psychiatry. It has produced recently several educational programmes and series of books. It has developed ethical guidelines for psychiatric practice, including the Madrid Declaration (1996). Further information on the WPA can be found on the website www.wpanet.org.

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World Psychiatry

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EDITORIAL

A new beginning

JUAN E. MEZZICH

President, World Psychiatric Association

As we start a new governance period in the life of the WPA, it is befitting to celebrate our roots and the path traveled, to consider where we are, and to be energized by our objectives.

We must celebrate our founders' perception 55 years ago in Paris of a common professional identity beyond geographic and theoretical barriers and the need to be associated into an international body to advance psychiatry and mental health scientifically, humanistically and ethically across the world.

We may want to recognize among our institutional landmarks the organization, from the beginning of our history, of World Congresses first every six years and more recently every three. The inauguration of Scientific Sections in 1961 afforded us institutional continuity in between Congresses. Our ethical code was first formalized in Hawaii in 1977, and was then enriched at several ensuing general assemblies. Educational programs were started as a major WPA activity in 1990. A first attempt at institutional strategic planning was witnessed in 1993, to be systematized in more recent years. A modern service-oriented Secretariat was established in 1996 and multiple lines of institutional work (sections, publications, meetings, education) were operationalized as well.

We have now 130 national Member Societies, and growing, as well as 64 Scientific Sections, with a few more in the pipeline. We have as well a respected, indexed and widely distributed official journal, an expanding website and a growing panel of continuing medical education credits, major International Congresses in years without a World Congress, and an institutional budget with a reserve fund. Illustrating our momentum, our biggest Member Societies are now eager to participate in our leadership structures and to extend themselves internationally through the WPA, while our mid-size and smaller Societies are increasingly protagonist in our institutional life. And we just come from celebrating a special 13th World Congress of Psychiatry, our first in Africa, with the richest scientific program in our history, the largest ever fellowship and young psychiatrist effort, and an unprecedented 110 Member Societies represented at the General Assembly.

And what about the future? The WPA Strategic Plan 2005-2008, prepared on the basis of the WPA General Survey, an evaluation of the previous Strategic Plan, and a SWOT (strengths, weaknesses, opportunities and threats) analysis, and recently approved by the General Assembly, has put forward 14 broad goals. These encompass optimizing the fulfillment of WPA constitutional purposes (including those least attended to previously), strengthening our Member Societies (particularly those in developing countries), promoting the position of our normative instruments in WPA life, emphasizing participatory and decentralized governance, promoting collaboratively ethics in mental health care at all levels, strengthening WPA relations with patient/user organizations, critically appraising and helping to shape world psychiatry, implementing fully the WPA Permanent Secretariat, continuing the promotion of the professional development of young psychiatrists as the future of our field (through congress fellowships and the Young Psychiatrists Council and Network), enhancing WPA Sections' integrated activities and communication with Member Societies, improving the geographic distribution, professional organization and academic quality of scientific meetings, upgrading the editorial and publishing capacity of WPA, advancing partnerships with international organizations, including the World Health Organization, on broad objectives such as person-centered and contextualized clinical care and greater attention to underserved world regions, and improving and consolidating WPA financial status through the Corporate Supporters program and long range financial planning.

The new Strategic Plan also includes 30 specific goals in the various sectors of WPA activity. To implement them, the members of our new Executive Committee and 18 Zone Representatives are now busy preparing their triennial workplans.

Highlighting major thrusts of our Strategic Plan, I have proposed "Institutional Consolidation and Global Impact: Towards a Psychiatry for the Person" as the presidential theme for 2005-2008. Working together we shall succeed. In the words of the Peruvian poet Cesar Vallejo, "there is, brothers, much to be done".

SPECIAL ARTICLE

The art of psychiatry

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Psychiatrists would undoubtedly support the notion of promoting such qualities as empathy, sensitivity and caring in the pursuit of good clinical practice. However, cultivating what we may call the "art of psychiatry" is not straightforward, since the qualities that constitute it are elusive. I propose that the means by which we can accomplish the goal of relating empathically and compassionately to our patients and their families is by regarding the humanities and the sciences as of equal relevance and as complementary. The humanities, particularly literature, the visual arts, film and music, are most suited to promoting empathic skills when they are woven into the clinical scenario. Examples are provided to demonstrate how this may be achieved. Were we to succeed in highlighting the art of psychiatry in our educational programs, and as part of continuing professional development, I surmise that our patients and their families would be the beneficiaries. We cannot merely vow to act empathically and sensitively. Instead, we should embark on a lifelong journey through the wonderful world of literature, the visual arts, film and music. The experience will not only prove appealing and engaging, but it will also go far to enrich our personal and professional lives.

Key words: Science of psychiatry, art of psychiatry, empathy, evidence-based mental health

All psychiatrists would undoubtedly support the notion of promoting such qualities as empathy, sensitivity and caring in the pursuit of good clinical practice. However, a snag complicates this task, namely the elusiveness of these qualities. For example, is it a question of "you have them or you don't"? Can these qualities be learned? If so, how? I would like to address these matters by focusing on what we may call the "art of psychiatry" and argue for a role for the humanities in enhancing it.

Paradoxically, the art of psychiatry warrants our attention more than ever before when it is juxtaposed alongside the rapid strides we have made in advancing the profession's scientific basis. We can now peer into the brain and examine its function with sophisticated imaging technology. We are poised to learn much about the contribution of genetic factors to mental illness. We have a range of psychotropic medications and psychotherapies, which have been demonstrated to be effective in a growing proportion of patients. Notwithstanding this rosy picture, a caveat intrudes. Anna Freud once noted that "many doctors... are not primarily healers. They want to know, they want to figure out, they take pleasure in fixing something..." (1). Of course, there is nothing inherently wrong with fixing, but, in psychiatry, arguably the most person-oriented of all the medical specialities, it can be at the expense of the two features Anna Freud pinpoints as key ingredients of healing: empathy and compassion.

EVIDENCE-BASED MENTAL HEALTH: A MIXED BLESSING

As part of fixing, many doctors are attracted to a prominent feature in the contemporary professional landscape: evidence-based medicine. While this is a noteworthy development, we do need to appreciate its limitations, even its potential deleterious effects. We should certainly apply only those treatments resting on adequate levels of evidence, whether through randomised controlled trials or consistent clinical observation. Innovative therapies also should have a place, but then earn it by being evaluated systematically.

There is an intrinsic irony here. Any well-informed clinicians should only resort to procedures and treatments which are buttressed by objective data, the more robust the better. But, perturbing about the veritable frenzy regarding evidence-based medicine is the omission of the obvious fact that, as Michael O'Donnell so aptly puts it, "evidence-based medicine deals with populations; clinicians deal with individuals" (2). Psychiatrists would also be more aware than any other medical specialists that these individuals are unique in terms of the interplay of their biology, psychology, social circumstances and, some have asserted, spiritual life.

Martin Van der Weyden, editor of the Medical Journal of Australia and an enthusiast of evidence-based medicine, is also mindful of its snares when he regrets: "Nearly extinct are accounts of the clinical art of medicine – the understanding and unravelling of medical problems through cumulative experiences with patients, a clinical tradition reaching back through Osler ... to Hippocrates" (3). Van der Weyden could well have cited Maimonides, the great Jewish physician of the Middle Ages who, in his espousal of a holistic clinical approach, proclaimed: "Any sick individual presents new problems. One can never say one disease is just like the other... The physician should not treat the disease but the patient who is suffering from it" (4).

THE CASE FOR THE ART OF PSYCHIATRY

I hope this brief critique finds the reader's favour since it makes my case to promote the art of psychiatry all the more imperative. Let us now tackle this dimension of clinical practice. I contend that the means by which we can accomplish the goal of relating empathically and compassionately to our patients and their families is by regarding the humanities and the sciences as a) of equal importance and b) as complementary. I enjoy the support of illustrious colleagues in this view.

The eminent American ethicist Edmund Pellegrino, for instance, avows that "medicine enjoys a unique position among disciplines ... as a humane science whose technology must ever be person-oriented..." He likens medicine to the arts in providing "a kind of human experience that makes it a special medium for revealing the world ... it [yields] an aesthetic wisdom of its own special object, man" (5).

Sir Kenneth Calman, a leading figure in British medicine, highlights the characteristics of an educated doctor: "someone who not only has the requisite clinical skills, knowledge and experience, but also can appreciate each patient as an individual human being with thoughts and feelings, and can understand and help explain illness and suffering" (6). Calman proposes that the humanities not only have a central role in moulding doctors with these characteristics but are "also relevant for personal continuing professional development".

Both sets of goals, laudable as they are, are likely to blur into each other if we link psychiatry and the humanities in too diffuse a fashion. I see empathy as the shared foundational feature, since it undoubtedly lies at the heart of the clinical encounter and complements the scientific attitude of developing and applying knowledge objectively and creatively.

Empathy, surprisingly, is a new word to the English language. Derived from the Greek *em*-into, *pathos*-feeling, empathy denotes an emotional process through which we place ourselves in another person's internal world and thereby experience that world vicariously. We do not do this for its own sake but as a means to accomplish an accurate understanding of what the experience is like for the other person. Referring to the process by its more accurate German term, *Einfühlung*, literally "feeling into", Sigmund Freud states that it "plays the largest part in our understanding of what is inherently foreign to our ego in other people" (7).

Thus, as we listen to the stories of patients and their families – whether it be a widow's grief upon the suicide of her husband, an adolescent's struggle to confront his heroin addiction, a Holocaust survivor sharing his guilt at living while his entire family has perished, the torment of a person with schizophrenia fending off persecutory demons, a couple's distress in coping with the diagnosis of anorexia nervosa in their daughter (the list is endless) – we use empathy in striving to understand what people are experiencing behind their narratives. I would suggest this is a *sine qua non* of all healing responses. The French historian Marcel Bloch refers to his craft in a way which is remarkably apt for the psychiatrist who, in a pivotal sense, also occupies the role of historian. After all we refer to history-taking, family history, developmental history and the like. Bloch points out: "When all is said and done, a single word, 'understanding', is the beacon light of our studies" (8). It is empathy which leads us to this beacon in psychiatry.

PROMOTING EMPATHIC SKILLS THROUGH THE HUMANITIES

I turn now to how we may promote empathic skills through the humanities, whether at the undergraduate, postgraduate or continuing professional development level (like Calman, I see this as a lifelong endeavour). Several methods are available to achieve understanding of the other. Role-plays, for example, are most effective. I will not easily forget a student portraying (without any preparation) a patient who had shared her story of severe postnatal depression in an interview the previous day. I could have sworn the student herself was the sufferer. Indeed, my impression is that medical students and psychiatric trainees thrive when using these dramatic devices, leading me to wonder if they are not starved of the opportunity to be imaginative and creative during their long period of education.

Another strategy is the live interview of the patient in which he is encouraged to convey not just a story but the feelings that accompany it. Here again, our students can become proficient in listening to the narrative with a "third ear". When I therefore advocate a role for the humanities in enhancing an empathic, caring attitude, I mean them to supplement these traditional learning methods.

As to who should highlight the humanities, I propose that sensitive clinical psychiatrists with a commitment to the art of psychiatry are well placed, since they are intimately aware of the part empathy and related understanding play in their work. Given this advantage, they can extract pertinent material from the inexhaustible riches of the arts. Moreover, they may do so in conjunction with their colleagues in University arts faculties as well as with creative artists like writers, dramatists, poets, film-makers, painters and musicians.

The humanities should, ideally, be woven into the clinical scenario. That trainee or consultant psychiatrists shift away from the clinic or ward to participate in a separate course may be appropriate for those wishing to sharpen their literary skills or nurture a writing talent, but not for the purposes I am propounding here. They need to be struck forcibly by the relevance of the experience, with explicit mention of the clinical issues illuminated by a particular short story, painting, film and so forth.

Consider the role of film to explore the psychological lives of diverse people. *Shine*, for example, directed by Scott Hicks, strikingly portrays the anguish of a family – including the principal protagonist, David, played in an Oscar-winning performance by Geoffrey Rush, who becomes psychotic – in which all members struggle to deal with the insecurity of a pitiful, yet tyrannical, father and husband. The challenge of understanding all the *dramatis personae* (and their interactions) without becoming judgemental is readily facilitated by watching this emotionally powerful film. We also discover the ease with which the purportedly objective, detached professional may side with some family members at the expense of others. The film

Spider, directed by David Cronenberg, is a remarkable portrait of a chronically ill patient, played by Ralph Fiennes, who is "discharged" into the so-called community, only to experience his torment in a new utterly solitary way.

The visual arts are especially conducive to the study of mental states, both the artist's and those of his creation. Norway's most celebrated painter, Edvard Munch, lends himself well to the interplay between the inner life of the artist and what he portrays on canvas. By viewing a series of his paintings, we soon note a poignant theme pervading the work: melancholy, loss and alienation.

We may also take the opportunity to explore paintings done by patients during the course of their illness and rehabilitation in order to see how these shed light on their internal world. By peering "beyond the surface", we have the incomparable means to enter into a range of psychological domains and penetrate their innermost core.

It is not surprising that most practitioners who draw on the humanities in their clinical work or teaching to optimise the art of psychiatry choose literature as their primary source. After all, we mostly use words to relate to our patients and rely on oral testimony when we elicit a clinical history. Consider one such clinical story. One of three sons, John, stood out as an intelligent and sociable young man. Attracted to the law, he graduated well and obtained a satisfying job. He performed his duties with an exactness and honesty of which he could feel proud. Outside of his profession he was witty and good-natured, although given to touches of vanity. After John had served his firm commendably for five years, he was offered a post in a higher court; his duties became more interesting and challenging.

Having settled down pleasantly in a new town, he met his future wife, an attractive girl in the set in which he moved. Marriage soon followed. Regrettably, from the first months of his wife's pregnancy, their relationship became strained, since she found fault with everything. Further troubles ensured upon the birth, both real and seemingly imaginable illnesses, in both mother and baby. As his wife grew more fractious, so John turned more to his work, becoming more ambitious than before. The result was another promotion. Meanwhile, more children came but bringing greater maternal ill-temper. Most conversations were disputatious.

We jump to the 17th year of marriage, when John achieved unexpected success. He was elevated to a high-ranking job which brought him considerable esteem. He was completely satisfied. The marriage also improved then that the family were living in a lively, metropolitan city. This happier time was marred however when he slipped off a ladder. Only a minor injury followed; the pain soon passed. Indeed, he felt bright and well just then. Moreover, he thought how fortunate he was to be something of an athlete. Another man falling as he had done might well have been killed. So, setting aside any concerns about his injury, he felt in a good humour.

But the discomfort in his left side persisted, even worsened. To this was added a queer taste and growing irritability. Quarrels between husband and wife intensified. At times he would fall into a rage, so much so that his wife began to feel pity for herself and exasperated with her husband. On one occasion she insisted he see a doctor. He pronounced a need for tests. John wasn't terribly taken with the doctor's jargon but much concerned about his indifference to what he regarded as a key question: was his case serious or not? All the way home he tried to translate the obscure phrases into plain language and find in them an answer to the questions: "Is my condition bad? Is it very bad? Or is there as yet nothing much wrong?" It seemed to him that the meaning of what the doctor had said was "that it was very bad".

He followed the doctor's directions. Indeed, he obeyed orders diligently and derived comfort from doing so. The pain, however, did not diminish. John made efforts to force himself to think that he was better. And he could do this as long as nothing agitated him. But once he had any unpleasantness with his wife, any lack of success at work or a bad hand at bridge, he was acutely sensitive to his medical condition. After he consulted another doctor, it seemed to him that he was deteriorating, and very rapidly at that.

He consulted a renowned physician, who conveyed almost the same information as the very first had done, which had the effect of increasing his fears. A friend of a friend diagnosed his illness differently; further doubts arose. A homoeopath viewed the disease in yet another way and prescribed medicine which he took secretly. Not feeling any better and having lost faith in all treatments, he became more and more despondent. As time passed, it seemed to him that he was on the brink of an abyss, with no one able to understand him.

On one particular evening, when attempting to fall asleep, the whole experience presented itself in a new way. It was not a question of this or that organ but one of life and death. Life was there and now it was going, and he could not stop it. He wondered if it was not obvious to everyone but himself that he was dying; it was only a question of weeks, even days. Previously, there had been light, now there was darkness. He resented those around him; his dying was all the same to them but they would die too. Perhaps he would go first but they would follow later and it would be the same for them.

John then saw that he was indeed dying and was in continual despair. He slept poorly. He was on continuous morphine. All food tasted disgusting. He felt a dull depression. What tormented him most was the deception that he was simply ill, and only needed undergo treatment and then something good would result. This deception tortured him. What also hurt John was that no one pitied him as he wished to be pitied. He hoped most of all for someone to comfort him as a sick child is comforted.

Consultation with a renowned specialist provoked new feelings of fear and hope. The doctor could not vouch for it but there was a chance of recovery. But the gleam of hope did not last long. The same room, pictures, curtains, wall paper, medicine bottles were all there, as was the same suffering body. He now felt helpless and lonely, and could only think of the cruelty of God, even of his absence.

Morphine soon proved inadequate and his pain became horrendous. After three dreadful days his school boy son crept into the sick room and encountered his father screaming plaintively. John looked at the boy and felt sorry for him. He thought to himself that it would be better for them when he died. Suddenly it grew clear what had been oppressing him; he was sorry for them, must act so as not to hurt them, and release them and himself from these sufferings.

He sought his former accustomed fear of death and did not find it. In place of death there was light. This happened to him in a single instant. For those present his agony continued for another couple of hours. Something rattled in his throat, his emaciated body twitched, then the gasping became less frequent. “It is finished!” whispered someone. He heard these words and repeated them in his soul. “Death is finished” he said to himself. He drew in a breath, stopped in the midst of a sigh, stretched out, and died.

Readers acquainted with Tolstoy’s (9) short story *The death of Ivan Ilych* will have already guessed that John emanates from the imagination of the great novelist. *Ilych* is an acclaimed account of the experience of facing death, replete with psychological and philosophical insights, the like of which have rarely been matched. No reader can fail to be stirred by Ilych’s initial anxious wriggling away from the threat of death, his later despair, and his ultimate sense of acceptance. The story paves the way for a consideration of how to relate to the seriously ill person. We also obtain a graphic account of a severely dysfunctional family’s failure to deal with their loss. The latter has proved indispensable in our own efforts to empathize with a family’s anticipatory grieving and to devise a form of family therapy which could be of help to those families which are floundering (10).

With Tolstoy in mind, we may return to our theme of promoting a role for the humanities in psychiatry through literature. An infinite body of writing is available. Two categories stand out. The first are the novels, short stories, plays and poems of gifted writers. Shakespeare is arguably the most insightful “psychologist” of all time. Hamlet, King Lear, Macbeth and Lady Macbeth, Shylock, and dozens of other characters reveal variegated facets of human motivation and conflict. In more modern times, the Loman family in Arthur Miller’s *Death of a salesman* and the Tyrones in Eugene O’Neil’s *Long day’s journey into night* are masterful in highlighting the complexity and tragedy of severe family dysfunction.

The second category of literature, suitably entitled “testimonial” in that its authors share their personal encounters with illness, has expanded enormously in recent years. Those who have been afflicted and able to communicate the nature of their experience usually do so with searing honesty. *Darkness visible*, for instance, is a courageous account by the novelist, William Styron (11), of his suffering from suicidal melancholia. *An unquiet mind* is a set of vivid revelations of the vicissitudes of wrestling with manic-depressive illness by Kay Redfield Jamison (12). The Melbourne historian Inga Clendinnen (13), in her acclaimed memoir *Tiger’s eye*, has woven into the narrative an emotionally evocative account of her battle to survive a life-threatening illness and liver transplant.

Testimonial literature also encompasses the observations, insights and personal encounters of relatives of the mentally ill. An account of family life where a member suffers from the ravages of schizophrenia, *Tell me I’m here*, by the Australian journalist Anne Deveson (14), is unsurpassable in illuminating what tragic effects a son’s intractable condition may have on his loved ones. *Romulus, my father*, an inspiring memoir by the moral philosopher Raimond Gaita (15), is equally poignant.

Poetry is another means of appreciating the experience of mental illness. Sandy Jeffs, a prize-winning poet who has grappled with schizophrenia for over quarter of a century, retains the talent of sharing what it is like to be trapped within the vortex of a psychosis. One of her poems is aptly entitled *Psychotic episode* (16) (see Table 1).

THE PSYCHOBIOGRAPHICAL APPROACH

A counterargument to resorting to either the great writers or to testimonial literature could be made. Most of us are intrigued by our patient’s own stories. We merely have to take the time to listen to them. The tradition of delving into the psychobiographical is a rich one, going back to a towering figure in American psychiatry, Adolf Meyer. As he stresses: “We study the biography and life history, the resources of adaptation and of shaping the life to success or to failure... What a difference between the history of a patient reported and studied ... by the well-trained [physician] ... and the account drawn up by the statistical-minded researcher or the physician who wants to see nothing

Table 1 The poem *Psychotic episode* by Sandy Jeffs

When the chilled, icy wind blew,
in went I,
into a world I knew nothing about,
into a space for which I could
never have prepared myself even if
I had been warned of its existence.
Down, down, down went I,
tumbling into an abyss filled
with a myriad spooks and phantoms
which preyed upon my unsuspecting self.
There was no room for rationality,
only chaos upon chaos upon chaos,
and flowing rivers of turbulent waters flanked
on each side by Gothic mountains of angst.
And I was immersed in something
deeper than a huge black hole,
from which I did not emerge
until the haze was blown away
by all manner of processes that acted upon my distraught,
disturbed self.
But as the wind wuthered about my cardboard face,
a chill had set in and frozen my life force forever.

but ... chemistry and internal secretions..." (17).

Another doyen of American psychiatry, John Nemiah, dwells on a similar theme as well as forging the link between patient as story teller and physician as empathic listener: "The subject of observation (the living, experiencing human being) dictates the methods of observation. They are made within the context of a human relationship between the patient and ourselves, in which we must immerse ourselves in the patient's life and must empathically feel our way into his experiences" (18). Nemiah graphically illustrates his position by telling the story of one of his patients, Grace Carbone. He does so in such a captivating way that it amounts to a fine literary work (indeed a reminder of Freud's case histories). In his review of "the panoramic sweep of her life", Grace comes fully alive. She is no longer a case or a diagnosis, but a person with a story who promotes our curiosity to learn more about her inner world and our motivation to relieve her suffering.

We may therefore pose the question: why turn to "external" literature when we can elicit our own by attending sensitively to stories emerging in the clinic? The answer is obvious if we consider the question in the light of earlier argument. The scientific dimension of psychiatry constantly tugs us towards the "facts", statistical norms, diagnostic criteria. On the other hand, acquaintance with great and testimonial literature (and other forms of art) encourages us to achieve what Meyer and Nemiah claim is the foundation of the psychiatrist-patient relationship: getting in touch with the living, experiencing human being. A corollary is that we master the complementarity of science and art, retaining in each case their full measure of relevance and applicability.

CONCLUSION

I have advanced the case for weaving the humanities into the practice of psychiatry. Were we to achieve this, I surmise that the art of our discipline would be much enhanced, with corresponding benefits for patients and their families. I have highlighted empathy as the key quality which we need to foster in ourselves. But one cannot merely vow: "I shall be empathic". Instead, we need to journey through the wonderful world of literature, the visual arts, film and music. Not only will that journey prove inherently appealing and engaging, but it will also go far to enrich our personal and professional lives. Bon voyage!

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What can mental health interventions contribute to the global struggle against HIV/AIDS?

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Mental health is an essential component of worldwide efforts to contain the spread of HIV infection and to treat those who are already infected or affected by the virus. This paper describes the integration of mental health approaches into primary and secondary prevention strategies for vulnerable populations, the identification and management of psychiatric conditions that increase the risk for becoming infected with HIV, and the diagnosis and treatment of the neuropsychiatric manifestations of HIV infection.

Key words: HIV infection, mental health interventions, prevention

Mental health interventions are critical to worldwide efforts to contain the spread of human immunodeficiency virus (HIV) and to treat those who are already infected or affected by it. The acquired immune deficiency syndrome (AIDS) pandemic has spread to every part of the world, with approximately 40 million people currently living with HIV infection (1). Given the estimated 14,000 new infections a day, and an even partially effective vaccine projected to be at least a decade away, even the most optimistic predictions for improved access to antiretroviral treatment will not be sufficient to keep up with the world's expanding need for it. AIDS treatment will be affordable and sustainable only if the number of new infections is reduced. Therefore, prevention programs targeting the sexual and drug use behaviors that transmit HIV must be effective and made a very high priority, and treatment of mental health conditions associated with HIV transmission, poor disease prognosis, and poor adherence to antiretroviral regimens – addiction and depression chief among them – must be provided on a massive scale.

The increasing global investment in new HIV prevention and care initiatives (1) is creating a window of opportunity to integrate mental health approaches into these new programs. Although a pandemic, AIDS manifests itself in epidemics that are heterogeneous in terms of their intensity, pace, and impact. Therefore, locally-appropriate prevention, treatment, care, and impact-cushioning strategies need to be developed (2) with input from mental health professionals. Psychiatrists and other mental health professionals can play multiple roles in the prevention and treatment of HIV infection. They can diagnose and treat psychiatric and substance use disorders that are related to HIV risk-taking behaviors to reduce such risk; perform differential diagnosis and treatment of psychiatric disorders that co-occur with HIV infection; assist with adherence to medical, psychiatric and substance abuse treatment; and help manage psychosocial problems such as disclosure of positive HIV-status, adjustment to HIV diagnosis and illness, and access to concrete services like housing and financial assistance.

This paper describes the impact of HIV/AIDS in vulnerable populations around the world, highlights prominent mental health aspects of the epidemic as well as clinical and management strategies essential to the diagnosis and treatment of mental health problems associated with HIV-related illness, and discusses the broad application of mental health concepts in modifying behaviors that sustain the epidemic.

THE EPIDEMIOLOGY OF HIV/AIDS AND VULNERABLE POPULATIONS

The worldwide effort to reduce the toll of HIV/AIDS involves inhibiting concentrated epidemics from becoming general population epidemics. The World Health Organization (WHO) defines a concentrated epidemic as one in which a sub-population has an HIV infection rate greater than 5%, but the HIV infection rate in pregnant women remains under 1%.

