Psychology and health: contributions of psychology to the improvement of health and health care

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Psychology as both a science and a profession has been closely identified with other disciplines in the broad field of health since the turn of the present century. Recent advances in health care have reinforced the growing belief that the promotion of health and the prevention and treatment of illness can be greatly enhanced by incorporating the scientific findings and modern techniques of psychology into everyday practices. This review outlines the contributions of psychology to health care throughout the world; only some of the most timely and relevant issues are mentioned, together with examples of current work in the field. After an introductory overview, special attention is given to each of the major areas within the broad field of health care where psychological applications have been particularly useful.

INTRODUCTION

Health problems prevailing in different parts of the world

Rapid social change resulting from economic development, industrialization, and urbanization has had profound effects on the structure of communities, the functioning of families, and the psychological well-being of individuals (28, 74). In many places, these changes have eroded traditional psychological support systems and thus reduced the capacity of individuals, families, and communities to cope with distress, disease, and disability. Often owing to social disorganization, problems such as juvenile delinquency, violence, and accidents at work and on the roads have increased. Accompanying changes in life-style (including poor diet, lack of exercise, and substance abuse) have all been implicated in considerable changes in disease patterns, including malnutrition, hypertension and other cardiovascular problems, various cancers and addictions (73), as well as in infant mortality and life expectancy rates (77).

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Psychosocial factors have also been increasingly recognized as determinants of success in health and social actions (75). It has become accepted that programmes aiming at prevention of diseases and the promotion of health and well-being must be based on an understanding of the culture, traditions, beliefs, and patterns of family interaction. No less important has been the admission that the structure and function of health services are significantly influenced by psychosocial factors such as the motivation of health workers and perceptions of disease.

The devastating spread of alcohol and drug problems, seriously harming health and lowering the socioeconomic productivity of individuals, communities, and nations, has been another source of growing concern to governments. In an increasing number of countries persons diagnosed as "alcoholics" fill as much as one-third or even more of all hospital beds. Heavy drinking among women and young people is being reported along with family breakdown. Liver cirrhosis ranks among the five leading causes of death between ages 25 and 64 years in a number of developed countries. In many countries alcohol-related traffic accidents account for up to 50% of road fatalities. Within industry, heavy drinkers show high rates of absenteeism and low productivity on the job. All social classes are usually affected, and serious alcohol problems often strike highly trained personnel who may be playing a major role in national development.

Health problems related to drug abuse are a major

public health and political concern in a large number of countries. The damage to health and social productivity, as well as the fact that the abuse often concerns adolescents and young people, further strengthens the demand for action. A serious problem in many countries is the uncontrolled use of psychotropic drugs with dependence liability. The work on prevention of such drug abuse is often hampered by insufficient awareness of the existence of problems related to the indiscriminate use of psychotropic drugs, the inadequacy of drug controls, and the lack of effective methods to prevent or remedy the harm done by such drugs.

At least 40 million people in the world suffer from severe mental illness, such as schizophrenia and severe depression (61), and at least