The impact of a generalized epidemic is most obvious in countries in sub-Saharan Africa. Of the 25 countries with the highest HIV prevalence (ranging from 5% to 39% of adults aged 15-49 years), 24 are in sub-Saharan Africa. About two-thirds of all people with HIV live in this region (1); roughly equally large numbers of people are being newly infected with HIV as are dying of AIDS, and there is no sign yet of an overall, national decline in the most affected southern African countries.

HIV epidemics also have generalized in the Caribbean, where HIV prevalence is the second highest in the world, exceeding 2% in five countries. Haiti has the largest number of people living with HIV in the Caribbean, with an estimated prevalence at almost 6% among people aged 15-49 years (1), followed by Jamaica and Guyana. Two countries in Latin America – Guatemala and Honduras – also have epidemics that have generalized.

These generalized epidemics vary, but predominantly are driven by heterosexual transmission, although sex between men (which is heavily stigmatized and in some places illegal), sex tourism, and injection drug use account for significant numbers of cases and remain underestimated by local public health surveillance systems, due to the societal disenfranchisement of individuals who engage in these activities.

Some countries that do not yet have generalized HIV epidemics nevertheless contain regions where the epidemic has generalized. This includes areas of China where unsafe blood donation took place, parts of India where injection drug use is prevalent, regions of Brazil with large populations of men who have sex with men (MSM), areas of Myanmar and southern Thailand where HIV infection among pregnant women exceeds 2%, and some urban areas of Eastern Europe such as St. Petersburg (Russian Federation) and Odessa (Ukraine) (1).

Surveillance data suggest that most countries still are contending with concentrated epidemics (1). While we correctly have moved away from the concept of risk groups, since unprotected sexual and drug use behaviors will put anyone at risk for HIV infection, it nonetheless remains true that most countries currently have epidemics that are concentrated in vulnerable populations. Historically, HIV begins its spread in three vulnerable groups: injection drug users (IDUs), MSM, and sex workers. Containing epidemics while they are still concentrated in these sub-populations is key to preventing spread into general populations.

Injection drug users

Injection drug use in the absence of sterile injection equipment is a recipe for public health disaster. This is the predominant route of HIV transmission in many developed and resource-poor countries with concentrated epidemics. Western Europe has a mature concentrated HIV epidemic with IDUs constituting the largest transmission group (1). The epidemic in Eastern Europe is more recent, but even more strongly driven by injection drug use. For instance, in the Russian Federation, between 1.5 and 3 million people inject drugs, which is 1-2% of the entire population. Many of these individuals begin injecting and become infected while still in their teens; their active sex lives pose a risk to the general population and heterosexual transmission is accounting for a dramatically growing proportion of new infections (1). More than 50% of heterosexually acquired AIDS cases in Eastern Europe are in people known to have an IDU sex partner. China, with 22% of the world's population, also cites injection drug use as the single most common mode of HIV transmission, and this is a prominent mode of transmission in regions of many other countries in North America, Latin America, East Asia (including India), and the Middle East (1).

The prevalence of drug addiction among IDUs is the most obvious link between psychiatric disorders and HIV transmission. Furthermore, substance use disorders are highly comorbid with other psychiatric disorders (e.g., bipolar disorder, depression, psychotic disorders, anxiety disorders, antisocial and borderline personality disorders). Moreover, alcohol and other drug use disorders are strongly associated with increased sexual risk for HIV infection. In many countries, alcohol and other drug use disorders are not addressed with effective treatment but instead are neglected or criminalized (1). Although not optimal, jails can provide an entry point for both antiretroviral and drug substitution treatment.

Men who have sex with men

MSM is a term that describes men of various identities and social contexts who engage in sexual behavior with other men. Widespread homophobia is providing an ideal climate for the spread of HIV by driving MSM away from the information, services, and security they need to protect themselves and others against HIV. In many parts of the world, surveillance, prevention, and treatment are impeded by the stigma and secrecy that surround same-sex behavior. This stigma probably also contributes to elevated rates of alcohol abuse and depression that have been documented in some countries (3), further fueling the epidemic and creating additional barriers to care. Some men have sex with other men without self-identifying as gay or bi-sexual, so they disregard prevention messages directed at the gay community.

In developed countries with good surveillance systems, MSM are one of the first groups to be identified as highly affected by the HIV epidemic. For example, in the United States, MSM was the hardest-hit group early in the epidemic, and unprotected sexual behavior among MSM continues to be the leading route of HIV transmission (4). In the world's second most populous country, India, one household study found that 6% of men reported having sex with men and another study found that 57% of MSM were married (5). The potential for HIV transmission between MSM and for cross-over transmission to the general population is very high under these conditions.

Whether they self-identify as gay or not, MSM may be unaware of their own HIV infection. In Buenos Aires (Argentina), for instance, only one in seven MSM who tested positive knew he was HIV-positive (6). Similarly, in Beijing (China), approximately 3% of MSM were found to be infected and almost all of them were unaware of their serostatus (7). Recent evidence from major cities in Europe, Australia, Canada and the United States suggests that the prevalence of sexual risk behavior and HIV infection rates among MSM are increasing (4); this represents both a resurgence of infection among older MSM as well as a disregard for risk reduction among younger MSM. Despite this, in the United States, MSM are less likely than heterosexual men and women to receive prevention counseling, and only 10% of the HIV prevention outcome studies in the United States have focused on MSM (8).

Sex workers

Commercial sex work, whether legal or illegal, is an economic exchange in which specific sexual activities are purchased. Many social and economic factors are associated with prostitution, including extreme poverty, illiteracy, unaddressed (or even sanctioned) violence against women and MSM. Childhood sexual abuse histories are common among male and female sex workers, and trafficking and other forms of exploitation undoubtedly result in severe psychological trauma among women brought into sex work forcibly (1).

While research on the mental health of sex workers is limited, a few studies have found that male and female sex workers have elevated rates of psychopathology when compared to matched controls (9,10), although these studies cannot establish whether psychopathology precedes or follows sex trading.

A number of studies suggest that mental illness is associated with higher HIV prevalence and lower rates of condom use among sex workers. In one study conducted in Puerto Rico (11), sex workers with high levels of depressive symptoms had a 70% HIV infection rate, whereas those with low depressive symptoms had a 30% infection rate. This did not appear to be a consequence of HIV infection, since depressive symptoms were independent of HIV status.

The circumstances under which sex workers operate can have a significant impact on whether they take safety precautions, including those against HIV. Many sex workers are uninformed or misinformed about bodily functions and lack access to and information on health services, HIV/sexually transmitted infections, drug abuse, and other health problems. Commercial sex remains the main driver of the HIV epidemics in West Africa and parts of India. Structural prevention interventions focused on commercial sex workers have successfully reduced the prevalence and incidence of HIV where instituted (12). In countries with both legal and illegal sex workers, the HIV prevalence among legal workers is usually considerably lower, suggesting easier implementation of prevention interventions.

Overlap among vulnerable populations

What is common to all three of these vulnerable populations is their disenfranchisement from the dominant culture, with the corresponding stigma, secrecy, and barriers to resources that make prevention efforts difficult. The WHO estimates that fewer than 5% of IDUs can access essential prevention services and that only about 10-20% of sex workers and MSM can do so (1). Needless to say, there is tremendous variability within vulnerable groups, and there may be sub-groups who are not receiving interventions specifically designed to meet their needs or to address the particular culture in which risk is taking place. So, for example, African-American MSM in the United States have higher rates of infection than other ethnic minority MSM, and younger African-American MSM have the highest rates of all.

Although we have talked about vulnerable groups as discrete populations, an individual simultaneously or over time may belong to more than one vulnerable group. Addiction to drugs can lead to sex work in exchange for drugs or for money to purchase drugs. There are some parts of the world where rates of drug use are high among sex workers (1). An example is St. Petersburg (Russia), where 81% of surveyed sex workers said they injected drugs at least once a day (65% had used non-sterile injecting equipment); 48% of sex workers were HIV-positive (1). Similar rates of HIV infection were reported among female sex workers who inject drugs in Ho Chi Minh City (Viet Nam). A study in Puerto Rico found that 47% of female sex workers injected drugs, and 70% of injectors were HIV-positive (11).

HIV spreads from historically vulnerable populations to the general population primarily through unprotected sexual contact. For example, men buying sex is a prominent practice in Asian countries, where studies suggest that 5-10% of men do so, often paying more for sex without a condom (1). Frequently these men are married or have regular sexual partners with whom condom use would call attention to infidelity.

Misconceptions and denial allow the virus to flourish. Underlying the daunting task of preventing the spread of HIV within and beyond vulnerable populations are numerous structural factors, including stigma, social discrimination, political indifference, poverty, violence, and oppression. An example of this is the finding that, in countries with generalized epidemics, young women aged 15-24 are between 2 and 6 times as likely to be HIV infected than young men of the same age (1). The vulnerability of women to HIV infection stems not simply from lack of knowledge, but from their pervasive disempowerment. One study in Zambia showed that only 11% of women believed that they had the right to ask their husbands to use a condom, even if he had proven himself to be unfaithful and was HIV-positive (1).

Mental health has a contribution to make in understanding the social relations that underlie the limited choices faced by both married and unmarried women, including recasting harmful stereotypes of masculinity and enabling men to assume their share of responsibility for HIV prevention and protection. Fundamental changes in behavior within entire populations need to occur. Although difficult to achieve, developing appropriate interventions to do so is essential to efforts to contain and reverse the AIDS epidemic among new generations reaching sexual maturity. Mental health must become part of the fabric of public health initiatives to accomplish this task.

APPLICATION OF MENTAL HEALTH CONCEPTS IN MODIFYING BEHAVIORS THAT SUSTAIN THE EPIDEMIC

Ample evidence exists that behavioral interventions reduce high-risk behaviors and promote safer practices. This has been demonstrated with all three historically vulnerable populations (13) and with an array of other groups as well (e.g., adolescents, women, psychiatric patients). In addition, programs that provide opiate substitution treatment and increase access to sterile injection equipment can reduce new HIV infection among people who inject drugs, without running the risk of increasing the number of people who engage in this behavior (14). These programs can serve as a platform for other services and also for interventions to reduce unprotected sexual behavior. However, in many countries, providing sterile injection equipment and substitute medications such as methadone is banned by law from use in drug treatment practice.

Many countries that are very heavily affected by HIV still have not mounted coherent and coordinated responses, and even countries that have had a vigorous response to one at-risk population may neglect another. So, for example, Thailand has been very effective in reducing HIV among sex workers, while new cases among IDUs have been detected at alarming rates and remain unaddressed by a comparable national prevention campaign.

There are some countries that continue to have a very low HIV prevalence even among historically vulnerable groups and have a rare opportunity to prevent HIV from gaining a firm foothold. These include Bangladesh, East Timor, Mongolia, People's Democratic Republic of Lao, Pakistan, Philippines, Sri Lanka, and several Latin American countries.

Levels of intervention

The broadest level of intervention is that which is initiated by a country's government. Some of the global successes in HIV prevention that are best known have been coherent nationally-led AIDS responses in some of the hardest-hit countries. So, for example, Uganda achieved a considerable reduction in rates of HIV infection with its community implemented approach, and Thailand and Cambodia contained their epidemics by promoting condom use among sex workers (15). By contrast, in the Russian Federation, where the epidemic has been concentrated among IDUs, harm reduction programs have not kept pace with need (1).

Country-level interventions often involve media campaigns and the provision of concrete assistance and incentives to change risky practices. Two commonly used indicators of countries' success are condom supply and reported condom use at last high-risk sex act. Obviously, in a country where the primary driving force is injection drug use, these two indicators by themselves will not be sufficient.

Changes in practice can also occur at a grass-roots level. This can be seen among the many non-governmental organizations (NGOs) that operate in countries throughout the world promoting safer practices. In Eastern Europe, where HIV prevention programming tends to be poor, an emerging movement of civil society and people living with HIV is gaining force. Grass-roots movements are most successful when they ultimately can influence government responses. This occurred among MSM in the United States, when ACT-UP (AIDS Coalition To Unleash Power) demanded better and faster treatment, effectively changing federal approval process and funding for antiretroviral medication (16). Brazil's grass-roots movement also resulted in prevention and treatment policies that guarantee access to both for every citizen (17).

Between the extremes of bottom-up and top-down approaches are the actions of every entity with an interest in reducing the impact of HIV. Among the tools enlisted are capacity building, networking, and partnership development. The benefit of such local responses is that they are tailored to the needs of the communities they serve. The downside is that services are fragmented, scattered, and too short-term, and affected individuals often must navigate between several programs or systems to obtain the full range of care they need.

Around the world, successful prevention efforts have been pragmatic, focusing on behavior rather than moral judgment about behavior, and have worked to improve the social, legal, and political environments in which those most at risk live and work. Moreover, multiple levels of intervention were conducted simultaneously. For example, in Brazil and Australia, government policies were developed in collaboration with MSM communities, reducing dramatically the number of new HIV infection cases, though some resurgence has been seen in both countries as a result of misunderstandings about the degree of transmission risk that remains following antiretroviral treatment.

Where interventions have been implemented to good effect, intervening once was not enough; complacency and misperception of who is at risk can result in resurgences in HIV incidence. Multiple examples exist of relapse into less-safe behavior when prevention interventions stop completely. What works best is ongoing and, if possible, structural reinforcement of risk-reduction behaviors, as is done with sex workers in Thailand, who are regularly monitored through licensing and other governmental mechanisms.

The biopsychosocial approach is particularly important to the management of HIV infection. Successful prevention and treatment cannot occur in the absence of well integrated psychosocial approaches. This includes the development of strategies to reduce sexual and drug use risk behaviors; the provision of comprehensive pre- and post-test counseling; helping those who are infected to disclose to their partners while creating safeguards against violence; and offering a host of end-of-life services that provide compassionate care to the dying and adequate planning for children who lose their caregivers. Mental health workers, either directly or in consultation with other providers, have an important role to play in ensuring that these services are well-conceptualized and meet the mental health needs of those who use them.

Mental health is important to integrate into all prevention interventions at all levels. Models of behavior change need to be incorporated into prevention initiatives to understand what motivates people to engage in risky behavior, what incentives are available to change such behavior, and what skills are needed to implement and maintain safer practices. In addition, detecting, understanding, and treating behavioral and psychiatric problems that interfere with safer practices or even promote unsafe practices must be a priority. Unless mental health is a component, prevention interventions – small or large in scope – are not going to contain the epidemic (13).

MENTAL HEALTH CONDITIONS ASSOCIATED WITH HIV TRANSMISSION AND POOR DISEASE OUTCOMES

Mental health problems can occur as risk factors for HIV, coincidentally with HIV, or as a result of HIV infection and its complications.

Alcohol and other drug use disorders are among the most common mental disorders among HIV-infected people (18). Furthermore, epidemiological studies indicate that the majority of HIV-infected individuals will suffer from other psychiatric disorders, most commonly anxiety, depression, or psychosis (19).

These multiple diagnoses must be addressed in an integrated manner. The presence of drug use disorders can complicate the management of HIV illness and compromise adherence to HIV medication and secondary prevention efforts (20). Some mental health conditions, like depression, can contribute to HIV transmission, poor HIV disease prognosis, *and* poor adherence to antiretroviral regimens (21). Therefore, ensuring that depression is detected and managed is a critical primary and secondary prevention task that psychiatrists must spearhead.

Severe mental illness (psychosis with or without an affective component) has been associated with HIV infection in 6 of 8 countries where seroprevalence studies have been done. Rates are highest among those with severe mental illness who have co-occurring substance use disorders (22,23). Adherence to antiretroviral regimens among those with severe mental illnesses can be as good as among those in the general population: psychiatric patients are experienced medication takers and should not be underestimated when antiretroviral treatment is indicated (24).

Traumatic childhood experiences and other psychosocial stressors can contribute to the acquisition of HIV and further exacerbate mental health problems. Sexual abuse, for instance, whether in childhood or later, has been shown to increase the risk of HIV infection in adolescent girls, commercial sex workers, gay and bisexual men, people with severe mental illness, and other groups (25). Assessing this risk and intervening appropriately takes the skill and sensitivity that mental health professionals readily possess or can develop.

Some somatic symptoms of HIV infection – particularly fatigue; lypodystrophy, lypoatrophy and wasting; insomnia; pain; sexual dysfunction – may cause considerable deterioration of quality of life and complicate the treatment of psychiatric disorders. These prevalent somatic problems are frequently overlooked (26). Mental health care providers have a very important role in either treating or advocating for treatment of these problems. When prescribing psychotropics, it is helpful to consider whether they will exacerbate or improve somatic symptoms. It should be noted that hepatitis C, a common problem in IDUs and hemophiliacs, can have neuropsychiatric manifestations, and that its treatment, particularly interferon, can cause or exacerbate depression (26).

There are some important principles that guide treating mental health problems in the presence of advancing HIV illness (26). These include taking into account multiple comorbidities; ruling out a new medical cause for any change in mental status (HIV-related or not); starting with lower doses of psychotropic medication and slowly titrating them upward; checking for drug interactions and overlapping toxicities between psychotropics, antiretrovirals, and any other medications being taken; offering adherence support to patients whose cognitive or psychiatric symptoms interfere with regular medication taking.

When treating substance use disorders in HIV-infected people, it is much easier to coordinate treatment when it is integrated in one site (26). Moreover, many medical providers to these patients have significant difficulty managing some of their disruptive, sometimes demanding behaviors, and on-site mental health services can be critical to retaining them in care. For those people on methadone maintenance substitution therapy, it is important to note that many antiretrovirals will change methadone levels, usually lowering them. Therefore, the dose of methadone needs to be adjusted accordingly (27).

In the case of mild or transient anxiety, use of psychotherapy, relaxation training, stress-reduction techniques, and avoidance of anxiety-provoking substances such as caffeine and nicotine should be utilized prior to prescribing medication (26).

Most chronic anxiety disorders are best treated with selective serotonin reuptake inhibitors rather than benzodiazepines, due to the lower potential for tolerance and addiction. When a benzodiazepine is needed, it is best to choose one that does not tend to interact with antiretrovirals. Lorazepam and clonazepam are the most frequently used with HIV patients (26).

For depression, psychostimulants may be particularly useful in people with cognitive impairment and fatigue (28), although their effect on mood is variable. It is important to caution patients on antiretroviral treatment not to use St. John's wort, a common over-the-counter herbal treatment for depression, which can lower levels of protease inhibitors. It is important to rule out hypogonadism, which is present in up to 50% of men with symptomatic HIV infection or AIDS and can be a cause of or contributor to depression. Other androgen deficiencies, mainly of dihydroepiandrosterone, are also common in both HIV-infected men and women (29). Testosterone replacement, therefore, can be an important component of the treatment of depression in these individuals and has been shown to be efficacious (30).

NEUROPSYCHIATRIC MANIFESTATIONS OF HIV INFECTION

HIV is a neurotropic virus that enters the central nervous system at the time of initial infection and persists there. Neuropsychiatric manifestations of the direct effects of HIV in the brain become more frequent as illness advances (26). Common problems include decreased attention and concentration, psychomotor slowing, reduced speed of information processing, executive dysfunction and, in more advanced cases, verbal memory impairment (26). Neuropsychiatric manifestations occur with a range of severity varying from subclinical manifestations to specific disorders that include minor cognitive motor disorder and HIV-associated dementia (HAD). The dementia is subcortical, although with advanced disease cortical areas may be compromised as well (26).

Mental health professionals often have a role to play in diagnosing these cognitive and behavioral disorders and in treating some of the psychiatric illnesses associated with them, including mania and psychosis. These are most commonly seen in HAD, where symptoms range from apathy and depression to mania and psychosis, mimicking functional psychiatric disorders and thus requiring a thorough differential diagnosis which can best be performed by a psychiatrist (26). Neuropsychiatric manifestations of HIV are diagnoses of exclusion and the physician must first eliminate all other possible medical causes, including opportunistic infections, metabolic problems, side effects of antiretrovirals, as well as substance intoxication or withdrawal (26). This is an essential task given that a variety of untreated medical problems can cause irreversible neuronal damage.

The best form of both prevention and treatment for the neuropsychiatric manifestations of HIV is highly active antiretroviral therapy (HAART), the use of three or more antiretroviral medications to suppress viral replication. It should be noted that some of the antiretrovirals themselves have neuropsychiatric side effects, most notably efavirenz (26). Efavirenz is currently considered one of the most important drugs to include in HAART regimens, because its use is associated with the durability and efficacy of the regimen. For that reason this drug is being used extensively in antiretroviral roll-out programs in resource-poor countries. However, efavirenz is often associated with neuropsychiatric manifestations such as anxiety, depression, nervousness, drowsiness, impaired concentration, insomnia, disturbingly vivid dreams, and even on occasion suicidality. Most of these side effects occur within 24 hours to 4 weeks of treatment initiation (31) and, if the patient can tolerate them, with or without help from treating clinicians, they usually will spontaneously subside.

What is particularly challenging about HAART is the need for patients to take at least 95% of the medication to suppress viral replication and minimize the chances of developing HIV strains that are resistant and cross-resistant to antiretroviral drugs (26). This level of adherence is not normally seen in patients with any medical disorder, let alone one that is chronic. Mental health concepts have been critical throughout the epidemic for determining how to assess patient readiness for such unforgiving regimens and how to maximize adherence.

CONCLUSIONS

Psychiatrists can contribute to the containment of, arguably, the most challenging public health problem the world has tried to address on a global scale, through elucidation of mental health-related factors that facilitate HIV transmission from vulnerable populations to the general population; advocacy for substance abuse treatment; development and implementation of HIV behavioral prevention interventions; and treatment of the mental health aspects of HIV and AIDS. On a person-by-person basis, we also can foster non-judgmental prevention (with a wide range of safer sex options according to the specific person’s needs and lifestyle), educate HIV-infected patients about associated central nervous system problems, monitor psychiatric sequelae, adherence, and quality of life issues (e.g., sleep, sexual functioning), and assist in managing the psychosocial impact of the disease on infected people and their relatives.

On a more global level, our individual efforts can impact policy and grass-roots efforts. Psychiatrists, psychologists, and other mental health care providers have been central in providing institutions and governments with needed help in the AIDS epidemic, joining together to advocate for and help develop policies in their own countries that have served as models in other countries. By integrating mental health concepts into every level of HIV intervention, we can continue to improve the quality of care and the quality of life of people affected by this global pandemic.

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The Maudsley family-based treatment for adolescent anorexia nervosa

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Anorexia nervosa (AN) usually onsets in mid-adolescence and presents with serious psychiatric and medical morbidities. Yet, few psychological treatments for this debilitating disorder have been studied. One intervention which involves the parents of the adolescent has proved to be promising, especially in patients with a short duration of illness, i.e., less than three years. The benefits of this family-based treatment have also been shown to be enduring at five-year follow-up. All available studies of psychological treatments for adolescent AN, both controlled trials and case series, are reviewed here. Almost all of them involve parents in treatment. These studies show that the majority of patients, even those who are severely ill, can be treated quite successfully as outpatients provided that the parents participate in treatment. In this family-based treatment, parents are viewed as a resource rather than a hindrance. Optimism regarding these encouraging findings should be tempered until larger scale randomized trials have been conducted.

Key words: Anorexia nervosa, adolescence, family-based treatment

Anorexia nervosa (AN) is a serious illness and has a profound impact on the lives of many individuals and their families. It usually onsets in adolescence and affects about 2% of young women and 1% of males (1,2). AN is characterized by persistent efforts to achieve a low weight, often to the point of severe malnutrition, and is accompanied by a specific psychopathology that includes a morbid fear of fatness. Unrelenting dieting usually leads to weight loss as well as amenorrhea (3).

If weight loss is not reversed, major medical complications, such as bradycardia, peripheral edema and osteoporosis, may develop (4-6). Numerous other complications can also result from AN: interference with physical development, growth and fertility (7), generalized and occasional regional atrophy of the brain (8), poor social functioning (9,10), low self-esteem (11), and high rates of comorbid substance abuse, mood disorders, anxiety disorders, and personality disorders (12,13).

Outcomes for AN are generally not optimistic. Only 44% of patients followed at least 4 years after the onset of illness are considered recovered, i.e., being within 15% of ideal body weight, one-quarter of patients remain seriously ill, and another 5% have succumbed to the illness and died (14). Other studies (15,16) have reported mortality rates as high as 20% in chronically ill adults with AN.

Although there is general consensus regarding the severe morbidity and mortality of AN, only modest efforts have been devoted to the exploration of psychosocial treatments for these patients. While findings from the few published studies for adults with AN are inconclusive, a more optimistic picture has emerged for adolescent AN. The handful of treatment studies that have been conducted for adolescent AN all include the patient's parents in treatment, and most of these reports point to positive outcomes. The aim of this paper is to examine these adolescent studies more closely and put family-based treatment forward as a promising approach for this patient population.

EARLY ACCOUNTS OF FAMILY THERAPY FOR ADOLESCENT ANOREXIA NERVOSA

The first effort to include families in the treatment of AN in adolescents was conducted by Minuchin and his colleagues at the Child Guidance Clinic in Philadelphia (17,18). These clinicians treated a series of 53 patients and provided outcome data for family therapy in a follow-up of this cohort. Most patients were adolescents with a relatively brief illness history (less than 3 years). Treatment was quite mixed, with most patients initially receiving inpatient treatment and some individual therapy. However, the primary intervention was family therapy and the authors reported successful outcome in about 86% of patients. It is due to this success rate, as well as the theoretical model of the "psychosomatic family" upon which much of Minuchin's work was based, that he and his colleagues ultimately exerted considerable influence on ensuing treatment efforts for adolescents with AN (17,18).

A primary distraction from the optimism that Minuchin's findings created is the methodological weaknesses that underlie this study. Members of the treatment team conducted patient evaluations, there were no comparison treatment groups, and follow-up varied greatly (range 18 months-7 years). However, this study did not purport to be a clinical trial and ought to be recognized for its significance in the treatment of AN. Consequently, the underlying theoretical principles and clinical application of Minuchin's approach have served as the foundation for a number of controlled family-based treatment studies which were pioneered at the Maudsley Hospital in London.

CONTROLLED STUDIES OF FAMILY TREATMENT FOR ADOLESCENT ANOREXIA NERVOSA

The Maudsley studies

The first controlled study to build on Minuchin's work was conducted at the Maudsley Hospital in London (19,20). It was a comparison of outpatient family-based treatment (FBT) and individual supportive therapy following inpatient weight restoration. This study included 80 consecutive admissions of all ages to the Maudsley Hospital. One of four subgroups of patients (n=21) was young (age of onset < 18, mean = 16.6 years) with a short duration of illness (< 3 years). All study patients were initially admitted to the inpatient unit (average stay = 10 weeks) for weight restoration before being randomized to one of the two outpatient follow-up treatments. After one year of outpatient treatment, the subgroup of adolescents had a significantly better outcome with FBT than with individual treatment. Ninety percent of those who were assigned to FBT made a good outcome at five-year follow-up, while only 36% of those who were in the individual therapy made a good outcome (21). Progress in treatment was defined using Morgan-Russell Outcome Assessment Schedule (22), with good outcome indicating a return to normal weight and menses.

The FBT employed in this Maudsley study contained several aspects of Minuchin's approach, but differed in significant ways. Most important of these was that Russell and his colleagues, unlike Minuchin, encouraged parents to persist in their efforts until normal body weight had been achieved. In the Maudsley approach, general adolescent and family issues were deferred until the eating disorder behavior was under control.

Since this seminal work, two studies from the Maudsley group have compared different forms of FBT in adolescent AN (23,24). Both these studies compared the family treatment that was employed in the original Maudsley study in its conjoint format (CFT) versus what was referred to as separated family therapy (SFT). The therapeutic goals for both treatments were similar and both treatments were provided on an outpatient basis. Most notably was that none of the patients in the Le Grange (24) study and only 10% of those in the Eisler (23) study required inpatient treatment during the course of the study. Admission was usually instigated when weight was not responding to the family's efforts, and/or the study physician considered the patient to be at medical risk for continuing outpatient management. Overall results for these two studies were similar and, regardless of type of FBT, approximately 70% of patients were considered to have made a good or intermediate outcome (weight restored or menses returned) at the end of treatment. In a description of the Maudsley FBT (25), it is noted that preliminary results from a 5-year follow-up of Eisler's (23) cohort show that, irrespective of the type of FBT, 75% of patients have a good outcome, 15% an intermediate outcome and 10% have a poor outcome (weight not restored and no menses).

The Maudsley group has also embarked on a more intensive form of treatment for those who do not respond to the typical outpatient FBT alone (26). In conjunction with a group in Germany (27), it has taken preliminary steps to develop an intensive program for adolescents with AN and their families called multiple-family day treatment (MFDT). This treatment shares some similarities with outpatient FBT used in the Maudsley studies and aims to enable families to uncover their own resources in order to restore their starving adolescent's weight. Families are encouraged to explore how the eating disorder and the interactional patterns in the family have become entangled, and how this entanglement has made it problematic for the family to get back on track with their normal developmental course. This program is quite different from outpatient FBT in that the sharing of experiences among families and the intensity of the treatment program (meeting together for several consecutive days) makes this a unique experience for families. Architects of MFDT argue that an emphasis on helping families find their own solutions is even more apparent than is typically the case in FBT (26,27).

This work with adolescent AN is still in a developmental stage and only preliminary findings can be offered at this stage. Both research groups have reported notable symptomatic improvements in several cases, including weight gain, return of menses, reduction of binge eating and vomiting, and decreased laxative abuse. All parents, and a majority of the adolescent patients (80%), regarded working together with other families in a day hospital setting as "helpful" and "desirable", keeping drop-out rates low. In particular, parents who participated in MFDT reported that this treatment was helpful because of its collaborative nature and sharing of ideas with other families about how to cope with their common predicament (27,28).

Continuing the Maudsley approach outside the UK

An important development since the original Maudsley work has been the manualization of FBT that has been implemented in almost all of the London studies (29). This manual was developed to accurately reflect the content and procedures of this specific treatment. The first controlled study outside the UK and the first to use the FBT treatment manual was completed by a group at Stanford in California (30). In this study, 86 adolescents between the ages 12-18 were randomly allocated to either a short-term (10 sessions over six months) or long-term (20 sessions over 12 months) FBT. An intent-to-treat analysis found no differences between the two groups. Post hoc analysis, however, suggested that patients who presented with severe obsessive-compulsive behaviors around their eating disorders or came from non-intact families needed the longer-term version of FBT.

Three case series also employed manualized FBT. In the first of these, Lock and Le Grange (31) describe the process of manualizing the Maudsley approach and report on the results of 19 adolescents with AN who were part of the randomized trial mentioned above (30). These authors report favourable outcomes for the majority of cases. Moreover, their results suggest that, through the use of this manual, a valuable treatment approach can now be tested more broadly in controlled as well as uncontrolled settings. In the second case series, Le Grange et al (32) report pre- and post-treatment data for 45 adolescents with AN who have received a course of manualized FBT. Overall, their findings are favourable, in that 89% of cases were recovered or made significant improvements in outpatient treatment over a relatively short period of time (mean = 10 months; mean number of treatment sessions = 17). They conclude that their series provides preliminary support for the feasibility of outpatient FBT which underscores the beneficial impact of active parental involvement in the treatment of adolescents with AN. In the most recent of these series utilizing manualized FBT, an open trial of 20 adolescents with AN, Loeb et al (33) demonstrate high retention rates and significant improvement in the specific and associated psychopathology of their patients.

Work based on the Maudsley approach

Behavioral systems family therapy (BSFT), based on the Maudsley treatment, has been compared to ego-oriented individual treatment (EOIT) (34,35). These researchers reported significant improvement in AN symptomatology at the end of treatment. More than two thirds (67%) of patients reached target weight and 80% regained menstruation. Patients continued to improve and, at one-year follow-up, approximately 75% had reached their target weight and 85% had started or resumed menses. However, there were noticeable differences between the two treatments. Patients in BSFT achieved significantly greater weight gain than those in EOIT, both at the end of treatment and at follow-up. Similarly, patients who received BSFT were significantly more likely to have returned to normal menstrual functioning at the end of treatment compared to those in EOIT. Both treatments were similar in terms of improvements in eating attitudes, depression, and self-reported eating-related family conflict. Neither group reported much family-related conflict regarding eating, either before or after treatment. While both treatments produced comparable improvements in eating attitudes and depression, BSFT produced a more rapid treatment response.

While BSFT was modelled after the Maudsley approach, it differed in some important albeit subtle ways. First, Robin et al (35) defined the adolescents in their study as ”out of control” and not able to take care of themselves, while the parents were coached to implement a behavioral weight gain program. This differs somewhat from the Maudsley approach, in that parents were to explore and, with the help of the therapist, find the optimal way to restore healthy weight in their adolescent with AN. Second, Robin et al (35) broadened the focus of treatment to include cognitions and problems in “family structure” while the parents were still in charge of the re-feeding process. The Maudsley approach typically would refrain from ”distractions” until weight has been restored. Both BFST and the Maudsley approach would return control over eating to the adolescent when target weight was achieved, and in the final stage of treatment focus discussions on adolescent issues such as individuation, sexuality and career.

Family treatment in an inpatient setting

Only one study employed family therapy in an inpatient setting. Geist et al (36) compared two modes of treatment: family therapy versus family group psychoeducation. The effects of these interventions are difficult to evaluate, as nearly half of the family treatment occurred in the context of an inpatient setting. Most of the recorded weight gain (76%) was achieved prior to discharge from hospital, with equivalent treatment effects observed with both family interventions. The authors argued that family group psychoeducation is an equally effective but more economical method of involving the family in treatment (36).

UNCONTROLLED FAMILY TREATMENT STUDIES

Since the seminal works of Minuchin (17,18) and Russell (19,20), and in addition to the case series already reported above, several smaller case series using family therapy have been published (37-45). Although modest in sample size, all these studies have demonstrated the value of employing parents in the recovery of their adolescent with AN. Taken together, results are supportive of family treatments for adolescent AN, although only provisional conclusions can be drawn from uncontrolled studies that describe a relatively small series of cases. However, in conjunction with Minuchin’s work, as well as the controlled studies, these preliminary investigations further emphasize the value of the family’s involvement in the treatment of adolescents with AN.

DISCUSSION

Most of the studies involving adolescents with AN suggest that family therapy is helpful in younger patients with a short duration of illness and that most patients do not require hospitalization for recovery to occur. For the most, 70% of patients will have reached a healthy weight by the end of treatment, while a majority will have started or resumed menstruation. At five years post treatment, 75-90% of patients are fully recovered and no more than 10-15% will remain seriously ill (23,25).

The involvement of parents in the treatment of their AN offspring appears beneficial, but conclusions can only be made provisionally. FBT encourages parents to take an active role in restoring their adolescent’s weight and, for now, seems to have some advantages over the more “routine” advice to parents, which is to involve them in a way that is supportive and understanding of their child, but encourages them to step back from the eating problem. However, many aspects regarding the effectiveness of FBT remain unanswered. For instance, it is unclear how best to involve parents in treatment or how essential their active involvement might be, given the limited data. Both Eisler et al (23) and Le Grange et al (24) suggest that conjoint FBT conveys an advantage to a separated format of this treatment in addressing both family and individual psychological issues. However, conjoint FBT may have disadvantages for families in which high levels of hostility or criticism toward the AN adolescent are present. Engaging these families in treatment can be a challenge (46,47) and this may be particularly true when the family is seen together in session. This challenge around engagement might be associated with parental guilt and blame that increase as a consequence of criticisms or confrontations occurring during family sessions (48). On the other hand, it now seems possible that FBT in its manualized format be implemented in ways to alter parental criticism, thereby enhancing commitment to treatment (31,32).

Based on current evidence, albeit limited, FBT appears to be the treatment of choice for adolescent AN. This elevated status must be tempered by the lack of research on other treatments for AN. For instance, EOIT shows good promise as well, but has only been employed in one controlled study (35). Moreover, CBT or psychodynamic treatments for AN are described in the literature (49,50), but have not been systematically evaluated, and their relative merits in comparison with FBT are not known. Similarly, MFDT (27) is a promising new development, but as yet there is no systematic evidence for its effectiveness. However, the Maudsley group is currently engaged in exploring the efficacy of this intensive treatment more systematically. Another avenue that requires further elucidation is our understanding of the relative efficacy of inpatient treatment versus outpatient psychotherapy, especially for adolescent AN. Gowers and his colleagues in the UK have embarked on this route (51).

While our knowledge about the best treatment for adolescent AN is hampered by few and underpowered studies, there have been some promising developments in the past several years. The most helpful of these perhaps has been the manualization of the Maudsley FBT (29). With this manual, the pioneering work of the Maudsley group could begin to be disseminated and replicated outside its site of origin. It is particularly in the US that FBT for adolescent AN has been embraced with some enthusiasm (31-33). We also know more about how intensely FBT should be implemented in order to facilitate maximum benefit from this intervention. This is somewhat contrary to conventional belief that most young patients can benefit from relatively brief outpatient FBT (30). Finally, the relative efficacy of FBT can only be established through a rigorously conducted and well-powered randomized controlled trial. Such a multi-site trial is currently underway at Chicago and Stanford in the US.

In conclusion, despite many obstacles, FBT has gradually been established over the past twenty-five years as an important therapeutic approach for adolescent AN. The prominence of this outpatient treatment of adolescent AN has been an important contribution to the evolution of helpful interventions in the management of the disease. However, further exploration in the form of randomized controlled trials to establish the true significance of the role of the family in AN treatment is sorely needed.

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Mental health care for children and adolescents worldwide: a review

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The magnitude of mental health problems in children and adolescents has not been recognized sufficiently by many governments and decision-makers. This paper reviews the epidemiology of these problems as a basis for planning of services; the situation of mental health services for children and adolescents in the various regions of the world; the principles and strategies of intervention for mental health disorders in children and adolescents; and the role of international organizations and advocacy groups. It is concluded that old myths, treatments and policies are no longer to be tolerated and that there is now the opportunity to develop and implement evidence-based interventions, modern training programs and effective policies.

Key words: Children, adolescents, mental health care, systems of care, global interventions

Children and adolescents have to be respected as human beings with clearly defined rights. These rights and the standards that all governments should fulfil in implementing them are fully articulated in the United Nations (UN) Convention on the Rights of the Child. This Convention is universally applicable to children living in all cultures and societies, and has particular relevance to those living in conditions of adversity. Two additional documents have to be mentioned in connection with the convention: the Protocol on the Involvement of Children in Armed Conflicts, and the Protocol on the Sale of Children, Child Prostitution, and Child Pornography. All these documents provide comprehensive guidance on the human rights needs of children, adolescents and their families.

In article 3, paragraph 3, the UN Convention on the Rights of the Child states: "States parties ensure that the institutions, services, and facilities responsible for the care or protection of children shall conform with the standards established by competent authorities, particularly in the areas of safety, health, in the number and suitability of their staff, as well as competent supervision".

Children with mental health problems are entitled to profit from the guarantees of the Convention as stated in that paragraph. However, this is not the case in many parts of the world. The magnitude of mental health problems has not yet been recognized sufficiently by many governments and decision-makers. They include not only well-defined mental disorders, but also the mental health problems of children exploited for labor and sex, orphaned by AIDS, or forced to migrate for economic and political reasons (1). These problems are increasing and are now quantifiable. It is estimated that in 26 African countries the number of children orphaned for any reason will more than double by 2010 and 68% of these will be as a result of AIDS. 14 million children in 23 developing countries will lose one or both parents by 2010 (2).

A disproportionately large percentage of the "burden of disease", as calculated by the World Health Organization (WHO), falls in the category of "neuropsychiatric conditions in children and adolescents", as shown in Figure 1. This estimate of the disability-adjusted life years (DALYs) actually under-represents the burden related to these disorders, such as attention-deficit/hyperactivity disorder (ADHD), conduct disorders, learning disorders, mood disorders, pervasive developmental disorders and mental retardation (3). The WHO report "Caring for Children and Adolescents with Mental Disorders" (1) highlights that: a) worldwide, up to 20% of children and adolescents suffer from a disabling mental illness (4); b) worldwide, suicide is the third leading cause of death among adolescents (5); c) major depressive disorder often has its onset in

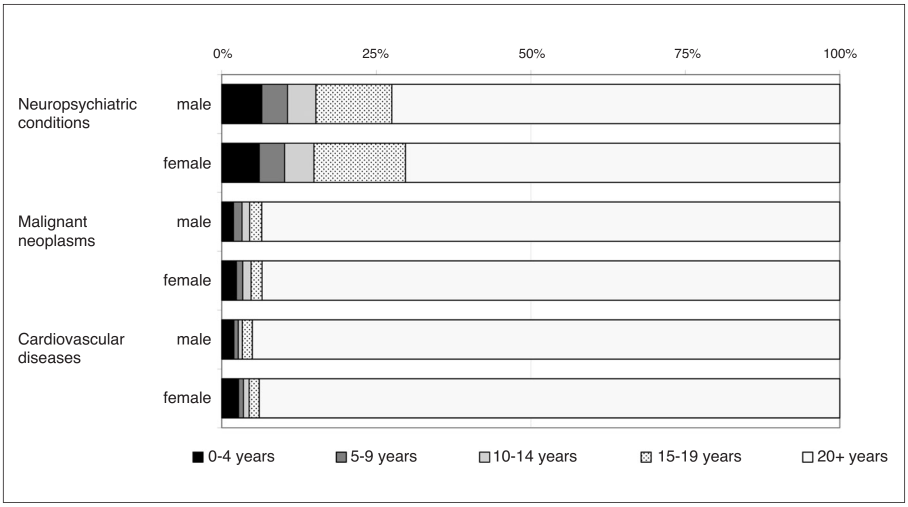

Figure 1 Percentage of burden of disease in disability-adjusted life years attributable to specific causes by age and sex in the year 2000 (according to the World Health Organization, 1)

adolescence, across diverse countries, and is associated with substantial psychosocial impairment and risk of suicide (6); d) conduct disorders tend to persist into adolescence and adult life and are frequently associated with delinquency, adult crime and dissocial behavior, marital problems, unemployment and poor physical health (7).

The cost to society of the various mental disorders in children can now be calculated. Leibson et al (8) reported that, over a nine-year period, the median medical costs for children with ADHD were 4,306.00 USD as compared with 1,944.00 USD for children without ADHD. These data suggest that: a) mental health disorders in children represent a huge burden for the children themselves, their families, and society, and b) a rights framework is necessary for children to get appropriate, good-quality care and treatment.

EPIDEMIOLOGY AS A BASIS FOR PLANNING OF SERVICES

Epidemiological data are important for the development of public policy and programs to improve mental health in children and adolescents. Epidemiological research can provide answers to the following questions (9): a) How many children and adolescents in the community have mental health problems? b) How many children and adolescents make use of mental health services? c) What is the distribution of mental health problems and services across age, sex, and ethnic groups? d) Are there historical trends in the frequency of child and adolescent mental health problems? e) What is the developmental course of mental health problems from childhood into adulthood? f) What etiological factors can be identified to inform the design of prevention and treatment programs? g) How cost effective are child and adolescent mental health services? h) What are the outcomes for children and adolescents who received services? The answers to these questions can be used as a strong basis for planning and implementation of services.

The 6-month prevalence rates of all mental disorders in the general population (for boys and girls together) are 16.3% in 8 year olds, 17.8% in 13 year olds, 16% in 18 year olds, and 18.4% in 25 year olds. If a measure of severity is taken into account, the most severe disorders vary between 4.2% in 8 year olds and 6.3% in 25 year olds (10). Table 1 gives an overview of the prevalence of mental disorders in the general population, split up into five groups, classified according to developmental features and course of illness (11,12).

These epidemiological data, based on studies in Europe and the United States, can be used for the planning of services in these regions of the world. They may not be applicable for the planning of services in other parts of the world, because it is important for planners to have locally relevant, culture specific data.

Table 1 Prevalence of mental disorders in children and adolescents based on population studies in Europe and the United States (from 11,12)

Early-onset disorders with lasting impairment	
Mental retardation 2%	Autism ~ 0.5‰
Atypical autism 1.1‰	Receptive language disorder 2-3%
Expressive language disorder 3-4%	Dyslexia 4.5%
Developmental disorders	
Disorders of motor development 1.5%	Nocturnal enuresis (in 9-year olds) 4.5%
Encopresis (in 7-year olds) 1.5%	Oppositional defiant disorder ~ 6.0%
Disorders of age-specific onset	
Mutism (in 7-year olds) 0.8%	Stuttering 1.0%
Specific phobias 3.5%	Obsessive-compulsive disorder 1.0-3.5%
Anorexia nervosa 0.5-0.8%	
Developmentally dependent interaction disorders	
Feeding disorder (at age 2) 3.0%	Physical abuse and neglect ~ 1.5%
Sibling rivalry (in 8-year olds) 14.0%	
Early-onset adult-type disorders	
Depressive episode 2.0-4.0%	Agoraphobia 0.7-2.6%
Panic disorder (in adolescents) 0.4-0.8%	Somatoform disorders 0.8-1.1%
Schizophrenia (in adolescents) 0.1-0.4%	Bipolar disorder (in adolescents) <0.4%
Alcohol abuse (in adolescents) ~10.0%	Alcohol dependence (in adolescents) 4.0-6.0%
Personality disorders (in 18-year olds) ~1.0%	

SYSTEMS OF CARE: A GLOBAL PERSPECTIVE

A system of care implies that there is a range of services, from the least restrictive (community and family-based) to the most restrictive (hospital-based). The concept of a "system" does not necessarily dictate a theoretical orientation or the therapies to be utilized. Implementation may also lack uniformity depending on the specific setting. The geographic area covered by a "system" can be as small as a local community or as large as a metropolitan city or a country. In a system, it is assumed that there is some form of facilitated transfer of the patient between the components of the continuum of care. Ensuring this facilitated flow between components of a system and ensuring good communication are difficult challenges.

Systems of care in Europe

Systems of care in Europe are very much connected with the development of child and adolescent psychiatry as a medical specialty. Child and adolescent psychiatry has its roots in the disciplines of neurology, psychiatry, pediatrics and psychology among others. Those working in the field have learned in recent decades that interdisciplinary cooperation is an absolute necessity for scientific and clinical progress. The number of child psychiatrists, as well as other child mental health workers, has dramatically increased over the last decades in nearly all European countries. The situation in the various countries, however, remains very heterogeneous with regard not only to the number of child psychiatrists, but also to the organization of departments and services, and to the research, training and continuing medical education which take place within them.

To the extent that the development of services in Europe can be seen as a

Table 2 Types of mental health services for children and adolescents available in most European countries

Outpatient services
• Child and adolescent psychiatrists in private practice
• Analytical child and adolescent psychotherapists in private practice
• Outpatient departments at hospitals
• Child psychiatric services at public health agencies
• Child guidance clinics and family counselling services
• Early intervention centers, social pediatric services
Day patient services
• Day patient clinics (two types: integrated into inpatient settings or independent)
• Night clinic treatment facilities
Inpatient services
• Inpatient services at university hospitals
• Inpatient services at psychiatric state hospitals
• Inpatient services at general community hospitals or pediatric hospitals
Complementary services
• Rehabilitation services for special groups (e.g. children with severe head injuries, epilepsy)
• Different types of residences
• Residential groups for adolescents

model to be emulated in other parts of the world, the following conclusions can be drawn: a) the main focus of service delivery is no longer on inpatient care, but on outpatient services, day patient facilities, and complementary services based on a community level (Table 2); b) specialized services for certain disorders are provided with highly qualified personnel and pragmatic, effective and efficient treatment programs; c) programs need to be evaluated; d) the private practice of child and adolescent psychiatry varies depending on country and local circumstances; e) the coordination of the different services is too often insufficient, which represents an obstacle for the patients and affects the delivery of effective interventions.

The Section of Child and Adolescent Psychiatry within the Union of European Medical Specialists (UEMS) has developed guidelines for training program development for child and adolescent psychiatrists. The program has been introduced in several countries of the European Union and can serve as a global model. The program identifies specific requirements and provides guidance on monitoring and quality assurance.

Systems of care in North America

After a long period of fragmented service development, the US federal government sponsored the Child and Adolescent Service System Program (CASSP), which was established in 1984 (13) and additionally supported by the Robert Wood Johnson Foundation's Mental Health Service Program for Youth (MHSPY) (14). The most successful of these initiatives were based on the so-called CASSP principles (13).

According to Grimes (14), four phases in the development of services for mental disorders in children and adolescents can be distinguished: a) infrastructure (the development of better coordination and communication between service providers and the fostering of an institutionalized awareness for the necessity of a responsible infrastructure within the community); b) wrap around (the development of the means to identify needs across a set of life domains, and the shift from a focus on deficits to an emphasis on the child's and families' strengths in building interventions); c) blended funding, shared governance (the establishment of a consortium of private and public funders to support a comprehensive care program, with an adequate evaluation of efficacy and cost effectiveness); d) integrated care (the integration of mental health care with all the other care systems: medical, social and educational).

Systems of care in South America

There are no sufficient data to describe appropriately the existing systems of care in South America. The situation is different from country to country. There are excellent services in some academic centers and newly formed private clinics and hospitals. Too often nearly no services exist outside urban areas. According to WHO guidelines, at least two child psychiatrists should work full-time for each 60,000 children. South America does not meet this standard but, in some cases, this is due to an inadequate distribution of resources. The estimated number of child psychiatrists was 51 in Venezuela in 1997, and 85 in Chile in 2003 (15).

Systems of care in Asia

Hong et al (16) report on systems of care in China, Japan, Korea and the Philippines. Each of these countries has a special history concerning child mental health and related service development, but there are some common features of the status and development of child psychiatry (mental health services) in the Asian region: a) many countries still face serious problems of general health and even survival; b) child psychiatry is a newly emerging subspecialty for many countries; c) most disorders classified in DSM-IV and ICD-10 are also found in Asian countries, but there is a need for a better understanding of cultural issues; d) the breakdown of the traditional family system and the reduction in number of children is a focus of mental health concern; e) working mothers' and women's equal rights movements are becoming increasingly powerful; f) child rearing practices vary greatly and are sometimes now viewed as inappropriate; confusing and often contradictory advice is given by professionals on child rearing and behavioural management; g) mental health intervention methods are limited.

Only in recent years national and international child psychiatry organizations have been established in the Asian region. The Asian Society of Child and Adolescent Psychiatry and Allied Professions (ASCAPAP) was established in 1996.

Systems of care in Australia

The vast size of Australia and its large non-urban population requires innovative service development. The main problems of mental health care for children and adolescents include (17): a) the inadequate funding for public mental health services; b) the resistance of adolescents to using mental health services; c) the irrational separation between mental health and alcohol/substance abuse services; d) the disastrous mental health of minority populations (aboriginal families); e) a lack of understanding of the needs of children in immigrant families; f) the inadequate training of many non-psychiatric mental health staff; g) the relatively high prevalence of adolescent suicide; h) the long distance between rural patients and urban mental health services; i) the paucity of emergency, residential, partial hospital and in-home services; j) the poor coordination of services; k) the lack of funding for preventive programs; l) the high prevalence of disruptive behavior disorders, anxiety/depression, eating disorders and trauma-spectrum disorders, and m) the need to assess the quality and effectiveness of services. Important research in the field of child mental health has been carried out in Australia, and effective prevention and treatment programs have been implemented.

Systems of care in Africa

Basic needs such as nutrition, water and sanitation are the major needs in Africa, where half of the population is represented by children (18). Difficult circumstances are found in many African countries, affecting most of the basic rights of children (19), such as: a) armed conflicts and forced recruitment of children as soldiers; b) child abuse, prostitution, and trafficking; street living and homelessness child labor; HIV/AIDS pandemic; c) societies which do not provide for children's basic needs; and d) societies which allow discrimination.

Systems of care in Africa are either formal or informal (18). Informal systems include those provided by families and their support network, but also natural healers and faith-based organizations. Formal systems are provided either by the state or the emerging private sector. There are no reliable data on services in the different countries, except South Africa. A key problem is the provision of education and training programs in child and adolescent mental health not only for doctors and psychologists, but for all other health and mental health workers.

PRINCIPLES AND STRATEGIES OF INTERVENTION

All interventions for mental health disorders in children and adolescents should observe at least the following four principles (20):

- *Specificity.* The most appropriate and effective treatment technique will have to be chosen for each particular disorder. In many cases, treatment will comprise a combination of those treatment techniques most likely to be specific and effective.
- *Age- and developmentally appropriate approach.* Children at different ages and developmental stages need different types of intervention.
- *Variability and practicability.* Ideally, one should be able to adapt a therapeutic technique to suit the setting in which the treatment is undertaken, e.g. outpatient or inpatient treatment, individual or group treatment. The treatment approach obviously needs to be practicable under the different circumstances.
- *Evaluation and assessment of effectiveness.* The effectiveness of an intervention needs to be proven and compared with other interventions. Unfortunately, there is a paucity of empirical studies concerning many interventions in child and adolescent mental health.

Modern types of intervention for children and adolescents with mental disorders usually comprise several components. In planning and implementation of treatment, it is crucial to select the appropriate components and to integrate them into a coherent treatment plan.

Table 3 summarizes the intervention possibilities for the major mental disorders seen in children and adolescents.

THE ROLE OF INTERNATIONAL ORGANIZATIONS AND CURRENT GLOBAL INITIATIVES

International organizations such as the WHO, the World Psychiatric Association (WPA), the World Federation of Mental Health, the International Association for Child and Adolescent Psychiatry and Allied Professions (IACAPAP), the United Nations Educational, Scientific and Cultural Organization (UNESCO)

Table 3 Therapeutic interventions for priority mental disorders of children and adolescents (according to the World Health Organization, 1)

Disorder	Dynamic psychotherapy	Cognitive-behavioural therapy	Pharmaco-therapy	Family therapy	School intervention	Counselling	Specialized interventions	Other
Learning disorders			X		X	X		X
ADHD		X	X*		X			
Tics		X	X	X				
Depression (and suicidal behaviors)	X	X	X*	X				
Psychoses			X	X	X		X	

ADHD - Attention-deficit/hyperactivity disorder
*Specific treatment depends on the age of the child or adolescent

and the United Nations Children's Fund (UNICEF) play an important role with regard to all aspects of child and adolescent mental health. The predominant goals and activities of these organizations are: a) to raise the awareness for child mental health; b) to facilitate the establishment of appropriate services in different parts of the world; c) to establish training programs for all mental health workers in all parts of the world; d) to fight for the rights of children and to take care that the Convention on the Rights of the Child is observed in every country. Bearing in mind these general principles, the following current global initiatives have to be mentioned.

The Atlas project

The WHO has started a series of initiatives that should enhance the capacity of countries to develop systems of care for mentally ill children and adolescents. Prime among these initiatives is the Atlas project. This project is one of the first systematic attempts to gather country-wide data on treatment resources for children and adolescents with mental disorders. The survey, using key informants, collects data on demographic health policy and legislation, mental health financing, mental health services, human resources for care, data collection capacity, care for special populations, and the use of medication. So far, 64 countries have participated.

The child and adolescent mental health Atlas follows on Atlas projects for general mental health services, neurological disorders, epilepsy, and others. The findings related to children and adolescents are striking in comparison to the data obtained for adult mental health services:

- In less than 1/3 of all countries it is possible to identify an individual or governmental entity with sole responsibility for child mental health programming.
- Public education about child mental health issues lags significantly behind other health related problems in all but the wealthiest countries.
- The gap in meeting child mental health training needs worldwide is staggering, with between one half and two thirds of all needs going unmet in most countries of the world.
- School-based consultation services for child mental health are not regularly employed in both the developing and developed world to the degree possible. This gap leads to a failure to reach children who otherwise might be helped to avoid many of the problems associated with school drop-out and other significant consequences.
- Child and adolescent mental health services funding is rarely identifiable in country budgets and in low income countries services are often "paid out of pocket".
- While the UN Convention on the Rights of the Child is identified by most countries as a significant document, rarely are the child mental health related provisions of the Convention exercised.
- The work of non-governmental organizations in the provision of care rarely is connected to ongoing country level programs and too often lacks sustainability.
- The development and use of "self-help" or "practical help" programs, not dependent on trained professionals, in developing countries appears to be more a myth than a reality.
- In 62% of the countries surveyed there is no essential drug list for child psychotropic medication. In 53% of the countries there are no specific controls in place for the prescription of medications.
- Although worldwide there is a great interest in ADHD, in 47% of countries psychostimulants are either prohibited or otherwise not available for use.

The Child and Adolescent Mental Health Policy Module

The Atlas project is complemented by the Child and Adolescent Mental Health Policy Module, which is part of a larger mental health policy and service guidance package project. This effort comes with the recognition that there is a virtual worldwide absence of mental health policy for children and adolescents, which has hindered service development (21). The document is aimed toward ministers of health and other policy developers, and provides precise guidance on policy development to support child and adolescent mental health services. The module recognizes that, without policy at the country level, there is little likelihood of priority setting, financing, and accountability.

The WPA Presidential Global Program on Child Mental Health

The objectives of this program, supported by an unrestricted grant by Eli Lilly, are:

- To increase the awareness of health decision makers, health professionals, and the general public about the magnitude and severity of problems related to mental disorders in childhood and adolescence and about possibilities for their resolution.
- To promote the primary prevention of mental disorders in childhood and adolescence and foster interventions that will contribute to the healthy mental development of children and adolescents.
- To offer support for the development of services for children and adolescents with mental disorders and facilitate the use of effective methods of treatment.

The program was an initiative of Ahmed Okasha, as President of the WPA, and is coordinated by an International Steering Committee, chaired by him. There are three task forces within the program: the Task Force on Awareness, the Task Force on Primary Prevention, and the Task Force on Mental Health Services, Management and Treatment. The program has led to several worldwide initiatives, e.g. field trials on school drop-out carried out in Alexandria (Egypt), Nishnij Novgorod (Russia) and Porto Alegre (Brazil). Results of the program have been presented at the World Congress of Psychiatry in Cairo.

Advocacy for services

It is a constant challenge to develop and sustain programs to support the care of children and adolescents with mental disorders.

Advocacy seeks to keep the needs of these populations on the agenda of nations and communities. Parental advocacy has been a force for the development and maintenance of programs. Professional organizations of all types have also advocated for care, but often in a manner serving the particular needs of their profession. It should be the aim of all international organizations devoted to mental health of children to facilitate broader advocacy efforts everywhere in the world.

Advocacy for child and adolescent mental health should not be the sole domain of mental health professionals or those impacted by mental disorders and their families. The health, social service, juvenile justice and education sectors also have key roles in providing advocacy for child and adolescent mental health services.

Training seminars for mental health professionals

The IACAPAP, together with the European Society for Child and Adolescent Psychiatry (ESCAP) and the Italian Foundation CHILD, has developed a series of research seminars for child and adolescent psychiatrists and others. This movement started in Europe and is now extended to the Eastern Mediterranean region. The major aims of these seminars are to enable child psychiatrists and others to learn about and apply the most advanced diagnostic and intervention methods, to carry out high-quality research studies and to function in their region as scientific and clinical resource persons for the development and application of evidence-based diagnostic and treatment measures as well as for the establishment of appropriate services.

LEGAL AND ETHICAL ISSUES

The main cornerstone for the improvement of child and adolescent mental health, as well as general health, is the UN Convention on the Rights of the Child. This convention is a powerful tool for use with governments to support the development of care for children and adolescents everywhere in the world. Other important documents and conventions of great importance are: a) the Declaration of Helsinki (1984), revised in Tokyo (1995) and in Edinburgh (2000), codifying the ethical principles of research in medicine; b) the Bioethics Convention of the European Union; c) the Belmont Report proposed by the US National Commission for the Protection of Human Subjects in Biomedical and Behavioral Research (1978); d) the Declaration of Madrid of the WPA (2002), containing the ethical principles of research with human beings.

The IACAPAP is an umbrella for child and adolescent mental health organizations throughout the world and has paid special attention to the promotion of the rights of children. Ethical issues have always been a major concern of the association and form an important part of its training activities.

The association has been an advocate for mentally handicapped and disabled children all over the world. In the legal sphere, its advocacy has focussed on the promulgation of declarations addressing major issues related to care, treatment and prevention, and research in child and adolescent populations impacted by mental disorders. These declarations are widely circulated as advocacy documents to ministries of health and education, key decision-makers, professionals and others, with the aim to improve the situation of mentally and behaviorally impaired children and their families.

The recent Declaration of Berlin, released on the occasion of the 16th IACAPAP World Congress in August 2004, advocates for: a) informing governments about child and adolescent mental health in the development of post-conflict programs; b) the support of national policies to foster mental health, independent of political philosophies, and to ensure continuity in programs; c) the inclusion of a provision to support child and adolescent mental health services in treaties of reconciliation, as part of essential guarantees at the cessation of hostilities; d) the initiation of sustainable mental health programs for children and adolescents.

CONCLUSION

Child and adolescent psychiatry and child and adolescent mental health services have evolved in remarkable ways in the past few decades. Old myths, old treatments and old policies are no longer to be tolerated. In this new era there is the opportunity to develop and implement evidence-based interventions, modern training programs and effective policies. Advocacy for these initiatives is the responsibility of many. The reward will be to see a healthier and happier population of children and adolescents and more productive and stable societies.

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Some reflections on the development of child and adolescent psychiatry

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Remschmidt and Belfer have provided us with a very comprehensive survey of the main efforts that have been made in the last 20 years by various organizations to increase awareness of the children's emotional needs and promote their mental health. Still, one may wonder: why do we need so many advocates, laws, and conventions for children's rights? Why do some adults have to convince other adults that children have rights, including the one to be treated when emotionally ill? Why do we need to create systems whose main aim is to check that these conventions and laws are indeed applied, as if we suspected a priori that they will not?

Looking for an answer to these troubling questions, we suggest to reflect on the development of child and adolescent psychiatry, as a parallel process to the development of the perception that the adult society has of children. This has been quite a peculiar process: from the publication of Freud's case of Little Hans, it took more than 50 years to have a domain called child psychiatry. Adolescents were not perceived as different from adults, and the very notion that younger children have specific emotional needs was still very far away, in spite of the developmental psychopathological implications of Little Hans's case (obvious for us today). Then, in a slow and gradual process, triggered by the social revolution, adolescence was separated from adulthood, and researchers as well as writers started to study the specific normal and abnormal developmental paths of adolescence. The "discovery" of childhood depression was a major hallmark in the societal process of realizing that children can understand and feel, and therefore have a mental life. From then on, the domain of child psychiatry started to exist.

Then, again with a delay of 40 additional years, came the first publications and international meetings about developmental capacities of infants, demystifying the "tabula rasa" concept. Spitz's clinical observations on anaclitic depression in infants, and Bowlby's theory of attachment, published many years before, "suddenly" became relevant and helped to understand clinical states that existed all along, but had been ignored by the traditional medical community. From then on, an amazing bulk of studies on normal and pathological development of infants emerged and the domain of infant mental health was created.

Theoretical constructs change with the progress of knowledge, and nowadays more is known about continuities and discontinuities from infancy to adulthood through childhood and adolescence, due to longitudinal studies of attachment, temperament and various disorders in infancy. Continuity in psychopathology has been found much more common than expected, though the symptomatic expressions may differ according to the age and the child's developmental stage.

This amazing interplay between societal changes and scientific new knowledge should have been sufficient to convince health policy makers that resources must be allocated to the mental health care of infants, children and adolescents. However, as Remschmidt and Belfer have described, this is not the case, especially in some parts of the world, and in spite of numerous epidemiological studies. Therefore, we suggest looking for additional explanations for what we could name a "resistance".

We may identify two groups of societal factors: "political" and psychological. On the political side, parents' non-governmental organizations play a major role in lobbying, for instance, for autism, but not for anxiety disorders of childhood, nor psychoses. The result is a disproportionate allocation of resources to very specific disorders/conditions, regardless of epidemiology. In certain situations, decision makers may decide to allocate significant resources to post-traumatic stress disorder, again in a disproportionate manner, because they feel it is "politically correct". These priorities lead to increased research budgets for awareness and prevention of specific disorders, and none for others.

In parallel to these political factors, more subtle psychological variables may be at work. Some of the "difficult to convince" health policy makers may have "repressed" the child who is inside them, which may impinge on their ability for empathy and for reflecting on the children's needs.

Finally, we would suggest addressing not only the question of *what* should be done for improving our children's mental health, but also *where* this should be done. Indeed, one of the major settings where infant, child and adolescent psychiatry has developed is children hospitals. An increasing attention has been devoted to child and adolescent liaison psychiatry, and infant psychiatry has found its "natural" place in hospitals, because the main expressions of emotional distress at that age are somatic. Adolescent psychiatry is still mainly located in psychiatric hospitals, although there is a trend towards creating therapeutic boarding schools for adolescents. It is widely accepted today that child and adolescent psychiatry should be settled in the community, while keeping a certain number of beds in children hospitals and psychiatric hospitals. Nevertheless, this does not happen, in part due to a conflict between the patients' needs and the doctors' academic ones. Indeed, in most countries, academic positions require working at a university hospital. Consequently, the teachers themselves stay at the hospital, and cannot teach what they do not do, i.e. community psychiatry. As long as it is so, "community psychiatry" – which I do believe is the future of our discipline – will remain just a slogan.

Last but not least, related to our identity as child and adolescent psychiatrists, we are on the edge of two domains: pediatrics and psychiatry. In order not to be forced to answer the question “Whom do you love more, mom or daddy?”, child psychiatry must remain an independent discipline with its own training program and research agenda.

Improving mental health care for children and adolescents: a role for prevention science

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Among all the topics raised by Remschmidt and Belfer, the most crucial might be their call to identify etiological factors to inform prevention programs. Modern prevention science is based on the concept of targeting or altering known risk factors or enhancing known protective factors that occur early in the chain of developmental events leading to disorder (1).

Primary prevention refers to any interventions that stop the onset of disease. They could block early environmental insults or mitigate the effects of genetic vulnerability. For example, improving the pre-, peri- and post-natal care of children born to families at risk for psychopathology might limit the impact of genes and spare children from the onset of disorders. They could also block later environmental insults in early childhood. For example, having identified a child at high risk for depression, we might use a family intervention program to help the family reduce stressors known to trigger depression. Secondary prevention does not prevent illness, but mitigates its course.

Prevention protocols distinguish two types of target populations. Selective preventive programs focus intervention resources on high risk children. For example, because young children with psychopathology are known to be at high risk for substance abuse in adolescence, they would be a logical group to use for a selective preventive program for substance abuse. In contrast to selective interventions, universal preventive programs apply prevention resources to all members of a designated population without regard to high risk status. Such programs are usually implemented in community settings such as schools.

Because universal programs target all children, they cannot be intensive or expensive and that constrains their efficacy. Yet some are clearly sensible, such as providing quality care to pregnant women. We have a limited ability to implement or design selective primary preventive interventions because we have yet to discover predictors that will allow us to identify with accuracy who will and will not become ill prior to the onset of a frank disorder. It is true that much research has validated statistically significant predictors of onset, but most of these are not sufficiently accurate to assure that the large majority of children selected for an intervention are truly at risk. Research aimed at discovering risk genes or neurodiagnostic measures of risk may provide accurate predictors in the future.

Mental health clinicians have the ability to implement selective secondary interventions but these are not routinely implemented. The potential for selective secondary intervention is clear in the treatment of psychosis. Wyatt’s (2) review of twenty-one controlled studies found that schizophrenic patients who had been treated with antipsychotic medication during their first or second hospitalization had a better outcome than patients treated later. A more common example comes from the attention-deficit/hyperactivity disorder (ADHD) literature. ADHD children are at high risk for subsequent substance use disorders and a review of longitudinal studies showed that pharmacotherapy in childhood reduced the risk for substance use disorders in adolescence (3). As a general principle, treatment early in the course of a disorder should improve the outcome compared with treatment later in the course of illness, although we need more research to document the generalizability of this effect.

Clinicians can practice selective secondary prevention by using the well documented fact that children with one disorder are at high risk for having another (4,5). This suggests clinicians should periodically screen for psychiatric comorbidity and routinely educate parents about the potential for emergent disorders. Because effective parent-report instruments are available (6), such screening minimally burdens clinical resources. For example, given data suggesting that twenty to fifty percent of depressed youth will eventually have a manic episode (7,8), clinicians have a clear opportunity to identify and treat mania at its earliest stages.

Clinicians can avoid treatment delays by discarding unvalidated therapies and by using effective therapies in an efficient manner. When a survey asked American pediatricians what their first line treatment recommendation would be for a child with ADHD, 33% responded “counseling or psychotherapy” even though such treatment is known to be less effective than pharmacotherapy (9). This is an example of a widely held clinical belief that a less effective (and in some cases untested) psychosocial intervention should be the first line of treatment because it is safer than a more effective pharmacotherapy. But that logic breaks down when one considers the risks of delaying ineffective treatments. For mood disordered children, the risk could be suicide (the third leading cause of death among adolescents); for ADHD children it could be another year of falling behind in school (which makes subsequent years even more of an ordeal), and for any youth with psychopathology it could mean an increasing cumulative burden of family stress and psychosocial disability (which complicates any subsequent treatment delivered after the less effective treatment fails). In the short time scale of childhood, delaying treatment can have massive effects on a child's development. If we delay effective treatment for two years when treating a mentally ill four year old, by the time the child is six, we will have exposed one-third of his life to the adverse impact of undertreated mental illness.

Remschmidt and Belfer provide a cogent and compelling rationale for societies worldwide to address the mental health needs of children and adolescents. Their health economic analysis and discussion of successful systems of care provide ample evidence that youth with psychopathology are underserved. One hopes that prevention science will become a top priority, when their call for action is heard, among the politicians and bureaucrats who plan the allocation of scarce resources, the mental health professionals who provide treatment, and the commercial interests that increasingly guide the development of novel pharmacotherapies.

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Developing modern child psychiatry

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It is a paradox that, in the second half of the 20th century, indicators of social wealth and physical health amongst children worldwide have improved, while mental health indices in young people have been deteriorating (1). Although there is still a lack of epidemiological data in developing countries about mental health problems in children, the bulk of the evidence suggests that one child or adolescent out of eight does suffer from mental health problems at any given point in time. It is also a paradox that very few of these children access mental health services in order to relieve their problems at a time where child psychiatry has developed new treatment approaches with demonstrated efficacy.

As pointed out in Remschmidt and Belfer's review, systems of care are needed in each country to deal with mental health issues of young people. These systems are unevenly developed worldwide, and unmet needs are substantial. The systems of care in developed countries have evolved through historical steps, with an initial concentration of psychiatric care in psychiatric institutions and the progressive development of child guidance clinics and outpatient programs and, more recently, more emphasis on community-based approaches. It is important to take this historical evolution into account and, for those countries which do not have systems of care currently in place, it would be a mistake to develop psychiatric services as they were developed elsewhere in the middle of the 20th century.

The philosophy of care, not only in psychiatry but in medicine at large, has changed, and emphasis is now placed onto quick access to care for patients irrespective of their geographical location or social or cultural position. The expertise of mental health professionals must follow the patients where they are rather than being concentrated in difficult to access expert centers. As this evolution in service delivery took place, the role of child psychiatrists has also changed. Child psychiatrists who, decades ago, were treating a small number of patients with play or family therapy for several months, now take on a consultant role for mental health professionals and other health professions in general. This means that child psychiatrists have a key role to play in devising health care delivery systems and that they must act in close partnership with other professionals, including nurses, general practitioners, family doctors, or pediatricians working in the community. Many of the evidence-based techniques to treat behavioural and emotional disorders can be delivered by other professionals than child psychiatrists, who will remain in insufficient numbers whatever happens in the next 20 years.

In improving access to care, the role of technology should be emphasized. Many countries have been struggling with systems of care which failed to deliver specialized services to distant regions with low population density. This is the case for Canada, Australia and many other countries worldwide. The development of telemedicine has been spectacular as a response to this difficulty and should be part of the planning of new systems of care in developing countries. Similarly, these techniques – or web-based approaches – can be used to facilitate the training of professionals in efficient and rapid format, also providing convenient means for ongoing supervision and consultations after the first training packages are administered.

Finally, it is true that advocacy is required and that professional organizations must lobby for the children's rights and for the promotion of child mental health by governments. Yet, the experience of many countries has shown that child psychiatry has developed when local leaders have emerged and played an influential role in their own country to promote mental health approaches. It is therefore important that international organizations as well as established academic centers worldwide follow a proactive approach to identifying training and mentoring investigators who might have the required leadership skills to impact on their systems of care efficiently.

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The future of child and adolescent mental health

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Remschmidt and Belfer provide a widely ranging, internationalist survey of mental health care for children and adolescents. The results are sobering. Despite the United Nations Convention on the Rights of the Child, epidemiological surveys of children's mental health and the burden of their problems, increasing knowledge of the principles of prevention, and advocacy for children by a number of international organizations, the Atlas survey by the World Health Organization reveals a worldwide paucity of specialized services, fragmented systems of care, and an absence of mental health policy for psychiatrically disturbed minors.

Why should this be so? In developing countries preoccupied with nutrition, water supplies, and infectious diseases, the answer is obvious. It is less clear in the more advanced countries of Europe, North America, Asia, and Australia.

Until the last 100 years, children's needs were not differentiated, and the problems of adults took precedence. Child psychiatry evolved from education, pediatrics, and adult psychiatry, often with difficulty. It is only in Europe that the profession has gained sufficient independence from its parent disciplines to be able to advocate for the needs of children. What should be done? Are any principles relevant worldwide? I recommend the following:

- Each country should press for a national mental health policy, with separate, specific recommendations for children.
- The policy should include sections on promotion, prevention, treatment, and monitoring (1).
- Mental health promotion requires attention to antenatal care, maternal mental health, infant and preschool language stimulation, and the avoidance or reversal of ethnic and social class discrimination.
- Prevention involves the elimination of risk factors and the enhancement of resilience by promoting social skills, learning, competence and a sense of efficacy. More needs to be known about the gene-environment interactions that lead to good and poor mental health.
- A minority of children with mental health problems receive any treatment. Even fewer receive specialized services. Advantaged countries must expand specialized services and extend their potential by educating primary care providers and incorporating them in systems of care.
- The cost-effectiveness of promotion, prevention and treatment should be monitored.
- Developing countries should decide how treatment could be implemented by their primary care clinicians, and seek help for training from developed countries.
- Public ignorance of and resistance to child mental health services must be addressed.
- Where impoverished countries are embroiled in war (internecine or otherwise), intervention is likely to be fruitless.

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Children's right to mental health. How adults have failed youth worldwide: the Latin America case

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Remschmidt and Belfer review the quality of mental health services for children and adolescents worldwide from the perspective of the children's rights. Not surprisingly, they point out the lack of data to assess quality of services in the areas of the world, such as Africa and Latin America, where these systems need more revision and where the violation of children's rights is likely to be more pervasive.

Children have rights, and among them, the right to health care. However, the blatant violation of children's rights in developing as well as industrialized countries worldwide is common knowledge. The very individuals expected to protect minors are frequently the main culprits in this unfortunate global tragedy, perpetuating mental and physical disorders in this population and creating the conditions for further violation of human rights. Juvenile judicial systems, health care agencies, the entertainment industry, the media, politicians, professionals, the church and even parents across the world are all-too-commonly implicated in the practice of innumerable forms of violence directed against minors, such as severe corporal punishment (including judicial and extra-judicial execution), illegal adoptions, sexual abuse (including child pornography and prostitution), and their exploitation through child labor or as fighters in armed conflicts (1). The global panorama in these regards is appalling.

It is true that the Convention on the Rights of the Child is the most widely ratified rights treaty in history, as only two countries, the United States and Somalia, have not ratified it (2). The Convention sets standards in health care, education and legal, civil and social services. Unfortunately, from theory to fact there is a big gap, and true implementation of the actions and policies to reach standards and benchmarks articulated in the Convention remains at best incomplete in most countries.

In Latin America, most children live in poverty and face numerous risk factors leading to mental illness, such as family disruption, social unrest, drug trafficking, criminality, and natural disasters (3,4). The prevalence of mental disorders is similar to the 15% to 20% found in other areas of the world; in contrast, very few are identified by primary care practitioners, and even fewer receive appropriate treatment (5). Furthermore, on average, national health expenditure is significantly lower than in the developed world (4), and, although data are certainly incomplete, mental health services for children are clearly underdeveloped in most Latin American countries (6).

Factors contributing to this tragedy are varied and go from scarcity of funding to poor education about mental health issues in the target population. But let us not fool ourselves. The main cause lies in the lack of commitment on the part of the national and global entities entrusted with the responsibility to develop effective national and regional policies and plans for child mental health programs (6). This creates a vicious cycle that goes from lack of services to lack of diagnosis, treatment and prevention, to lack of appropriate data to inform planners and policy makers. Until that cycle gets broken by a serious and well coordinated global effort from institutions such as the World Psychiatric Association, the World Health Organization and its regional branches, local ministries of health and non-governmental organizations concerned with the wellbeing of children, the tragedy children live today concerning mental health will go on forever.

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Mental health care for children and adolescents: a regional perspective

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Nowadays, the whole world is in a flux of transformations in social structures, cultural values and behavioral patterns. People move around the world, migrate and return, live abroad and raise children abroad. They are bound to live together with other ethnic and cultural groups, and to get in touch with different cultural orientations and values. "Cultural invasions", cultural pluralism and clashes between cultures are inevitable consequences. New crises or an intensification of the existing crisis in child rearing and child mental health can be expected.

Conflicts between cultures occur not only at the international level, but also within a country or even within each individual. Globalization in economies, politics and cultures and the consequent clash of civilizations demand a global ethics and a new way to coexist. Likewise, we, child mental health professionals, are forced to think of mental health in a global perspective and to acknowledge the need for developing effective preventive and therapeutic interventions on a global scale.

In this context, the paper by Remschmidt and Belfer is timely and extremely relevant in providing data on the current status of child mental health care and advocating for the development of child mental health services worldwide. It is remarkably rewarding to see recent efforts of the World Psychiatric Association, the International Association for Child and Adolescent Psychiatry and

Allied Professions, and the World Health Organization in emphasizing the crucial importance of mental health care for children and adolescents.

More than 50% of the countries in the world lack any formal child psychiatric service, and only a few countries have established a successful service system. In order to start a child mental health service program in any country, it is essential to secure qualified child psychiatrists who will be the pioneers for the development of child psychiatry. Training people abroad, e.g. in the USA or the UK, is very consuming in time and money. It is also limited in terms of the number of trainees and the contents of training, which may not be culturally appropriate. Therefore, I would like to propose that regional training centers for child psychiatry/child mental health be established in all regions of the world (e.g., one or two centers in Asia, Africa, South America). International societies, such as the International Association for Child and Adolescent Psychiatry and Allied Professions, could help the regional centers by providing lecturers and faculties.

It should be pointed out here that most of the international meetings in our field seem to be geared toward spearheading rigorous scientific research projects and downplaying clinical research projects in the countries where child psychiatry has just been established. Psychosocial research carried out in developing countries is often disregarded and rejected, and sophisticated biological research conducted in developed countries is given priority, because the former is considered "sloppy, not enough empirical". If any scientific organization wants to be truly international, it will have to take into account that most non-Western countries are still at varying stages and degrees of scientific sophistication. International meetings and journals should not be designed only for Western developed countries. We should also reevaluate the relevance of training psychiatrists from non-Western developing countries at the training institutions of Western countries. Cultural sensitivity, cultural relevance and cross-cultural issues should be emphasized as part of training abroad. The curriculum should include the social and cultural changes due to modernization and their impact on mental health, cross-cultural psychiatry, anthropology and ethnology.

I would like to make a plea that the leading international organizations like the World Health Organization, the International Association for Child and Adolescent Psychiatry and Allied Professions and the World Psychiatric Association should continue their efforts and take necessary actions to assist the establishment of child psychiatry/child mental health services in developing/underdeveloped countries, and that international scientific meetings should allocate time to discuss the issues involved in establishing child psychiatry services and the clinical problems of developing countries which do not have adequate child mental health/child psychiatry services.

Mental health care for children: the needs of African countries

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There is a crying need for developed countries and non-governmental agencies based in those countries to assist developing countries with the training of personnel like child psychiatrists, psychologists, and psychiatric nurses interested in the treatment of psychologically and mentally handicapped children. The few child psychiatrists available to meet the needs of huge numbers of children and adolescents in need of treatment are at the moment "jack of all trades" in all aspects of mental health care. The thrust of services as brilliantly articulated in Remschmidt and Belfer's paper for Europe and North America, while generally seen as heuristic, is still largely a dream in Africa and may remain so for several years to come.

While dearth of personnel and services are crying for attention, it is generally agreed that preoccupation of families is still the *survival* of children. When psychological, general developmental and learning or coping difficulties appear, there is very little action organized in a purpose-oriented manner in many parts of Africa. The development of health and allied social services rank very low in African governments priorities, as this aspect of services competes with provision of infrastructural and other social services such as roads, portable water, light, food, education, housing, communication, etc.

Children from educated or "affluent" homes do get seen by health workers, e.g. psychiatrists, general and specialist doctors. Very little is known about the real outcome of these contacts, because such programmes are poorly organized, neither are they sustainable.

Meagre and unquantifiable as services for children and adolescents in many parts of Africa may be, a programme of training seminars for mental health personnel organized by the World Psychiatric Association would be extremely useful for sub-Saharan Africa countries. Apart from the real possibility of such an initiative being a launching pad for pragmatic approach by such health professionals presently available in the sub-region, such seminars could result in a meaningful and worthwhile impact on African governments, in particular where lack of programme development is due to lack of political will.

Intervention in child abuse and neglect: an emerging subspecialty in child and adolescent psychiatry

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Remschmidt and Belfer rightly point out the importance of developing rights-based and evidence-based policies for dealing with child and adolescent mental health problems. Awareness, prevention and intervention are especially required, and achievable, in the area of child abuse and neglect (CAN).

All types of CAN can produce short- and long-term psychological sequelae. "Abused children have learned that their world is an unpredictable, often hurtful place. The adults who care for them may be angry, impatient, depressed, and distant. Further, they can be transformed without warning into hostile, violent persons" (1). The young child may feel incompetent, unlovable, helpless and powerless, and become suspicious of others. Older children often demonstrate emotional problems, such as depression and anxiety. Verbally and physically aggressive behavior as well as passive compliance and avoidant behavior have been reported. Physically abused children frequently have significant problems in their ability to develop and sustain peer relationships (2). A history of sexual abuse may contribute to becoming a sexual offender (3,4).

In contrast to physical and sexual abuse (where children experience visibility, albeit negative), the neglected child feels invisible. Neglected children have been shown to become helpless and passive, and to display less affect, either positive or negative, in their peer encounters (5).

A systematic review has shown that both male and female victims of abuse have significantly higher rates of psychiatric treatment than the general population (6). Accordingly, it is essential for psychiatrists to consider a history of childhood abuse in their patients, and be familiar with the definitions, dynamics, and effects of all forms of CAN. Child and adolescent psychiatrists must also be able to work with parents and families. The complexity of CAN cases make it a necessity that psychiatrists cooperate not only with nurses, pediatricians, psychologists, psychotherapists and clinical social workers, but also with child protection workers, criminal justice professionals and the judiciary.

The realization that CAN is relevant to a variety of child, adolescent, and adult mental health problems, and the dramatic increase in cases, have created a need for clinical specialization with child victims and adult survivors of CAN. The Physical Abuse Assessment Model, the Physical Abuse Process Therapy Worksheet (7) and the "abuse-focused therapy" are examples of efforts aimed at meeting this need. Moreover, recent years have witnessed the emergence of national, regional and international professional associations based on a multidisciplinary membership of mental health, social work, medical and criminal justice professionals and the judiciary. A main international example is the International Society for the Prevention of Child Abuse and Neglect (ISPCAN) and its regional partner networks such as the Network of Arab Professionals for the Prevention of Child Abuse and Neglect. Professional journals, e.g. the ISPCAN Journal, that specifically focus on CAN are another important development, because they keep the field updated on new research.

CAN intervention as a subspecialty in child and adolescent psychiatry is feasible, and could be encouraged if basic and advanced training were offered in undergraduate and graduate level courses, and if courses on CAN were required for those applying for license renewal.

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RESEARCH REPORT

The European Prediction of Psychosis Study (EPOS): integrating early recognition and intervention in Europe

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This paper provides the rationale and design of the European Prediction of Psychosis Study (EPOS), the first European prospective transnational field study of the prodrome and moderating risk/resilience factors of psychosis. As different health systems provide different structures of care, prevention programmes will only be successfully implemented and sustained system-wide, if they can be adapted to the system's special opportunities and needs. EPOS will provide a sound data base for a future evidence-based prevention of psychosis. Data on the recruitment of subjects and on the distribution of the four clinical criteria for an at-risk mental state for psychosis are given.

Key words: EPOS, psychosis, schizophrenia, prodrome, early detection, prevention

The European Prediction of Psychosis Study (EPOS) is the first European multicentre investigation focusing on early detection of persons at risk for psychosis, particularly schizophrenia, and was designed as a prospective, longitudinal, naturalistic field study. Originally designed by centres in Germany, Finland, The Netherlands, UK and Spain, the study is carried out in Cologne, Berlin, Turku, Amsterdam, Birmingham and Manchester, which together cover a catchment area of approximately 7.5 millions inhabitants.

EPOS addresses four main issues which are important in current research on early detection of psychosis:

- *Pathways to care:* How do persons at risk for psychosis access their health care system, and how does this vary between the different European Union healthcare settings? A systematic retrospective assessment of pathways to care and onset of symptoms, and an evaluation of delays and obstacles to adequate treatment will form an empirical database to design awareness and prevention programmes for the community in order to reduce the duration of untreated illness.
- *Prediction of psychosis:* What should be assessed in order to predict transition to psychosis? The predictive validity of past and present symptoms and deficits, of risk indicators and of personality, neurocognitive and neurobiological measures, as well as their possible synergisms, is evaluated.
- *Disabilities:* When and how do social, educational, vocational and other functional impairments start in prodromal patients, and what is their course? The systematic prospective assessment of disabilities and quality of life of persons at risk for psychosis aims at operationalized definitions of their deficits and needs in the prodromal stages of the illness. EPOS is the first study designed to reveal the onset, prevalence and determinants of disabilities in the prodromal stages of psychosis, which is a precondition for an early and targeted rehabilitation.
- *Early interventions:* What kinds of interventions are applied in at-risk individuals, by whom, and what is their cost-effectiveness? Any intervention such as psychotherapy or medication and institutional/non-institutional support offered to persons at risk for psychosis in the participating regions is monitored and evaluated for its cost-effectiveness and benefits to the person. The aims are an assessment of the possible applications and chances of success of early detection and intervention, and the provision of an empirical basis for the development of a common European framework for the care of people at risk for psychosis.

METHODS

Design

EPOS includes a comprehensive baseline assessment and two follow-ups, at nine and 18 months. All persons between 16 and 35 years of age presenting to any participating centre are being screened for the presence of four psychopathological inclusion criteria (Table 1). If at least one inclusion criterion is fulfilled and the person provides his/her informed consent, the baseline clinical examination as well as the neurocognitive, neurophysiological and magnetic resonance (MR) volumetric measures are performed. If inclusion criteria are not fulfilled, the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID, 1) and the Structured Interview for Prodromal Syndromes (SIPS, 2) are performed to complete the clinical assessment, thus establishing two control groups (see below). These groups will be re-examined only after 18 months to record any transitions to psychosis.

Subjects

A minimum number of 250 persons fulfilling at least one of the inclusion criteria listed in Table 1 ("core group") are to be recruited across the six participating centres. The inclusion criteria for EPOS are partly in line with the "ultra-high risk" (UHR) criteria used by the Melbourne and Yale groups (3,4). In addition, the basic symptom cluster "cognitive disturbances" is used as a fourth criterion (5,6). Moreover, the genetic risk criterion is extended to second-degree relatives with a psychotic disorder. Differently from the Melbourne criteria, brief limited intermittent psychotic symptoms (BLIPS) are not operationalized using the Brief Psychiatric Rating Scale, but using the Positive and Negative Syndrome Scale (PANSS, 7), which has the advantages of a more reliable item scoring and of the correspondence to the SIPS.

Table 1 Inclusion criteria for the EPOS core group

Attenuated positive symptoms (APS)
Presence of at least one of the following SIPS symptoms with a score between 3 and 5 and an appearance of several times per week for a period of at least one week:

- Unusual thought content / delusional ideas (P1)
- Suspiciousness / persecutory ideas (P2)
- Grandiosity (P3)
- Perceptual abnormalities / hallucinations (P4)
- Disorganized communication (P5)
- Odd behaviour or appearance (D1)

Brief limited intermittent psychotic symptoms (BLIPS)
Presence of at least one of the following PANSS symptoms that resolve spontaneously in 7 days and an interval between episodes with these symptoms of at least one week (two episodes of BLIPS separated by less than one week are considered as being one episode; if the total duration then becomes more than one week, the transition criterion is fulfilled):

- Hallucinations (PANSS P3 score ≥ 4)
- Delusions (PANSS P1, P5, P6 score ≥ 4)
- Formal thought disorder (PANSS P2 score ≥ 4)

Familial risk plus reduced functioning
A change in mental state or functioning leading to a reduction of 30% or more on the Global Assessment of Functioning scale for at least one month within the last year compared to the highest level of previous functioning, plus at least one of the following risk indicators:

- One first- or second-degree relative with a history of any DSM-IV psychotic disorder (not due to a medical factor or substance induced)
- A schizotypal personality disorder of the index person according to DSM-IV

Basic symptoms
Presence of at least two of the following symptoms from the cluster "cognitive disturbances" for more than one year, with a BSABS-P score ≥ 3 during the last three months:

- Inability to divide attention (A.8.4)
- Thought interferences (C.1.1)
- Thought pressure (C.1.3)
- Thought blockages (C.1.4)
- Disturbances of receptive speech (C.1.6)
- Disturbances of expressive speech (C.1.7)
- Disturbances of abstract thinking ("concretism"; C.1.16)
- Unstable ideas of reference ("subject-centrism"; C.1.17)
- Captivation of attention by details of the visual field (C.2.9)

SIPS – Structured Interview for Prodromal Syndromes; PANSS – Positive and Negative Syndrome Scale; BSABS-P – Bonn Scale for the Assessment of Basic Symptoms - Prediction List

The control group I includes subjects suffering from attenuated positive symptoms (APS) or BLIPS or any of the 21 cognitive, perceptual and motor disturbances included in the Bonn Scale for the Assessment of Basic Symptoms – Prediction List (BSABS-P, 8), but not fulfilling the inclusion criteria listed in Table 1 (i.e., APS/BLIPS not within the last three months but within the last year, or basic symptoms below threshold concerning number, cluster or time frame).

The control group II includes subjects who seek help, but throughout their lifetime have never experienced any APS, BLIPS or BSABS-P symptoms and do not currently fulfil the inclusion criterion of familial risk and reduced functioning.

Only if inclusion criteria are fulfilled, exclusion criteria are assessed. These are given in Table 2.

As a continuation of the BLIPS definition, a transition to psychosis is defined by the presence of psychotic symptoms – i.e. hallucinations (PANSS P3 score ≥ 4), delusions (PANSS P1, P5 or P6 score ≥ 4) or formal thought disorders (PANSS P2 score ≥ 4) – for more than one week.

Assessments

To fulfil the four main objectives of EPOS, a thorough multi-level assessment of past and present psychopathology, personality, neurocognitive, neurophysiological and structural brain abnormalities is being carried out. Pathways to care, disabilities, and quality of life are also assessed. Treatment will be documented and direct and indirect costs of the illness will be calculated.

Socio-demographic data and general psychopathology

A Basic Data Form (9), which was developed for the purpose of EPOS, briefly reviews the person's sociodemographic background, physical health, obstetric and family history,

Table 2 Exclusion criteria for the EPOS core group

- Previous psychotic episode for more than one week

- Symptoms are due to substance abuse:
  - for *cannabis,* if a symptom has not been definitely present before the use of the substance, there has to be a drug-free period (if the symptom is still present during the drug-free period, the subject can be included). If a symptom was definitely present before the use of cannabis, the subject can be included despite a present abuse.
  - for other *hallucinogens and amphetamines,* the drug-free period has to be three months, i.e. new symptoms have to be still present after this period. An ongoing use of these drugs is an exclusion criterion.

  Alcohol dependence is an exclusion criterion, but alcohol abuse is not.

- Symptoms are due to an organic mental disorder (such as intoxication or neurological disorders)

- Verbal IQ below 85

as well as premorbid adjustment, social functioning and disability by psychiatric symptoms. For the latter, the Premorbid Adjustment Scale (PAS, 10) and the Prognostic Scale (S&C-PS, 11) were incorporated into the Basic Data Form.

The SCID (1) is applied to rule out present or past psychosis and to evaluate comorbid conditions. Parts of the Composite International Diagnostic Interview (CIDI, 12) are used to assess substance use/abuse, that is considered to be an environmental factor eliciting psychotic relapse (13,14).

Prodromal symptoms

The SIPS (2) is used as a comprehensive diagnostic tool designed specifically for the assessment of a broad spectrum of prodromal signs and symptoms. The BSABS-P (9) is used to assess 21 self-experienced cognitive, perceptual and motor disturbances found to be predictive for a transition into psychosis (5,15). The PANSS (7) is used to assess the severity of BLIPS and to extend the SIPS regarding negative symptoms and global psychopathology. After transition, it is applied to assess the severity of the psychotic state.

Lifetime psychopathology and duration of untreated illness are determined with the Interview for the Retrospective Assessment of the Onset of Schizophrenia (IRAOS, 16). All symptoms of the inclusion criteria are assessed with a special Course of Screening Symptoms sheet with regard to first onset as well as course and subjective burden during the last 12 months.

Pathways to care

The previous history of contacts with the health care system, the pathways to care and the delays are assessed with a specifically developed instrument based on the multicentre World Health Organization study on the pathways to care in primary health care (17,18). The updated EPOS - Pathways to Care questionnaire is used to collect information on key issues related to previous contacts with helping agencies, such as presenting symptoms, reasons for the decision to seek care and reasons for delay.

Disability and quality of life

The Global Assessment of Functioning scale (GAF-M, 19) is used to assess the reduction in social functioning as being part of the inclusion criterion "familial risk plus reduced functioning". The World Health Organization - Disability Assessment Schedule II (WHO-DAS II, 20) is used to assess difficulties in maintaining personal care, performing occupational tasks and functioning in relation to the family and the broader social context due to a mental disorder. The revised version of the Modular System for Quality of Life (MSQL-R, 21) is used to evaluate subjective quality of life in several areas: physical health, vitality, material satisfaction, spare time, partnership, family and occupation, as well as psychosocial, affective and general quality of life.

Treatment and cost-effectiveness

The Treatment Documentation Sheet (TDS, 22) is used to document in detail all contacts with health care agencies related to mental health problems, i.e. hours of psychological intervention, number of contacts with health care professionals, dosage of psychopharmacological treatments. It has been developed on the basis of a systematic review of the literature and a systematic, comprehensive collection of treatment settings, modalities and interventions available in the participating areas.

The Client Service Receipt Inventory (CSRI, 23), a well-established instrument for the assessment of direct and indirect costs of illness and cost-effectiveness of interventions, used successfully in European schizophrenia research (24,25), has been adapted for the needs of EPOS.

Additional measures

A screening for DSM-III-R personality disorders is performed with the revised version of the Personality Diagnostic Questionnaire (PDQ-R, 26). Schizotypal personality traits, which have been repeatedly shown to be a risk factor for schizophrenia (15,27,28), are systematically assessed with the Schizotypal Personality Questionnaire (SPQ, 29), whose positive dimension seems to reflect the genetic vulnerability to schizophrenia (30) as well as non-familial psychosis-proneness (31).

The Level of Expressed Emotion Scale (LEE, 32), a self-rating used to assess the person's interactions with his/her most significant other, has been included, because a high expressed emotion level is regarded as a risk factor for psychotic relapses in schizophrenia and may trigger the onset of a first psychotic breakdown in at-risk persons (33-37). Furthermore, its earlier and repeated assessment during the prodromal period will help to clarify the still unclear question of whether a high expressed emotion level in families of schizophrenics should be regarded as a general communication style or the family's reaction to the (developing) illness.

Recollections of trauma during lifetime are reviewed by means of the Trauma and Distress Scale (TADS, 38), because an accumulation of traumatic events were found among schizophrenic patients (39), with a possible, yet unclear contribution to the development of the disorder.

The Beck Depression Inventory (BDI, 40) is included as a self-report scale to review the course and severity of depressive symptoms during prodromal stages and interventions, since depression was retrospectively reported to be the most frequent earliest sign of illness in first-episode schizophrenic patients (41).

Life events are reviewed and evaluated for the 12 months prior to inclusion by a chart adapted for EPOS from the Munich Life Event List (MEL, 42) that also includes an assessment of the appraisal of the event and the degree of subjective burden.

Neurocognitive assessments

The various stages of information processing are monitored with a set of well-established neuropsychological instruments.

The identical pairs version of the Continuous Performance Test (43) is used to measure sustained attention. It has been repeatedly shown to indicate genetic liability to schizophrenia unrelated to schizotypy (44-46).

The Auditory Verbal Learning Test (47) is used to investigate whether at-risk persons show a mnestic profile which is distinguishable, yet similar to that of schizophrenic patients. It assesses recall and recognition of learnt materials, progression in learning, proactive and retroactive inhibition, primacy and recency effects.

The Verbal Fluency Test (48) is used to assess verbal fluency abnormalities, which are regarded as a familial trait marker for schizophrenia (49).

The Finger Tapping Test (50) is used to measure psychomotor abnormalities, since previous research suggested that central aspects of motor aberrations are associated with a liability to psychosis (51).

The assessment of spatial working memory is done by a computerized version of the Spatial Memory Test by Cannon et al (52), that requires remembering a sequence of spatial locations over a brief delay, since spatial working memory impairments are discussed as a possible endophenotypic marker for schizophrenia (53,54).

Biological investigations

High-resolution, three-dimensional T1 and T2 weighted MR scans will be performed. A voxel-based morphometry for significant regions will be done using statistical parametrical mapping (55). As a second step, a region of interest (ROI) based approach will be used. The neurophysiological dimension of information processing and its disturbances will be studied by quantitative EEG and event-related potentials, i.e. mismatch negativity (56) and P300.

RESULTS

By July 2004, 953 persons were screened for inclusion criteria, of which at least one was fulfilled by 340 (35.7%) in the absence of any exclusion criterion. Two hundred thirty-six (69.4%) of these 340 subjects gave informed consent to participate in the study and entered the core group of EPOS. Seventy-one (7.4%) screened persons entered the control group I; 175 (18.4%) entered the control group II. Three hundred sixty-seven (38.5%) persons were excluded, more than 50% of them because of a present or past psychotic episode. One hundred thirty (55.1%) of the core group subjects were male. The mean age of this sample was 22.5 (±5.1) years (range 15-35 years, median 21 years), with no significant difference between males (22.3±4.7 years) and females (22.9±5.6 years).

Among the 236 core group subjects, most reported APS (81.6%). This was closely followed in frequency by at least two basic symptoms of the cluster "cognitive disturbances" (65.5%), whereas BLIPS (12.6%) and the family risk plus reduced functioning criterion (16.2%) were met more infrequently. Thereby, the majority met one (44.2%) or two inclusion criteria (37.8%), seldom three (16.2%) and rarely four (1.8%); 13.5% were included on the basis of cognitive disturbances alone.

DISCUSSION

Prevention programmes, in principle, can follow three different approaches – a universal, a selective and/or an indicated one (57) – which reflect segments of the population as well as levels of risk (58). A universal prevention that targets the general population unspecifically as a whole is obviously not appropriate for a rare disorder of yet unknown, but certainly multi-factorial aetiology (59). Furthermore, a selective prevention approach to schizophrenia aiming at a segment of the population which is clinically healthy, but at a high risk for the disease (e.g., because of a genetic liability) would result in too many false positive and false negative cases. Therefore, an indicated prevention has currently the best prospects of success for schizophrenia, because it targets on persons who already show clinical signs and are possibly in a prodromal state. Thus, when referring to early detection and intervention projects, we focus on an indicated approach in a help seeking population with signs and symptoms associated with a relatively high risk of transition to psychoses and schizophrenia. This practice oriented approach is hitherto regarded most appropriate to examine hypothesized risk and resilience factors, which may increase the accuracy in predicting a transition to psychosis (60).

Current studies focus on two main aims: an evaluation of criteria to define and operationalize the prodrome and an evaluation of therapeutic interventions for treating present signs and symptoms and preventing frank psychosis (3,4,5,15,61-70). Trying to estimate the possibilities of and opportunities for an early detection and/or intervention, these studies had to focus rather strictly on their respective topic, e.g. on the evaluation of a limited number of potentially prodromal symptoms. EPOS not only adapts the UHR concept for the prediction of psychosis, but also uses a basic symptom criterion, "cognitive disturbances", which has been shown to be highly predictive for schizophrenia (5,6). A first analysis of baseline data demonstrates that the "cognitive disturbances" criterion allows the detection of some at-risk subjects who do not meet UHR criteria. Further follow-ups within EPOS will show whether this is an additional group or is detected earlier in course, before the development of APS or BLIPS. In line with other studies (71), most subjects recruited for EPOS exhibited APS.

As a broader approach should improve prediction even at a clinical level, EPOS comprises not only a thorough assessment of the course of symptoms, comorbidity and drug consumption, but also elaborated investigations of potential risk or resilience factors, e.g. personality traits, premorbid adjustment, trauma, development of social and vocational functioning, life events, family atmosphere and quality of life. Furthermore, the possible contribution of biological and neurocognitive aberrations, e.g. disturbances of information processing, has to be tested. In addition to a comprehensive tool for prediction, for the subsequent development of an evidence based prevention programme, data about the current support and interventions in and costs of the prodromal phase are needed. This step does not only serve the economic analysis of current costs, but also meets the demand for a comparative evaluation of costs, cost-effectiveness and cost-benefit of evidence-based prevention programmes (58).

As different health systems provide different structures of care, prevention programmes will only be successfully implemented and sustained system-wide, if they can be adapted to the system's special opportunities and needs (58). In the European context, this strategy is of special importance, as European policy has an increasing impact on public health. Paying tribute to these aspects, EPOS is a hitherto unique project to provide essential data for a future evidence-based prevention of psychosis.

APPENDIX

The EPOS Group is formed by Joachim Klosterkötter, Stephan Ruhrmann, Frauke Schultze-Lutter, Heinrich von Reventlow, Heinz Picker, Katarina Savic, Meike Neumann, Anke Brockhaus and Ralf Pukrop (University of Cologne, Germany); Raimo K.R. Salokangas, Markus Heinimaa, Jyrki Korkeila, Tanja Suomela, Anna-Mari Heinisuo, Jyrki Heikkilä, Tuula Ilonen, Terja Ristkari, Jaakko Rekola, Jukka Huttunen, Jarmo Hietala and Erkka Syvälahti (University of Turku, Finland); Don Linszen, Peter Dingemans, Hiske Becker, Dorien Nieman, Reinoud van de Fliert and Maurice Niessen (University of Amsterdam, The Netherlands); Max Birchwood, Paul Patterson, Amanda Skeate, Leslie Harrison and Chris Jackson (University of Birmingham, UK); Andreas Heinze, Georg Juckel, Henning Witthaus, Seza Ozgürdal, Yehonala Gudlowski and Frank Forstreuter (University of Berlin, Germany); Anthony Morrison, Paul French and Helen Stevens (University of Manchester, UK). The International Advisory Board includes Patrick D. McGorry, Thomas H. McGlashan, Shôn Lewis and Martin Knapp.

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The EUNOMIA project on coercion in psychiatry: study design and preliminary data

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Previous national research has shown significant variation in several aspects of coercive treatment measures in psychiatry. The EUNOMIA project, an international study funded by the European Commission, aims to assess the clinical practice of these measures and their outcomes. Its naturalistic and epidemiological design is being implemented at 13 centres in 12 European countries. This article describes the design of the study and provides preliminary data on the catchment areas, staff, available facilities and modalities of care at the participating centres.

Key words: Coercion, involuntary admission, inpatient treatment

Coercive treatment in psychiatry – including the admission to a psychiatric hospital or ward on a legally involuntary basis as well as the administration of measures such as seclusion, restraint and forced medication – remains an understudied issue (1-3). The only replicated finding in this highly sensitive area is the significant cross-national variation concerning aspects such as provisions in mental health legislations and rates of involuntary admissions to psychiatric hospitals (3,4). Regarding the latter, the various European countries differ by a factor of nearly 20, and most countries report currently increasing rates (5,6). Furthermore, as repeatedly pointed out by patients' organizations as well as at the political level (7), no European guidelines or standards of good practice concerning coercive treatment measures have been established, either from the legal or the clinical viewpoint (3,8).

This situation conflicts with an important general goal of the European Union: standardizing health care opportunities and living conditions for the citizens in the individual member states. On the other hand, the increasing focus, during the past decade, on consumers' perspectives in mental health care (9) has contributed to produce a growing concern that coercive measures in psychiatry may entail unnecessary infringements of patients' rights (10).

Given this complex background, the European Commission is currently funding the project "European Evaluation of Coercion in Psychiatry and Harmonization of Best Clinical Practice" (acronym: EUNOMIA), within its Fifth Framework Programme of Research. As its main objective, this project will analyse the existing cross-national variation in coercive psychiatric treatment, its influencing factors and its outcomes.

The project is being conducted at 13 centres in 12 European countries. The research questions are the following:

1. What are the socio-demographic and clinical characteristics of legally involuntarily admitted patients and of voluntarily admitted patients who feel coerced to admission?
2. How frequent (and intense) is the perceived coercion in patients legally voluntarily and legally involuntarily admitted to hospitals?
3. What coercive treatment measures are applied to these two groups of patients?
4. What is the medium-term outcome for these two groups of patients?
5. What are the baseline predictors of a more or less favourable medium-term outcome in the two groups of patients?
6. What is the international variation in questions 1 through 5?

This article describes the design of the study and provides preliminary data on the catchment areas, staff, available facilities and modalities of care at the participating centres.

METHODS

The study is carried out at 13 centres in 12 European countries: Dresden, Germany; Sofia, Bulgaria; Prague, Czech Republic; Thessaloniki, Greece; Tel Aviv, Israel; Naples, Italy; Vilnius, Lithuania; Wroclaw, Poland; Michalovce, Slovak Republic; Granada and Malaga, Spain; Örebro, Sweden; and East London, UK. Each centre is expected to recruit 250 legally involuntarily admitted patients who are between 18 and 65 years of age, and able to give informed consent. Patients who are assigned to this group have experienced coercive measures during hospital admission, as defined by country-specific legislation. To identify the second study group in each centre, a randomly selected sub-sample of at least 375 patients voluntarily admitted to the wards admitting the legally involuntary patients are screened according to their subjective experience of feeling coerced to admission, using the Perceived Coercion Scale from the MacArthur Admission Experience Survey. Patients reporting perceived coercion in three or more out of the five questions in this instrument are asked to participate in the study.

Each patient is assessed at three time points: within the first seven days after admission (t1), at 4 weeks (t2), and at 3 months (t3) after admission, independent of his/her current living situation (Table 1). The assessment includes documentation of coercive measures, defined as follows. Seclusion is the involuntary placement of an individual alone in a locked room, which may be set up especially for this purpose. Restraint is the fixation of at least one of the patient's limbs by a mechanical appliance or at least one limb being held by staff for greater than 15 minutes. Forced medication refers to activities which use restraint or high psychological pressure (involving at least three staff members) to administer medication against the patient's will. Involuntary detention is defined by any of the following criteria: a) the patient was initially admitted on a legally voluntary basis and withdraws his consent to hospitalization at a later stage; b) the legally defined time period (different between countries) in which the hospital is allowed to initially detain a patient without applying for a decision of the responsible legal authorities has passed; c) the detention is based on the authorization of legal authorities.

The characteristics of the participating centres are assessed by the following instruments: a) the European Socio-Demographic Schedule (ESDS, 11), to evaluate the socio-demographic characteristics of the catchment area; b) the European Service Mapping Schedule (ESMS Version 3, 12) for the standardized description and classification of established mental health services; c) an instrument for the standardized assessment of structural/organizational characteristics of hospitals (13); d) the International Classification of Mental Health Care (ICMHC, 14) for the description of mental health care interventions in the acute wards of the hospitals.

Twelve team members, one from each participating centre, attended a special training session in Thessaloniki to assess the inter-rater reliability for the ICMHC. The inter-rater reliability has been then rated at the day hospital and the acute wards of the Greek study centre and a modified Cohen's linear weighted kappa has been computed.

RESULTS

More than half of the EUNOMIA catchment areas show a population size of approximately 500,000 inhabitants (Table 2); three areas have a substantially smaller popula-

Table 1 Instruments used in the EUNOMIA study to assess patient-related data

Construct	Instrument (source of information)	Time points		
		t1	t2	t3
Perceived coercion concerning hospital admission	Perceived coercion items from MacArthur Admission Experience Survey (patient interview)	X		
Perceived coercion and pressures concerning hospital admission	Cantril Ladder of Perceived Coercion, items from Nordic Study on Coercion (patient interview)	X		
Perceived coercion and pressures concerning stay in hospital (only if index episode continues)	Cantril Ladder of Perceived Coercion, items from Nordic Study on Coercion (patient interview)		X	X
Outcome assessment, e.g. use of psychiatric services and contact with the police and criminal justice services after discharge (only if the patient has been discharged after the index episode)	Self-defined items (patient interview, records)			X
Characteristics of treatment	Self-defined items (records)	continuously		
Details of each coercive measure applied in the first 4 weeks after the index admission	Self-defined items (records)	continuously		
Fixed socio-demographic and clinical characteristics	Self-defined items (records, patient interview)	X		
Variable socio-demographic characteristics	Self-defined items (records, patient interview)	X	X	X
Patient's compliance with treatment	Self-defined items (staff rating if patient is in hospital, otherwise patient interview)	X	X	X
Coercion perceived by staff (only if index episode continues)	Cantril Ladder of Perceived Coercion, rephrased (staff rating)	X	X	X
Patient's aggression (only if patient is currently in hospital)	Modified Overt Aggression Scale (staff rating)	X	X	X
Symptom severity	Brief Psychiatric Rating Scale, 24 item version (researcher's rating)	X	X	X
Symptom severity and level of functioning	Global Assessment of Functioning scale (researcher's rating)	X	X	X
Patient's satisfaction with treatment (retrospective evaluation, if the patient has been discharged after the index episode)	Client's Assessment of Treatment, 7 main items (patient interview)	X	X	X
Quality of life, self-rating (optional to each centre)	Manchester Short Assessment of Quality of Life (patient interview)	X	X	X

Table 2 Characteristics of the EUNOMIA centres

		Dresden	**Sofia**	**Prague (areas 2,3,4,8, 10)**	**Thessa-loniki**	**Tel Aviv**	**Naples**	**Vilnius**	**Wroclaw**	**Micha-lovce**	**Granada**	**Malaga**	**East London**	**Örebro**
Inhabitants in the catchment area		478,631	900,000	477,626	450,000	538,200	2,265,547	217,800	640,367	326,534	445,497	600,000	451,119	273,412
Size of catchment area (km²)		328	1,311	99	ca. 7,000	284	13,595	163	293	4,312	ca. 6,300	ca. 3,600	58	8,546
Character of catchment area		urban	urban + rural	urban	urban + rural	urban	urban + rural	urban	urban	urban + rural	urban + rural	urban + rural	urban	urban + rural
Unemployment (%)		14.7	14.4	5.6	8.1	15.8	24.9	7.1	16.4	34.3	21.9	17.3	11.2	-[a]
Population aged 65 years or older (%)		17.4	15.4	19.7	11.3	9.4	8.1	11.5	14.9	10.7	15.5	14.0	8.0	18.2
Suicide rate per 100,000 inhabitants: males/females		22.9/10.9	17.8/7.5	21.3/5.9	5.7/1.6[b]	10.5/2.6[b]	2.3/0.7	43.3/9.0	12.6/3.5	7.9/0.6	11.4/4.1	12.6/2.8	8.3/1.7	22.9/13.7
ESMS-R2-facilities[c]	no. of beds	305	125	268	68	136	106	86	196	100	30	30	161	89
	staff per bed	1.0	0.7	0.7	0.7	0.5	2.0	0.8	0.7	0.4	1.3	1.2	0.9	2.0
ESMS-R6-facilities[d]	no. of beds	0	70	180	53	0	0	0	184[e]	60	15	20	45	0
	staff per bed	-	0.8	0.4	0.6	-	-	-	0.2	0.3	2.2	1.4	1.1	-
Number of hospitals involved in EUNOMIA		4	2	2	1	1	5	1	1	1	1	1	2	3
Number of acute wards involved in EUNOMIA		5	5	6	1	2	6	2	4	4	1	1	10	7
Number of acute wards always locked		4	5	6	0	2	6	2	4	2	1	1	1	6
General psychiatric beds on these wards		89	139	220	50	68	80	80	110	100	30	30	163	100[f]
Average number of beds per room		1.9	5.6	4.2	1.8	3.1	3.0	8.0	3.3	2.7	1.7	3.0	1.3	1.2
Working hours: physicians (per bed per week)		5.3	2.6	5.5	11.2	5.9	20.5	4.1	3.4	2.2	14.0	6.7	5.6	2.8
Working hours: nurses (per bed per week)		26.9	9.4	18.0	32.0	23.5	52.1	7.7	15.5	8.4	15.2	12.0	22.3	18.1
Working hours: all clinical staff (per bed per week)		38.1	19.9	26.5	46.4	32.9	77.2	22.0	31.7	11.4	51.3	44.7	38.5	59.8
ICMHC[g] 01: Establishing and maintaining relationships		1-2	1	1	2	2	1-2	1	1-2	1	1	1	2-3	1-3
ICMHC 02: Problem and functional assessment		2	2-3	2-3	2	3	2	2	2-3	1	2	2	3	3
ICMHC 03: Care coordination		1	1	2	1	2	2	1	0-1	2	1	1	1-3	2-3
ICMHC 04: General health care		2-3	1-2	2	2	2	3	2	2	3	3	3	1-3	2-3
ICMHC 05: Taking over activities of daily living		2	1	1	1	2	2	1	1	1	2	2	1-2	1-2
ICMHC 06: Psychopharmacological and other somatic interventions		2-3	3	3	2	3	2	3	3	3	3	2	3	2-3
ICMHC 07: Psychological interventions		1-3	1-2	1-2	2	3	1-2	1	2-3	2	1	1	1-2	1-3
ICMHC 08: (Re)educating basic, interpersonal and social skills		1-2	1	1-2	1	3	1-2	1	2	2	1	1	1-3	0-1
ICMHC 09: Interventions related to daily activities		2	1	1-3	1	1	1-3	1	1-2	2	1	2	2-3	0-2
ICMHC 10: Interventions aimed at family, relatives and others		1-2	1	1-2	2	2	1-2	1	1	1	1	1	0-2	0-3

ESMS – European Service Mapping Schedule; ICMHC – International Classification of Mental Health Care

[a] no valid regional data available, but low unemployment rate; [b] national data, no data available for catchment area; [c] hospital wards (in psychiatric and general hospitals) to which acute admissions from a catchment area are routinely made; [d] long-stay psychiatric inpatient wards to which patients are admitted for indefinite periods and which have 24-hour staffing; [e] not standardized to the catchment area, applies to a greater region; [f] includes 8 beds for the treatment of addiction; [g] ICMHC rating scale for level of specialization in each modality of care: 3=high level of specialization; 2=intermediate level of specialization, 1=low level of specialization, 0=not applicable to this module of care

tion, and two areas have a significantly larger one. Since seven of the catchment areas include rural components, the density of the population varies enormously even between areas of similar population size, ranging from 32 (Örebro) to 8845 inhabitants (East London) per square kilometer. As shown by the unemployment rates, huge economic differences exist across these regions. While the population in the Czech, Swedish and German catchment areas include rather high percentages of old people, this is not the case in the Tel Aviv, Naples and London areas. An almost 20-fold difference for males and a more than 10-fold difference for females is observed in suicide rates across the regions, due to the low risk in the Italian, Greek, Slovak and English areas and the high risk in the Lithuanian one.

The ratio of psychiatric beds per 1,000 inhabitants ranges from 0.05 to 0.64. The highest ratios are observed in the German (0.64) and Czech (0.56) areas, and the lowest in the Italian, Spanish (both below 0.07), Bulgarian (0.14), Greek (0.15), and Israeli (0.25) areas. Staffing of hospital facilities shows an East-West difference across Europe, with 0.4-0.7 staff per bed in the Eastern areas, and 0.9 or more staff per bed in the Western areas; the highest ratios are those of Örebro and Naples (both 2.0).

The data describing some core features of the acute wards in the hospitals (Table 2) demonstrate that wards are operated differently across the sites. One indicator of comfort during hospital stay, the average number of beds per room, shows some West-East gradient, which may affect the use of coercive treatment measures such as mechanical restraint or seclusion. Similarly, it is to be assumed that the practice of coercive treatment will be influenced if the doors of the acute ward are not always locked (notably at the Thessaloniki and London centres). Additionally, clinical practice is likely to be influenced by the substantial differences in staffing levels: some Central European centres (Sofia, Vilnius, Michalovce) display the most prominent shortages (11.4-22.0 working hours of all relevant professional groups per bed per week), whereas the Spanish, Greek, Swedish and Italian centres seem to be very well staffed.

Despite these differences in staffing, the levels of specialization of the most important modalities of care for people with acute mental illness seem to be similar across the participating EUNOMIA wards. This includes problem and functional assessment (i.e., all activities necessary to formulate, monitor and consequently adjust an individual plan for treatment or rehabilitation), general health care (provided by professionals to patients suffering from somatic as well as psychiatric problems), and psychopharmacological and other somatic interventions. None of these modalities of care are provided below an intermediate level of specialization (with the exception of general health care at the Bulgarian site). The level of specialization in other modalities of care is also similar across all wards: these include establishing and maintaining relationships (i.e., all activities aimed at involving individuals in need of professional help in the mental health care process); care coordination (which includes all activities necessary for individuals to have access to all required health and social services in the catchment area); re-educating basic, interpersonal and social skills (i.e., providing activities based on well-defined theoretical models designed to help individuals cope with their impairments and personal disabilities), and psychological interventions based on well-defined theoretical models provided by specifically trained professionals. Some more prominent differences in levels of specialization can be seen in the rest of the modalities of care requiring higher staffing levels.

The overall inter-rater agreement for ICMHC was good for both the day hospital (κ=0.61) and the acute wards (κ=0.80). For the acute ward, linear weighted kappas for nine out of the 10 modalities were good to excellent (0.73 to 1.00), with moderate agreement (κ=0.43) only for the modality "taking over activities of daily living".

DISCUSSION

The characteristics of the catchment areas show that the EUNOMIA study is conducted in European regions with significant socio-demographic and economic differences. Data on unemployment rates and health status of the population, in particular, show that living conditions are vastly different.

The current structure of the hospital-based services clearly reflects different stages of the psychiatric reform processes and the underlying intentions of health policies. The consortium includes areas that have already achieved community orientation of their mental health services, particularly Italy, Spain and the UK, which are therefore characterized by a very low rate of inpatient psychiatric beds, as well as areas like Wroclaw, Dresden, and to a lesser degree Prague, where hospital services still need to be decreased, according to the health policies of the respective governments.

The staffing of the participating acute wards cannot be discussed according to established international standards. If we consider the German guidelines for staff levels in these services (15), it appears that several EUNOMIA centres have staffed their acute wards at a similar level. The two centres of Naples and Örebro are well above this standard, possibly due to their specific situation of having a few small acute psychiatric wards integrated in a strictly community-oriented system of general hospitals. In contrast, several Central European centres (in particular, the Bulgarian, Slovak and Lithuanian ones) show a low staff level at these wards, due to poor economic resources for health care.

Against this background of different organization of hospital-based acute services and the variety of staffing levels, it is somewhat surprising that the level of specialization concerning the modalities of care which are most important for providing acute treatment show no great differences among the participating wards. Problem and functional assessment, general health care, and psychopharmacological and other somatic interventions are provided at a medium to high level of specialization. This means that standard diagnostic tools are used repeatedly, that counselling of other medical specialists for (mostly severe) somatic problems are (regularly) available, and that staff is well-trained in monitoring the application of a range of somatic interventions.

Assessment of patients in the EUNOMIA project started in the summer of 2003 and will continue until the first half of 2006. All the instruments used in the study have been translated and, where necessary, back-translated. They are being administered by researchers receiving continuous training for inter-rater reliability. Furthermore, the consortium developed and implemented a standardized computerized system for basic documentation of all patient-related data, including individual coercive measures in acute psychiatric wards. Currently, this is only used for research purposes but, if transferred to routine clinical practice, it might facilitate continuous quality assurance, clinical and legal certainty, and the preparation of public health reports in this field. Furthermore, all project-associated local expert groups have started their activities to establish or improve existing guidelines for best clinical practice, and the special team of legal experts has nearly finished their work on detailed reports covering a range of aspects of the national legal situations concerning the issue of coercive treatment. Finally, all project-related scientific activities should result in the development of a European guideline ("patient charter") for the best practice of coercive measures in psychiatry, that will be discussed at the WPA-sponsored thematic conference "Coercive Treatment in Psychiatry: a Comprehensive Review" organized by the EUNOMIA group in June 2007.

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Relationship between cocaine use and mental health problems in a sample of European cocaine powder or crack users

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Numerous studies have pointed out the risks of cocaine use for mental health. Most clinical studies report a high psychiatric comorbidity, mainly among crack users. In this paper the association of mental health problems with sociodemographic variables and patterns of use is analysed, based on data from a multicentre European study including a field survey of cocaine users in different settings. Bivariate analyses revealed that mental health problems were influenced by all variables under consideration, i.e. age, gender, social situation, crack use, days with cocaine use in the past month, lifetime use of cocaine, severity of dependence, and physical health. However, in a regression analysis, intensity of use, physical health, severity of dependence and social situation were found to be predictors of mental health problems, while crack use by itself was not. These findings suggest that mental health consequences are related more to the intensity than to the form of cocaine use.

Key words: Cocaine, crack, mental health problems, intensity of use

Considerable debate has surrounded the potential dangerousness of cocaine, since many people continue to use the drug on a recreational basis without reporting problems. The health risks of cocaine use include a number of medical complications, such as cardiovascular or respiratory disorders, that in some cases can lead to death. Acute cocaine use can lead to the wanted effects of euphoria, self-assurance, increased attention, reduced appetite, less tiredness, among others, but can also lead to unwanted effects such as anxiety and paranoia, egocentric behaviour, dysphoria, anorexia and delusions. After cocaine withdrawal, a typical symptom is anhedonia. A greater severity of cocaine dependence is associated with a more severe depressive symptomatology after withdrawal (1).

Health related effects of cocaine are largely related to the route of use. Routes of use have important implications for pattern of use, drug effect and risk of dependence, with smoking and intravenous use associated with greater absorption, a shorter more intense high and a greater tendency toward a binge pattern of use (2,3). Different routes of using cocaine are associated with different negative consequences (4). Crack users have a greater number of symptoms, and higher levels of anxiety, depression, paranoid ideation, and psychoticism (5,6). Other symptoms, such as aggression and violence, are associated more with crack than with cocaine powder.

Psychiatric comorbidity among cocaine dependent users is not only increased for other substance disorders, but also for personality disorders (7-9), post-traumatic stress disorder (10,11), and depressive disorders (12,13). However, there remains a paucity of research evidence concerning the association of mental health problems with the complex interaction of length of cocaine use, the social context and the route of use.

METHODS

Design

The research project Support Needs for Cocaine and Crack Users in Europe (CocaineEU) was initiated in 2002. This multicentre, multimodal field study was aimed at defining specific recommendations (guidelines) in order to ameliorate the care for regular cocaine and crack users. The project was initially carried out by research centres in nine European cities (Barcelona, Budapest, Dublin, Hamburg, London, Rome, Stockholm, Vienna, Zurich), while a tenth research centre (Paris) joined in during the course of the project.

In each participating city, cocaine and crack users out of three different subgroups were recruited: 70 cocaine/crack users on drug treatment, mainly maintenance treatment; 70 socially marginalized cocaine/crack users not on a specific drug treatment, and 70 socially integrated cocaine/crack users not on a specific drug treatment.

The treatment group was recruited mainly in outpatient maintenance clinics or, if not possible, in other (inpatient or outpatient) addiction treatment settings. The marginalized group was recruited at places where drug users usually meet to sell, buy or use drugs, or in the surroundings of low-threshold addiction facilities (e.g., needle exchange programmes or safe injection rooms). The integrated group was recruited at different party places (e.g., discos, nightclubs or pubs), or through private contacts. To exclude an overlap between the three target groups, each centre determined specific recruitment locations, e.g. treatment facilities and places typically attended by the two other groups. Besides affiliation to the respective target group, the inclusion criterion was the use of cocaine powder or crack cocaine at least once in the last month.

The three target groups were consecutively recruited according to a criteria oriented sample strategy. Subjects at the determined recruitment locations were first asked with regards to the inclusion criteria. If these were met, and after the subject gave informed consent, the interview took place.

Measures

Structured face-to-face interviews were conducted to assess the consumption behaviour, social and health status. The instrument used was an adjusted version of the Maudsley Addiction Profile (MAP) (14), including a 10 item physical health symptom scale (adapted from the Opiate Treatment Index, OTI, 15) and a 10 item scale to assess mental health problems (derived from the anxiety and depression subscales of the Brief Symptom Inventory, BSI) (16). Dependence upon cocaine was assessed using the Severity of Dependence Scale (SDS) (17).

The MAP is a brief, interviewer-administered questionnaire that measures problems in four domains: substance use, health risk behaviour, personal/social functioning, and physical and psychological health. The adjusted version included items concerning patterns and history of cocaine and crack use, and some items concerning the social situation. In addition to the current drug use data, lifetime data assessed according to the European Addiction Severity Index (ASI) (18) were reported for cocaine powder and crack cocaine.

Subjects

Because of the low prevalence of cocaine in Stockholm (19), it was not possible to recruit a sufficient number of cocaine users who met the inclusion criterion of having used cocaine powder or crack cocaine at least once in the past month. Therefore, the following analysis is based on data from nine European cities.

The total number of subjects was 1855, with 34% belonging to the treatment group, 33% to the marginalized group, and 33% to the integrated group. There were small deviations from the originally intended sample size of 70 cocaine users in each group and each city. In the treatment group, 81% were recruited in maintenance clinics, 9% in other drug treatment services. The marginalized group was mainly recruited in low-threshold facilities (58%), on the drug scene (16%), or via snowballing (10%). The integrated group was recruited mainly at night-life sites (38%), or via snowballing (40%), and the rest at different medical services or public places. The patterns of use varied greatly between cities and between the three target groups (20).

RESULTS

Thirty-two percent of the sample were female. The average age of the whole sample was 30.8 (± 7.4) years, ranging from 16 to 62 years. On average, males (31.7 ± 7.5 years) were older than females (28.8 ± 6.6 years).

Eighty-six percent of all subjects had used cocaine powder in the 30 days prior to the interview, 27% had used crack cocaine (73% had used cocaine powder alone, 14% crack cocaine alone, 13% cocaine powder as well as crack cocaine). About 90% of the crack cocaine users were smoking, about 10% were injecting. In the last 30 days, the average number of days with cocaine use was 14.4 (±11.1). The severity of dependence (according to SDS) was 5.5 (range: 0-15, SD=4.1). Fourteen percent of the sample reported no period of regular cocaine use (period of at least six months with a use of more than two times per week) in their lifetime. In those with a period of lifetime regular use, the average duration of regular use was 6.1 years (±5.1). With respect to problems with physical health, the sample reported an average of 12.0 (±7.6) on the OTI subscale (range 0-40).

With respect to mental health problems, the sample showed an average BSI score of 14.3 (range 0-40, SD=8.89). Only 4% had a sum score of 0, reporting no mental health problems. The mental health problems score showed highly significant differences for gender, social situation, present crack use and regular cocaine use (Table 1). The mental health problems score also correlated significantly with age (r=.124, p<0.001), days with cocaine use in the last 30 days (r=.370, p<0.001), years of regular use (r=.109, p<0.001) and severity of cocaine dependence (r=.502, p<0.001). A very highly significant correlation was found between the mental health problems score and problems with physical health (r=.623, p<0.001).

In order to understand which variables best predict mental health problems in this sample of cocaine users, a multiple linear regression analysis was performed, including the variables gender, age, social situation, days with

Table 1 Differences in mental health problems (Brief Symptom Inventory score)

	N	Mean ± SD	F	Post hoc
Gender				
Male	1257	13.8 ± 8.7	11.54**	
Female	595	15.3 ± 9.1		
Social situation				
Stable (1)	813	11.3 ± 8.0		
Partially stable (2)	760	16.2 ± 9.0	90.27**	2, 3 > 1*
Unstable (3)	236	17.7 ± 8.9		
Crack use				
Yes	495	16.8 ± 9.0	56.13**	
No	1358	13.4 ± 8.7		
Regular cocaine use lifetime				
Yes	1579	14.9 ± 8.8	60.09**	
No	258	10.4 ± 8.2		

*p<0.05, Scheffé test; **p < 0.001, ANOVA
Stable: stable living situation and employed; partially stable: unstable living situation or unemployed; unstable: unstable living situation and unemployed.

Table 2 Regression analysis summary for variables predicting mental health problems

Variable	B	SEB	β	t
Problems with physical health	.56	.02	.48	23.39**
Severity of cocaine dependence	.53	.05	.24	11.33**
Stable social situation	-1.49	.33	-.08	-4.47**
Days with use of cocaine	.05	.02	.07	3.11*

*p<0.01; **p<0.001

cocaine use, crack use, length of regular use (those with no lifetime regular use were set at 0 years), severity of dependence and problems with physical health. Results of this regression analysis are found in Table 2, indicating that mental health problems are related to physical health, severity of dependence and intensity (frequency) of cocaine use, as well as the social situation of the user. However, crack use by itself and the length of regular cocaine use do not predict the extent of mental health problems.

DISCUSSION

In the past, numerous studies have shown the risks of cocaine use for both physical and mental health. The focus with respect to mental health risks has come mainly from clinical studies, reporting a high proportion of psychiatric comorbidity. Many studies have concentrated on the specifically high risk of health problems related to crack use.

This paper is based on a field survey of cocaine users and explores the association of mental health problems with sociodemographic factors as well as patterns of use. Since not only clinical cases were included in the survey, the study allows for a much wider view of cocaine use in the population, including users who do not consider their cocaine use a problem. Although not assessing a representative sample of the population, the survey includes a large sample of all the main subgroups of cocaine users in the society.

The main result of the study is the association of mental health problems with various sociodemographic factors as well as patterns of use. This included the variable of crack use, with a significantly higher mental health problems score for crack users than for users of cocaine powder. However, the regression analysis was then able to show that crack use by itself was not a predictor of higher mental health problems. Predictors of mental health problems were the intensity of use, physical health and the social situation. These findings suggest that the severe consequences are related more to the intensity than the form of cocaine use. Although this position has been stated in a review in the past (3), there have been numerous studies since then which all focus on the form of cocaine use (crack cocaine versus cocaine hydrochloride) rather than on the intensity of use.

With respect to the prevention of mental disorders among cocaine users, the high correlation of mental health problems and physical health problems points to the importance of screening for mental health problems among cocaine users in other medical settings such as general practitioners and emergency rooms, similar to the Drug Abuse Warning Network system implemented in the USA (21).

The results with respect to the severity of dependence and the social situation emphasize the necessity of implementing harm reduction measures. Severity of cocaine dependence, as assessed by means of the SDS, mainly refers to psychological components of dependence, such as impaired control over drug taking and preoccupation and anxieties about drug use. Hence, harm reduction measures that are aimed at safer, more controlled, less intensive use of cocaine may decrease mental health problems. Similarly, stabilising the social situation of drug users may have the same effect. Furthermore, the higher risks for female users, in line with the findings of McCance-Katz et al (22), need to be addressed in prevention, treatment and research.

APPENDIX

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A competencies-based mental health training model for health professionals in low and middle income countries

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This paper describes a competencies-based training model specifically created to teach needed mental health skills to health professionals in low and middle income countries (LMICs). The model combines a mental health training needs assessment with the delivery of mental health training modules aligned with national/regional mental health priorities and designed to be used by all health professionals at various levels of the health care system. The model also defines a sustainability framework that involves the creation of a multidisciplinary training team embedded in the national/regional health system. The training program consists of a number of modules, each one designed to enhance specific mental health competencies for a variety of health care workers. These modules are linked to a number of clinically useful tools that facilitate knowledge transfer into clinical care while concurrently addressing health equity issues. This model may provide an efficient and cost-effective alternative to traditional profession-based mental health training approaches, which have to date not been successful at meeting mental health delivery needs and mental health service priorities in LMICs.

Key words: Mental health training, low and middle income countries, sustainability, capacity building

Neuropsychiatric disorders now account for 6 of the 10 leading causes of disability and are estimated to represent 12.3% of disability adjusted life years lost, a figure that is expected to reach 15% by 2020. Of the six leading causes of years lived with disability in the 15-44 years age group, four are psychiatric disorders: depression, alcohol abuse, schizophrenia, and bipolar illness (1).

Low and middle income countries (LMICs) may be disproportionately affected by the burden of these disorders. Mental health services may lag behind general health care services in terms of infrastructure and availability, and many health care professionals may not be adequately trained in mental health diagnostics, treatment or management. In addition, due to limited financial resources and the pressing problems of disorders such as HIV/AIDS and malaria, insufficient funding may be available for mental health care. The impacts of rapid urbanization, poverty and globalization may also increase the identification or expression of psychiatric conditions in LMICs. Consequently, there is a need to actively address mental health care needs in these countries (2,3).

Provision of appropriate mental health care in LMICs is often handicapped by a number of factors. These include: failure to recognize mental health as a health priority; stigmatization of consumers and providers of mental health care; a dearth of appropriately trained mental health professionals; inappropriate distribution of the few mental health professionals who are available; a lack of mental health competencies in general health care providers; a lack of sustainable capacity for the training of health personnel in mental health competencies. All of these factors can be addressed through health sector reforms which can encourage the development of community based mental health care, decrease dependence on institutionally based custodial type services and combat stigma at population, provider and policy maker levels.

Successful implementation of such reforms, however, will depend in large part upon the enhancement of mental health competencies in all health care providers. Such enhancement may promote efficiency in mental health care delivery and improve population access to effective mental health care. Effective training of health care providers in the competencies needed to provide mental health care appropriate to their role within the health care system (for example: community health nurses require different mental health care competencies than do acute care psychiatric nurses) is thus a necessary component of health services reform.

TRADITIONAL MENTAL HEALTH TRAINING MODELS

Many LMICs rely on traditional, professional school based educational models for training of mental health professionals to provide mental health care. Such traditional approaches alone have proven to be inadequate at meeting population mental health care needs in LMICs. Many such programs emphasize information and theory over practical skills and tend to be profession specific, thus promoting segregation of professional groups. Such mental health professional based models also fail to take into account the scarcity of mental health human resources in LMICs, where distribution of mental health competencies across multiple health disciplines may promote more efficient, cost-effective and accessible clinical care that may more appropriately address population mental health needs.

Adherence to a mental health professional school training model has made some LMICs dependent upon foreign based training programs to train their mental health professionals. These programs are costly and often involve a lengthy curriculum that necessitates removal of valuable personnel from the health human resource pool for extended periods of time. These programs may also inadvertently encourage migration of skilled professionals out of their country of origin. Significant numbers of such trained mental health professionals, even if they return to their country of origin, may emigrate, due to better economic opportunities available elsewhere or due to professional frustration which may arise as a consequence of their being accustomed to patterns of practice more appropriate to the country in which they were trained. Many foreign based training programs promote models of mental health care which are more appropriate for Western economies and which do not meet the socio-cultural, political or economic systems of LMICs. A training model that is more appropriate to the health care realities of LMICs is necessary. This model must meet population mental health needs, be cognizant of the social, cultural, economic and political contexts, be cost-effectively applied and be designed to facilitate health care reform in a sustainable and capacity building manner.

A COMPETENCIES-BASED MENTAL HEALTH TRAINING MODEL

As an alternative to traditional training approaches, we have developed a potentially cost-effective mental health training model that has been designed to meet population mental health needs in countries with limited resources and shortage of mental health professionals. Its modular construction allows for flexibility in delivery and for tailoring of educational materials to specifically address the different mental health competencies required by a variety of health professionals. In this model, specific mental health skills can be taught to health professionals at all levels of the health care system in such a manner as to be immediately useful for them in their everyday clinical practice. For example, while both community health nurses and primary care physicians need to provide competent mental health care for depressed patients, their health role competencies are not expected to be identical.

This mental health training model allows for: a) enhancement of appropriate mental health competencies in all health professionals (including mental health staff); b) distribution of mental health competencies throughout the entire health care system, including primary, secondary and tertiary levels; c) successful implementation of community based mental health services and improvements in access to quality care that meets population mental health needs; d) building of sustainable domestic mental health training capacity.

The model has three components: curriculum; mental health training needs assessment and priority setting; delivery, sustainability and capacity building (for more detailed information about these components, please visit the website http://iho.medicine.dal.ca/news.cfm).

Curriculum

The curriculum consists of a number of modules which have been designed to assist health professionals in addressing both acute and chronic mental disorders. These modules fall into two categories: “core knowledge” and “specific focus”. Core knowledge modules provide essential and practical information presented in a manner that allows for training to meet specific knowledge needs of various health professionals in “disease related” categories. Additionally, there is a core module that deals with common myths pertaining to mental illnesses, global burden of disease, epidemiology, and modern concepts of understanding mental illnesses as brain disorders.

“Specific knowledge” modules consist of a variety of training components designed to either teach specific therapeutic skills that can be practiced by a variety of health professionals (e.g., cognitive behavior counseling module); address specific professional/health system needs (e.g., first point of contact module); address necessary skills and knowledge for all health professionals (e.g., suicide module); teach the rational and effective clinical application of disease related knowledge (found in the core knowledge modules) through the use of clinically useful tools (e.g., therapeutic outcomes module) or address the needs of specific populations (e.g., child and adolescent module).

All of the modules are written so as to provide necessary information in such a manner as to meet the needs of a variety of health professionals. For example: in the psychosis module, one of the core competencies is diagnostic ascertainment. This core competency is presented in a variety of modes within the module, each of which may be adapted to meet various health care providers needs.

Each module uses a variety of materials to present information, although all modules are minimally comprised of: printed monograph, trainer’s notes, trainer’s slides, student’s slides. Some modules contain video material (e.g., to teach clinical skills such as specific interview techniques or specific physical examinations), and most modules include case-based scenarios to clinically illustrate information that they contain. Each module is also accompanied by an evaluation designed to test the information taught and the information acquired, using a pre-test and post-test format. Each “core knowledge” module requires 1-3 days of training, depending on the professional group taught. Each “specialized focus” module requires 1-2 days training depending on the professional group taught.

As the curriculum is modular, each module can be taught at the appropriate level to the appropriate health professional in any order (except that the myths and realities module must be taught first) according to identified priorities. Thus, training needs for service delivery determine curriculum presentation, and application of knowledge into clinical care can occur immediately. Over time, each health professional who is trained in this program can acquire an entire corpus of knowledge of mental health competencies appropriate to his/her professional role and the needs of the population that he/she serves.

Mental health training needs assessment

A mental health training needs assessment is an analysis of the existing health physical infrastructures (including mental health institutions), health professionals' roles (including mental health professionals) within the health care system (for example: what professionals work in what type of community setting, what are the usual health referral patterns, what is the nature and function of existing mental health service locations, etc.) and the mental health competencies held by various professional groups. This assessment includes direct observation of both health facilities and mental health care delivery and should lead to an understanding of where mental health services are and could be delivered, which health professionals could deliver mental health services and what the current mental health competencies of various health professionals are (including mental health professionals).

Whenever possible, epidemiological data on the incidence and prevalence of mental disorders should be reviewed to determine if there may be service availability/population need gaps. In many LMICs, such data may not be available and existing international data may be used to provide surrogate estimates. This information is especially important in estimating what impact currently "hidden" mental disorders (such as anxiety and depression) may have on the health system if better case identification occurs as a result of the training program.

As health systems differ, a variety of health professionals may play similar roles in different systems. A good understanding of the various roles (for example: first contact, primary intervention, chronic care monitoring, etc.) of various health professionals is necessary in order that the training modules can be taught to meet the mental health competencies that their roles could deliver (for example: a community health worker should be taught "case identification", so that he/she would be able to identify cases of psychosis, depression, dementia, anxiety and substance abuse in the community at point of first contact with the health system).

Once this inventory is completed, the gaps between available and needed mental health competencies in each group of health professionals can be addressed by ensuring that the modular training program is delivered in a form that meets those needs. This "mental health competency gap analysis" will also provide a baseline for future reference when evaluation of the training program is carried out.

Priority setting

This refers to the order in which the training program modules are delivered and which health professionals are taught what modules at what time. This ideally should be done jointly by the national/regional health authorities/policy makers and the needs assessment team, and should be guided by the directions laid out in the national/regional health plan. The priorities can be mapped on to a project timetable which identifies what training will be provided at what time and to whom. In this manner, mental health training can be rationally incorporated into ongoing health planning.

Delivery, sustainability and capacity building

These essential components of the model are achieved by the identification and training of a national/regional trainers group. Ideally, the trainers should be selected by the responsible policy makers and should compose a multidisciplinary group consisting of: psychiatrists, general practitioners, psychiatric nurses, psychiatric social workers. A trainers group of 6-8 individuals is optimal. Whenever possible, national/regional educational institutions (such as universities, community colleges, nursing schools, etc.) should be represented in the trainers group.

The members of the trainers group should be senior enough to be respected in their professional organizations and should ideally represent a variety of workplace settings (for example: acute care hospitals, community clinics, etc.). Each group member should also be committed to provide ongoing mental health education to a variety of health professionals. As many of the modules require a team teaching approach, group members must be able to work co-operatively with one another.

Ensuring a broad based trainers group will facilitate collaboration amongst disciplines, encourage development of complementary proficiencies and promote sufficient overlap of competencies as to diminish dependence on any one discipline while making cost-effective and efficient use of available health human resources. In a situation in which the nation/region loses a key health professional, the training program can be continued and another health professional can be trained to become a member of the group. Thus, the trainers group becomes a "living organism" that sustains itself and the national/regional mental health training capacity.

The trainers group is then taught the modules by the program development team over a designated period of time, beginning with the modules previously identified as priorities. Members of the trainers group take knowledge based written examinations (pre-test and post-test) following their learning of various modules. These examinations are more complex and detailed than those that will be taken by their students (the various health professionals they will be teaching).

In addition, members of the trainers group are taught "how to teach" and an important part of their training is observed teaching with feedback from the program development team. This is necessary to ensure that the trainers have both learned the curriculum and are able to teach it to others. It is our contention that this observed teaching component is an essential part of the training for the trainers group.

Without this component no train-the-trainers program can be expected to be fully successful, as without teaching competencies knowledge does not necessarily translate easily.

A "usual" training session for the trainers group consists of three to four modules and takes 7 to 10 days. Once the trainers have successfully passed the examination and the observed teaching, they are certified in the appropriate modules and may begin training those health professionals for whom the modules have been prioritized. Additional trainers group courses can be held at later time points in line with identified priorities.

Ideally, the trainers group would be re-credentialed on a pre-determined basis (suggested at three years). This is achieved by having the development group observe training sessions and by another written examination. Re-certification points can be used to bring on new members of the trainers group, either to replace those who no longer wish to participate or to add more members, should increased training activity be needed. After the entire training program has been taught by the development group to the trainers group, the teaching role of the development group should become redundant and the ongoing upgrading and expansion of the trainers group can be undertaken locally.

It is essential that the trainers group be embedded in the health care system through an appropriate reporting relationship within the Ministry of Health or regional health authority. Whenever possible the trainers group should also reflect educational institutional linkages. This will ensure that mental health training will proceed in a manner that will reflect national/regional priorities and will allow for feedback from the trainers group about the state of mental health competencies in health care workers that they are training. Additionally, such a structural format will enhance the importance of mental health within the health care system and will help prevent the "ownership" of the training program by one educational institution or professional group.

VALUE ADDED ASPECTS OF THE MENTAL HEALTH TRAINING MODEL

This model of mental health training has a number of additional benefits to those identified previously. First, it meets LMICs' needs to provide effective mental health services by utilizing the existing health care system. It does not require extensive training of large numbers of new mental health professionals at substantial cost and it makes better use of health human resources and health infrastructure already available to meet population mental health needs. Second, it promotes equity and flexibility in mental health care by matching mental health competencies of all health professionals to population mental health needs at the appropriate point of contact with the existing health care system. Third, it can easily incorporate aspects of the nonformal health care system, such as community elders or traditional healers, by providing training commensurate to their roles (such as community case identification of the mentally ill, advocacy for the mentally ill and community education to counter stigma against the mentally ill). Fourth, it discourages "brain-drain" of health professionals with unique mental health competencies. Because mental health competencies are spread out across a variety of health professionals, the loss of one or more health professionals should not have the same negative impact on the provision of mental health care that would be the case if those competencies were invested only or primarily in mental health professionals. Fifth, it may provide greater efficiency within the health care sector by making access to mental health care easier and more available. Sixth, it should assist in addressing stigma against the mentally ill amongst health professionals by providing all health professionals with up to date knowledge about mental disorders and the tools by which to care for individuals with those disorders.

By distributing mental health competencies amongst hospital and community health services, this training model promotes the integration of mental health care into general health care as well as the movement from custodial to community based mental health care, both policy directions supported by the World Health Organization and the Pan American Health Organization. The presence of health professionals with appropriate mental health competencies within all levels of health care and across all health sectors should facilitate interdisciplinary communication and collaboration that will break down traditional barriers to care. Additionally, this should enhance the dissemination of knowledge about mental disorders to the wider community using the vehicle of all health professionals, thus assisting in the reduction of stigma against the mentally ill held at large. In turn, this might be expected to enhance the accessibility of mental health care and of general health care for the mentally ill, promote the earlier detection and effective treatment of mental disorders and lead to improved population mental health in LMICs.

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The public mental health significance of research on socio-economic factors in schizophrenia and major depression

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This paper reviews the epidemiological research evidence on the role of socio-economic factors in the origins and disease experience of schizophrenia and major depression. The studies were conducted in different countries over many years. Although their findings are divided in their support of either the social causation or the drift hypothesis, all of them agree that persons with these disorders are at high disadvantage in society. Several factors for this have been identified. These studies provide the rationale for community-based interventions that have to be guided by principles of equity in the distribution of resources and grounded in biopsychosocial models of care that comprehensively answer the needs of the affected populations.

Key words: Schizophrenia, major depression, socio-economic factors, community-based interventions

Schizophrenia and major depression are two of the ten leading mental disorders that generate disability and shorten life (1). Their joint contribution to the global burden of disease in the year 2000 was estimated to reach 11.2% among the population aged 15-44.

Schizophrenia captures most of the resources available to psychiatric services in both developed and developing countries. As for major depression, it is the fourth leading cause of disease burden and accounted for 4.4% of total disability adjusted life years (DALYs) lost in the year 2000 (2); it is estimated that by 2020 it will become the second leading cause of DALYs lost (3). It is thus not surprising that for decades the World Health Organization (WHO) has collaborated with countries to better understand these disorders in terms of their origin and course (4), to organize their classification (5), to screen and diagnose them (6), to organize proper services and care (7), and to promote the safeguard of the rights of the persons affected by these disorders and their families (8).

An important concern of the work of WHO is to highlight how socio-economic factors impinge upon the disease origin and experience of both disorders. WHO's purpose is to promote ways to reduce the adverse effects of low socio-economic status (SES) in persons with psychiatric disorders, calling on both governments and society to make means and resources available (9) and on mental health professionals to implement comprehensive rather than discrete interventions (3).

The objective of this paper is to briefly review findings on the role of socio-economic factors in the origins of schizophrenia and depression, and in the disease experience of people suffering from these conditions. As stated above, the aim is to highlight the "case for action" based on available epidemiologic research with regard to intervention strategies.

SCHIZOPHRENIA

Community-based epidemiological studies across countries and over time have consistently identified an inverse relationship between SES and prevalence rates of schizophrenia (for reviews, see 10-12). The ratio between the current prevalence (defined as period prevalence up to one-year prevalence) of the disorder among low-SES and high-SES people was 3.4, whereas the ratio for lifetime prevalence was 2.4 (11). This inverse relationship is found among both men and women and regardless of the treatment status of the person. Furthermore, the association is found in studies using different methods of case ascertainment and diagnosis.

Why are there more persons with schizophrenia in the lower SES groups, defined by occupation, education, place of residence, income, or by a combination of these variables? The social causation and the social selection (drift) hypotheses have been raised to explain the differential rates.

In line with the social causation hypothesis, Kohn (13) argued years ago that social class is related to schizophrenia since the conditions of life built into the lower social class are conducive to this disorder. Several conditions prevailing in the low SES group were imputed, e.g., environmental adversity, such as discrimination (14); disadvantage, including unemployment (15); and stress (16). These factors may account for the contrasting rates between SES groups in a single population (17) or in different ethnic groups of different social position (18). In contrast, the social selection hypothesis argues that, on account of the disorder, a person drifts down the social ladder or fails to rise out of low SES, in societies where upward social mobility is possible (12,19).

This long-standing research issue has been explored by many authors in many countries over many years. Goldberg and Morrison (20) showed that parents of persons of low SES admitted with schizophrenia to hospitals in England and Wales were not found in the lowest class with greater relative frequency than is the case in the total population. In addition, they explored the occupations of grandfathers, uncles and brothers and of the patients. There was a similar class distribution among these relatives compared to the patients' fathers but not to the patients themselves. These findings pointed to a clear drift phenomenon. Prior to Goldberg and Morrison, others (21-23) in the United States had argued for the drift hypothesis. An adoption study of children with schizophrenia, in Scandinavia, was also partially consistent with downward mobility (24). Findings supporting the drift hypothesis were confirmed in a two-year follow-up study conducted in the Netherlands. In this study, both educational and occupational downward mobility were greater than expected among those with a diagnosis of schizophrenia compared to their fathers (25). These authors also found that some individuals improved in their social class compared to their fathers. These investigators and several others in various countries (26-29) found that the SES at birth among those with schizophrenia was actually higher than expected.

A study conducted in Sweden showed a similar result for a cohort born in 1953 that had inpatient hospitalizations up to 1983 (30). In comparing the parental SES in 1963 and the patient's own SES in 1980, no evidence of an association between low status origin and heightened risk for schizophrenia was found. In this cohort of 71 subjects, the majority (n=43) was no longer in the work force by age 27, and most others were concentrated in low status occupations. These findings were consistent with social selection (drift) having greater weight than social causation. Jones et al (31) also found social selection to be the more likely explanation when their cohort of individuals with schizophrenia and affective psychosis were noted to have lower social class than their fathers. Among those with schizophrenia, this downward decline began prior to the onset of the disorder and continued following diagnosis. Prior to diagnosis, investigators (32,33) have found that persons with schizophrenia reside in areas characterized by higher social deprivation, suggesting that social decline began with the prodromal symptoms.

The educational attainment of a hospitalized patient with schizophrenia becomes truncated as a result of the disorder. A study in Finland explored the educational attainment of 80 patients who belonged to a 1966 cohort (34). Patients admitted to the hospital at age 22 or younger achieved only basic education with a higher frequency than both those whose age of onset was 23 or older and those without a psychiatric admission.

In Israel, investigators contrasted true prevalence rates of schizophrenia among ethnically advantaged and ethnically disadvantaged Israel-born Jews, controlling for SES. They showed that social selection was more important than social causation to explain the inverse relationship between SES and schizophrenia. Indeed, the rates were higher among the ethnically advantaged in each SES group (17).

In Finland, a retrospective cohort study was carried out in patients discharged with the diagnosis of schizophrenia in 1987-1988. Using five census periods – 1970, 1975, 1980, 1985 and 1987 – the authors were able to demonstrate a progressive decline in social class, with most becoming unemployed after initially having an appropriate SES primarily based on their parent's status (35). The investigators found a more pronounced decline in SES for men compared to women, possibly due to the earlier age of onset. Similar findings were obtained by a study examining parental social class upon birth of individuals that eventually developed schizophrenia (36).

In contrast, a number of studies concluded that indicators of social inequality at birth are associated with increased risk of adult onset schizophrenia (37). This conclusion is supported by studies investigating rates in immigrant populations to the United Kingdom, such as the African-Caribbeans (see 14 for a review); in first and second-generation Moroccan immigrants to the Netherlands (38); and in different groups of immigrants to Sweden (18). In the United Kingdom, the second-generation African-Caribbeans have significantly higher admission rates for schizophrenia than their parents or their White counterparts. Importantly, rates of schizophrenia in the countries from which the immigrants arrived – Jamaica (39), Trinidad and Tobago (40) and Barbados (41) – are not unduly high, thus arguing in support of the social causation hypothesis.

SES, as a result of its associated factors, such as deprivation and adversity, may affect the incidence and, ultimately, the lifetime and period prevalence rates of schizophrenia. In addition, low SES may increase current prevalence rates by widening the treatment gap between the treated and the untreated disorder, resulting in individuals remaining symptomatic and thereby meeting diagnostic criteria in community studies. A recent estimation of the treatment gap for schizophrenia based on lifetime health service utilization for mental health found that at least 32% of those individuals diagnosed with non-affective psychoses did not receive mental health care (42). The poorer classes may have less access to treatment settings and to more expensive curative and rehabilitative interventions, such as the new generation antipsychotics or vocational training.

MAJOR DEPRESSION

A summary of findings of several epidemiologic community studies of major depression noted that the median low-SES compared with the high-SES prevalence rates yield a ratio of 2.4 for the prevalence period of up to 1 year, and 1.1 for lifetime prevalence (11). The social causation hypothesis is supported by most but not all surveys. A recent meta-analysis showed that persons with lower SES had an odds of reporting depression 1.8 times higher than advantaged SES groups (43). These findings are not confined to industrialized countries. Indeed, a recent review of studies conducted in several locations within African and Asian countries identified low SES-related variables as a risk factor (44).

Incidence studies constitute a complementary source of information. In the USA, Bruce et al (45) examined the role of poverty in the incidence of major depressive disorder using a standardized diagnostic instrument in a large size population at two points in time. The adjusted odd ratios were in the order of 2.5 (95% CI 1.3, 4.8). From the follow-up of the Stirling County study in Canada, Murphy et al (46) concluded that poverty, depression, and the relationship between them remained stable over time. While chronicity and recurrence were not limited to those in the low SES, the persistence of illness played a role in maintaining the relationship between poverty and depression. Lorant et al (43) found that the odds of persisting depression was 2.1 higher among the low SES groups. One of the reasons was that the latter use less services for depression (47).

For implementation of timely intervention it is also of interest to establish whether early or current adversity is causative of depression. In the USA, Ritsher et al (48) relied on cohorts defined by the offspring's exposure to parental depression. Probands with major depression, recruited from treatment settings, and controls without major depressive disorder were assessed up to 4 times over 17 years. Their respective children and spouses were assessed as well. SES was measured by education and occupation. There was a strong and consistent effect of low parental education on the onset of major depressive disorder in their offspring, also after adjustment for parental major depression and offspring's gender and age. The authors concluded that higher parental education might protect the offspring against the development of depression.

A British study confirmed the effect of early adversity but, most importantly, it also identified the role of current social stresses such as financial hardships and employment insecurity (48). In India, Patel et al (49), in a primary health care population, found that inability to buy food due to lack of money and being in debt were associated to a higher percentage of common mental disorders (anxiety and depression).

DISCUSSION

What is the significance of these findings from a public mental health perspective? Assuming that the social selection hypothesis with regard to schizophrenia turns out to be firmly proven, we are still facing a disorder that takes the person into a downward path leading to poverty, or is responsible for perpetuating poverty for those born into it. Once poor, the person partakes of two sets of disadvantages: the social effects of the illness, including stigma, which is higher in lower education groups, and the harsh environmental conditions related to his/her class affiliation. To be effective, services must protect this person from sliding down further and further.

SES may contribute to the period prevalence rate and ensuing disability by acting on the recovery rate from the psychosis. The disease experience of the person with schizophrenia has a role in the ensuing disability. As early as in the 1960s, Cooper (50,51), in the United Kingdom, found that patients from the lower classes had longer hospital stays, were much less likely to be improved or recovered upon discharge, were liable to be readmitted earlier and were more likely to become chronically institutionalized than their upper class counterparts. In the community they were less likely to be employed and showed worse social adjustment. Recently, Mallet et al (15), also in the United Kingdom, found that the most vulnerable group in their study on the role of ethnicity in the origin of schizophrenia, the African-Caribbeans, exhibited two current risk factors more often that other groups: to be unemployed and to live alone.

Saraceno and Barbui (52) have argued that an association between SES and outcome would imply that mental disorders such as depression and schizophrenia could not be managed without taking into account the environment of poverty and discrimination. Importantly, Ciompi (53) noted that the relatively benign course of schizophrenia in Switzerland might have resulted from the full employment opportunities available in this country. Due to the ongoing process of globalization, an increasing number of salaried persons free of major psychiatric disorders may become redundant, following plant reductions or closures, and displace from work persons with major disorders holding low skills jobs (54).

Saraceno (55) argued that, in parallel to the classical biopsychosocial etiological hypothesis, an identical paradigm for mental health intervention is needed. He wrote: "The social dimension of mental illness should be an intrinsic component of intervention and not just a concession in etiological modeling". Even if the social selection hypothesis is found to have dominant weight in the origin of schizophrenia, social factors such as those that have been implicated by supporters of the social causation hypothesis need to be addressed, if the downward path is to be blocked or even reversed, e.g., by guided education or retraining (56) and by the establishment of suitable work environments, such as the cooperatives implemented in Argentina, Brazil or Italy (e.g., 57).

Indeed, the WHO would like to see more interventions addressing putative environmental factors already identified by research. For example, among immigrant groups (58), mental health risks may be buffered by adequate social policies. Thornicroft and Tansella (59) have incorporated epidemiological research findings in a modified matrix of community services to address the needs of the persons with schizophrenia. In addition, with regard to depression, a full community psychiatry-based model may include into the repertoire of interventions also evidence-based primary prevention actions that address those in low SES positions (60-62).

The judicious combination of social policies purported to protect the poor and of mental health programs and services based on equity could put the research findings we now possess into motion for the benefit of our most vulnerable populations. This conclusion is not novel, but such a combined approach of policies, programs and services is yet to be adopted worldwide.

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SECTION REPORT

Sleep disorders in psychiatric practice

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Over the last years, a large body of evidence has accumulated showing that complaints of disordered sleep are quite prevalent in the community. Insomnia is by far the most common disturbance and is often associated with concurrent psychiatric illness, in particular anxiety and mood disorders. On the other hand, sleep complaints are frequently present among psychiatric patients and have been incorporated in the official diagnostic criteria for many mental disorders, such as major depression, post-traumatic stress disorder, generalized anxiety disorder and substance-related disorders. Estimates of the prevalence of sleep disorders diverge widely, because these disorders have been variously conceptualized. Currently, however, three different classifications for sleep disorders establish reliable diagnostic criteria and allow for more consistency in clinical research. In particular, the ICD-10 diagnostic criteria for insomnia helped to establish a consensus among sleep specialists by defining accurately this clinical condition, i.e. by conceptualizing it as the subjective complaint of insufficient or non-restorative sleep, which is the important feature, not the actual amount of time spent asleep. Alongside the evolution of taxonomic systems, the development of specific diagnostic tools, such as rating scales for measuring clinical manifestations of sleep disorders, has contributed significantly to the growth in the field. For instance, the risk factors responsible for the development of chronic insomnia, its consequences, and the complex relationship between insomnia and psychopathology, have been considerably clarified. In terms of the polysomnographic aberrations observed in various mental disorders, these, although proven not to be pathognomonic for any of them, have been considerably refined over the last decade, and certain general sleep patterns for some specific disorders have emerged. Finally, substantial advances have been made in the elucidation of the neuropsychobiological substrate of disturbed sleep. Thus, hyperarousal has been identified as the cardinal feature of chronic insomnia, which is associated with an around-the-clock activation of both major components of the stress system, the hypothalamic-pituitary-adrenal axis and the sympathetic nervous system.

Key words: Sleep disorders, insomnia, psychopathology, polysomnography, neurobiology

A complaint of disordered sleep is quite common. Bixler et al (1) were among the first to carry out comprehensive epidemiological studies using a sample representative of the general population. They found that a current complaint of insomnia was reported by 32.2% of the respondents. In addition, 7.1% of the respondents suffered from excessive sleep, either current or past, 11.2% had a problem with nightmares and 2.5% reported having sleepwalking, either current or past.

Concurrent psychiatric diagnoses are common in individuals with sleep disturbances. In their 1989 study, Ford and Kamerow (2) demonstrated that 40% of respondents with insomnia and 46.5% of respondents with hypersomnia had a psychiatric disorder, compared with 16.4% of individuals with no sleep complaints. Anxiety disorders were found to be the most common mental disorders, in both insomnia and hypersomnia (23.9% and 27.6%, respectively). The prevalence of major depression, alcohol abuse or other substance abuse was also increased.

Insomnia has been found to be associated with psychiatric illness in two thirds of patients presenting at a sleep disorders center, and more than half of them had a mood disorder (3). In another study, insomnia related to psychiatric disorder was the most frequent diagnosis in patients referred because of insomnia to five sleep medicine centers (4).

Patients with sleep complaints are frequently seen in psychiatric practice. Insomnia is the most prevalent sleep disorder not only in the general population, but also among psychiatric patients. For instance, Berlin et al (5) found that, of 100 patients referred from a general hospital for psychiatric consultation, 72 had insomnia. In a study by McCall et al (6), 93% of depressed inpatients complained of insomnia. Disturbed sleep is a diagnostic criterion for many mental disorders, such as depressive episode, post-traumatic stress disorder (PTSD), generalized anxiety disorder and substance-related disorders (7-9).

DIAGNOSTIC ISSUES

As indicated above, one of three adults may report current trouble in falling or staying asleep or problem with waking up too early (1) but, when a more restrictive definition was used, the frequency of reported insomnia was in the range of 7.5 to 10.2% (2,10). Similarly, when sleep disturbances were required to last 2 weeks within the previous 6 months, to interfere with daytime functioning, and not to be related to a mental disorder or medical condition, the frequency of reported insomnia was only 3.2% (2). Therefore, a need to develop widely accepted diagnostic criteria is self-evident.

With the accumulation of knowledge over the years, insomnia has been variously conceptualized. To date, no definition has gained universal acceptance. ICD-10 defines the clinical condition of insomnia as follows: the complaint is either of difficulty falling asleep or maintaining sleep, or of poor quality of sleep; the disturbance has occurred at least three times per week for at least 1 month; the unsatisfactory quantity and/or quality of sleep either causes marked distress or interferes with ordinary activities in daily living. Thus, ICD-10 diagnostic criteria help to establish the threshold of significant sleep disturbance. It should be stressed that insomnia is a subjective complaint of insufficient or non-restorative sleep, and this complaint is important, not the actual amount of time spent asleep (11).

Needless to say, a universally accepted classification of sleep disorders would also increase diagnostic precision, improve comparability of epidemiological studies and provide greater homogeneity of research samples. Such a need has been long recognized. The first classification system was published in 1979 (12). Currently, three different classifications for sleep disorders are available: the revised edition of the International Classification of Sleep Disorders (ICSD, 13), the DSM-IV sleep disorders section and the section of ICD-10 dealing with non-organic sleep disorders.

The revised edition of the ICSD comprises 88 syndromes. They are divided into the following categories (13):

- Dyssomnias, i.e. the disorders of initiating and maintaining sleep and the disorders of excessive sleepiness.
- Parasomnias, i.e. undesirable phenomena that occur predominantly during sleep.
- Sleep disorders associated with mental, neurologic, or other medical disorders.
- Proposed sleep disorders.

The ICSD differs from other classifications also in that it includes polysomnographic diagnostic criteria.

The DSM-IV sleep disorders section (7) consists of:

- Primary sleep disorders, subdivided into dyssomnias and parasomnias.
- Sleep disorders related to another mental disorder.
- Other sleep disorders, e.g., sleep disorder due to a general medical condition and substance-induced sleep disorder.

In ICD-10, non-organic sleep disorders are listed with mental and behavioral disorders. The section of non-organic sleep disorders is divided into: a) dyssomnias, i.e. predominant disturbance in the amount, quality, or timing of sleep due to emotional causes (non-organic insomnia, non-organic hypersomnia, non-organic disorder of sleep-wake schedule), and b) parasomnias, i.e. abnormal episodic events occurring during sleep (sleepwalking, sleep terrors, nightmares). Non-psychogenic sleep disorders, such as narcolepsy or sleep apnoea, are placed in chapter 6 of ICD-10 (8).

The National Institute of Mental Health classification of insomnia (14) may be helpful in treatment planning. In this classification, insomnia has been divided into: a) transient insomnia lasting several days and related to minor situational stress; b) short-term insomnia lasting up to three weeks and associated with acute personal loss in work or family life, and c) long-term insomnia. It should be noted that both transient and short-term insomnia are physiological reactions occurring in normal sleepers, while long-term insomnia is a disorder of multiple causes.

ASSESSMENT METHODS

The development of specific diagnostic tools has contributed significantly to the growth in the field. For the past sixty years, polysomnography has been the main method of sleep analysis and the main diagnostic tool in sleep medicine. Standardized scoring systems for sleep stages had landmark significance, allowing to compare the results between laboratories. From the 1960s onwards, Rechtschaffen and Kales scoring criteria (15) have been the gold standard, despite the development of alternative methods of sleep description.

Altered sleep has to be regarded as a 24-hour disorder. Therefore, night-time recordings may be followed by daytime tests such as the Multiple Sleep Latency Test, a neurophysiological technique developed to quantify sleep tendency (16).

Rating scales for measuring clinical manifestations of sleep disorders have also been developed. Among many others, they include the Pittsburgh Sleep Quality Index (PSQI), designed to evaluate self-rated sleep quality (17); the Sleep Problems Scale (18); the Stanford Sleepiness Scale, the first tool developed to measure self-rated daytime hypersomnolence (19); and the Epworth Sleepiness Scale, employed to evaluate chronic excessive daytime sleepiness (20). Recently, the Athens Insomnia Scale, an instrument quantifying the severity of insomnia based on the ICD-10 criteria and consisting of either 8 items or only 5 items in the brief version, was produced (11,21,22). In addition, many other psychobiological measures can be utilized, since sleep medicine emerges from and depends upon a multidisciplinary approach.

INSOMNIA AND PSYCHOPATHOLOGY

"It is virtually axiomatic that a disturbance of the mind can manifest itself in the sleeping state as well as in the waking state" (23). A wealth of data on sleep in mental disorders has been accumulated to date. Clinical manifestations of chronic insomnia were thoroughly documented in a series of journal articles published in the 1970s and 1980s by Kales's group, which were integrated into a monograph on the evaluation and treatment of insomnia (24).

Insomnia is a condition of heterogeneous origin. Multiple diagnoses are the rule, not the exception. Stressful life events or stressors of everyday life are triggering factors, and maladaptive habits contribute to the development and persistence of insomnia. However, some predisposing factors, such as female gender (25) and family history of sleep disturbances (26), increase the vulnerability to insomnia. McCarren et al (27), using the Vietnam Era Registry, demonstrated that genetic effects were stronger predictors of self-reported insomnia than combat exposure.

For many years, insomnia has been viewed as a disorder of minor importance, although it was clear that insomniacs have poorer physical and mental health, and attempt suicide four times more often than controls (28). Prospective epidemiological studies consistently report that insomniacs are at greater risk for developing a depressive disorder. Ford and Kamerow (2) were the first to demonstrate that individuals who complained of insomnia at baseline and one year later had a greater risk of developing new depression over the intervening year. Eaton et al (29) found that sleep problems identify 47% of the new cases of major depression occurring in the next year, and sleep problems are a better predictor of full-blown depression than thoughts of or wishes for death, feeling of worthlessness and guilt, psychomotor retardation, weight problems or fatigue. In the Breslau et al (30) study, insomniacs were at nearly four times higher risk for developing a new depressive disorder in the following 3.5 years. Data from epidemiological studies indicate that the risk for developing new anxiety disorders and alcohol abuse is also greater for insomniacs (2).

In a review of ten epidemiological studies on the association between heart disease and insomnia, Schwartz et al (31) concluded that sleep complaints are a marker for chronic stress which results in autonomic dysfunction and increased risk of myocardial infarction.

SLEEP ABERRATIONS IN PSYCHIATRIC DISORDERS

Descriptive data on sleep in depressive disorders are the best documented results in the field. Disturbed sleep during an acute depressive episode is characterized by decreased sleep continuity (increased sleep latency, multiple awakenings, early morning awakening), diminished slow wave sleep (stage 3 and 4), and shortened latency to the first rapid eye movement (REM) period, with an increased amount of REM sleep early in the first half of the night. However, 10-15% of depressive patients report hypersomnia, together with complaints of decreased energy and psychomotor retardation (for a review see 32). In mania, disturbed sleep continuity, shortened REM latency and greater REM density have been found (33).

Sleep abnormalities have been also documented in other psychiatric disorders, including schizophrenia, anxiety disorders, dementia and alcoholism. Prolonged sleep latency, decreased sleep continuity, decreased total sleep time, reduced slow wave sleep, decreased REM latency, reduced or increased REM sleep, increased REM density are the most often reported abnormalities in schizophrenia (for a review see 34). Sleep in generalized anxiety disorder is characterized by decreased depth and continuity (35). Lower sleep efficiency was demonstrated in outpatients with obsessive-compulsive disorder (36). DSM-IV and ICD-10 criteria for PTSD include nightmares and difficulty falling or staying asleep; however, objective sleep studies on PTSD revealed either no abnormalities or a variability of findings: reduced total sleep time, decreased sleep efficiency and delta sleep, reduced or increased REM latency and REM percentage, increased REM density (37). Slow wave sleep is reduced, and nocturnal waking is increased in patients with possible or probable Alzheimer's disease (38). A considerable reduction of slow wave sleep was found in abstinent alcoholics (39). Polysomnographic variables are not pathognomonic for any mental disorder (40), although general sleep patterns for specific disorders can be identified. Automated EEG analysis may provide additional information. For instance, Ganguli et al (41) found less delta counts in schizophrenics while their slow wave sleep percent did not differ from that seen in controls.

Although polysomnography is the most widely used and the most sensitive state indicator of sleep, no diagnostic parameters have been found as yet. Therefore, two questions arise. First, what is the utility of psychiatric sleep research in a clinical setting and can it contribute to diagnostic classification, assessment of the course and prediction of the outcome? Second, can this research offer an insight into biological mechanisms of mental disorders?

Many data confirm that the clinical state, and the underlying pathology as well, can be mirrored in sleep variables. Disturbed sleep-wake patterns parallel cognitive decline in patients with possible or probable Alzheimer's disease (38). The amount of slow wave sleep appears to be inversely correlated with the presence of negative symptoms of schizophrenia (41). Slow wave sleep loss corresponds with cerebral atrophy in abstinent alcoholics (39).

Longitudinal follow-up and family studies suggest that sleep disturbances in depression are trait-like. Sleep of depressed patients in remission is still disturbed: delta sleep is decreased and REM latency is shortened. Shorter REM latency is associated with an increased risk for relapse (42). Polysomnographic studies in high risk probands showed that short REM latency and slow wave deficits are familial, and polysomnographic abnormalities may precede the clinical expression of depression (43). Relapsing primary alcoholics show significantly shorter REM latency and more REM percent compared with abstainers. Polysomnographic measures at time of hospital admission appeared to be a better predictor of relapse within 3 months than any other clinical or demographic variables (44).

Sleep disturbances may be of value in predicting suicide. A prospective study conducted in the general population demonstrated that the frequency of reported nightmares was related to the risk of suicide (45). Insomnia, hypersomnia and subjective sleep quality based on PSQI are related to suicidal behavior (46). Major depressive patients with nightmares at least twice a week have higher suicide scale scores (47). Suicide attempters have longer sleep latency, fewer late-night delta counts, and longer REM time (48).

Sleep data may also help in prediction of the PTSD course. Koren et al (49) reported that sleep complaints from 1 month after the trauma are significant in predicting PTSD after 1 year. Mellman et al (50) demonstrated that more fragmented REM pattern within a month of injury is associated with PTSD development.

THE NEUROPSYCHOBIOLOGICAL SUBSTRATE OF DISTURBED SLEEP

Considerable advances have been made in the elucidation of mechanisms underlying sleep disorders. Hyperarousal has been identified as the cardinal feature of insomnia (51). Chronic insomnia is associated with an around-the-clock activation of both major components of the stress system, the hypothalamic-pituitary-adrenal axis and the sympathetic system. The 24-h urinary free cortisol and catecholamine metabolites are significantly higher in insomniacs and correlate with objective sleep disturbances (52). Many additional measures suggest arousal due to augmented activity of the sympathetic nervous system: worse sleep maintenance, increased basal metabolic rates, altered heart rate variability, increased body temperature (for a review see 53). It has been proposed that the chronic activation of the stress system plays a significant role in the poor mental and physical health associated with persistent insomnia (31,52).

In the stress-diathesis model of mood and anxiety disorders, abnormal corticotropin releasing factor (CRF) regulation is responsible for such behavioral responses as arousal, restlessness and insomnia (54). Richardson and Roth (53) indicated that primary insomnia has an extensive overlap with major depressive disorder, suggesting commonality in pathophysiology. This has led to the hypothesis that increased activity of CRF neurons is responsible for primary insomnia. However, the CRF-producing neurons of the hypothalamus are only the final integrator which transforms the stress response into the endocrine response. It has been proposed that stressors requiring interpretation and modulation by previous experience may be relayed to paraventricular nucleus through multisynaptic limbic-forebrain circuits (55).

FUTURE DIRECTIONS

Many issues remain to be addressed in the field of sleep disorders. The incorporation of sleep medicine into the curricula of medical schools and residency programs is badly needed. Most studies concentrate on sleep disturbances in depressive disorder and non-organic insomnia. Interest in studies on sleep in schizophrenia is waning; yet, sleep disturbances in this disorder are well documented. Fewer studies focus on altered sleep in anxiety disorders. There are also unmapped territories. For instance, daytime complaints of impaired functioning are a precondition for the diagnosis of insomnia, but performance decrements in insomniacs remain a subject of controversy. Relatively little is known about the safety and efficacy of chronic hypnotic use. There is a strong evidence that insomniacs are at higher risk for depressive disorder, but whether early treatment of insomnia prevents the onset of depression, a question posed in the Ford and Kamerow (2) seminal study, still remains unknown.

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The WPA Education Coordination Center

ROGER MONTENEGRO
WPA Secretary for Education

The main tasks of the WPA Education Coordination Center (ECC), under the supervision of the Secretary for Education, are to facilitate communication among the WPA components, by means of the WPA website and the WPA Electronic Bulletin, and to implement the WPA educational initiatives.

Moreover, the ECC has been very active in ensuring the provision of WPA continuing medical education (CME) credits at various WPA scientific meetings, including the following: the WPA Co-sponsored Conference in Chennai, India (January 2004); the Conference on Psychiatry and Its Contemporary Context in New York, USA (May 2004); the WPA Co-sponsored Conference in Kos, Greece (May 2004); the WPA Regional Meeting in Lahore, Pakistan (September 2004); the WPA International Congress in Florence, Italy (November 2004); the WPA Co-sponsored Conference and 23th Latin American Psychiatric Association (APAL) Congress in Punta del Este, Uruguay (November 2004); the WPA Regional and Intersectional Congress in Athens, Greece (March 2005); the WPA Regional Meeting in Mar del Plata, Argentina (March 2005); the WPA Thematic Conference in Valencia, Spain (June 2005); and the 13th World Congress of Psychiatry in Cairo, Egypt (September 2005).

Lately, the ECC has been also very much involved in the development of the WPA-World Health Organization (WHO) Atlas on Psychiatric Training. This collaborative project has been considered a strategic task, and was carried out using the structure that the ECC has built by connecting various WPA components (Member Societies, Zone Representatives, Scientific Sections, Educational Network, Network of Consultants). This has been the first time that an international non-governmental organization has obtained information about psychiatric training from as many as 90 countries. The data thus obtained will be published in a report produced jointly by the WHO and the WPA.

The ECC is constantly updating the WPA website (WPA Online). Scientific Sections inform us on their recent activities; Member Societies send their publications and information on upcoming initiatives; the members of the WPA Educational Network share their contributions with other components; the members of the WPA Network of Consultants spread the news about their fields. This constant flux of information has made WPA Online what it is today: a website which receives more than 20,000 visits a month (21,227 last March, with a 52% increase compared to the 13,923 visitors in March 2004), from people all over the world. This dynamic means of communication, with the WPA Electronic Bulletin acting as a herald, has fostered the participation of all components in the life of the WPA, providing them with a sense of belonging.

The comprehensive and effective functioning of the ECC has made of it a very important tool towards the high recognition of the WPA all over the world.

The Geneva Prize for Human Rights in Psychiatry 2005

NORMAN SARTORIUS
President, Geneva Prize Foundation

Following the call for candidatures made in 2004, the jury of the Geneva Prize for Human Rights in Psychiatry met in Geneva on 10 January 2005 to examine the proposals received. The jury was presided by Ruth Dreifuss, former President of the Swiss Confederation. All the proposals received were found to be of excellent quality and the jury praised the high human qualities of their promoters. The jury recommended that the 2005 prize be given to Jorge Luis Pellegrini, from Argentina, who has been defending human rights in psychiatry throughout his life and has been himself the victim of the violation of these rights by the Argentinian military dictatorship. The members of the Council of the Foundation accepted this recommendation.

Dr. Pellegrini engaged himself in the promotion of social psychiatry and the reform of traditional psychiatric institutions immediately after the completion of his medical training. His activities in favour of the schooling of handicapped children, of the social integration of indigenous populations of Patagonia, of the treatment and rehabilitation of people with alcohol-related problems, of the development of outpatient care and social rehabilitation of people with mental illness witness a coherent and innovative professional path. The governing idea of his engagement was the empowerment of patients and their families, as well as the fight against discrimination of any sort, and programmes of training and information of the public. During the military dictatorship, Dr. Pellegrini was excluded from University and subsequently from the hospital before being arrested, imprisoned, liberated and again imprisoned. During these years of political persecution, he continued his social engagement and also produced a book about a Mapuche Indian family which was later turned into a film raising awareness about the pleas of the Indian population in Argentina.

The Prize, which is accompanied by a sum of 20,000 Swiss Francs, has been awarded to Dr. Pellegrini during the 13th World Congress of Psychiatry.

The jury was also impressed by three other programmes, each functioning in a different cultural and institutional environment, which were considered particularly worthy of distinction because of their exceptional engagement for the recognition of the fundamental rights of psychiatric patients. Each of them contribute to make the public opinion sensitive to the possibilities and needs of the mentally ill people.

These programmes are the following: Grégoire Ahongbonon and the activity of the Association St. Camille of Lellis in Bouaké, Ivory Coast; the "Marcela Programme" in Albania; and the Schizophrenia Research Foundation (SCARF), a nongovernmental organization established in Chennai, India. More details about these programmes can be obtained from the website of the Geneva Prize Foundation (www.geneva-prize.ch).

New WPA officers

The new WPA officers, elected during the General Assembly held in Cairo on September 12, are the following:

Executive Committee

President-Elect – Mario Maj (Italy)
Secretary for Education – Allan Tasman (USA)
Secretary for Publications – Helen Herrman (Australia)
Secretary for Sections – Miguel Jorge (Brazil)

Zone Representatives

Zone 1 (Canada) – Julio Arboleda-Florez (Canada)
Zone 2 (United States of America) – Michelle Riba (USA)
Zone 3 (Mexico, Central America and the Caribbean) – Enrique Camarena-Robles (Mexico)
Zone 4 (Northern South America) – Edgard Belfort (Venezuela)
Zone 5 (Southern South America) – Roger Montenegro (Argentina)
Zone 6 (Western Europe) – Michel Botbol (France)
Zone 7 (Northern Europe) – Marianne Kastrup (Denmark)
Zone 8 (Southern Europe) – Levent Küey (Turkey)
Zone 9 (Central Europe) – Dusica Lecic-Tosevski (Serbia and Montenegro)
Zone 10 (Eastern Europe) – Armen Soghoyan (Armenia)
Zone 11 (Northern Africa) – Tarek Okasha (Egypt)
Zone 12 (Middle East) – Charles Baddoura (Lebanon)
Zone 13 (Western and Central Africa) – Oye Gureje (Nigeria)
Zone 14 (Southern and Eastern Africa) – Fred Kigozi (Uganda)
Zone 15 (Western and Central Asia) – Haroon R. Chaudhry (Pakistan)
Zone 16 (Southern Asia) – Jitendra K. Trivedi (India)
Zone 17 (Eastern Asia) – Naotaka Shinfuku (Japan)
Zone 18 (South Pacific) – Bruce Singh (Australia)

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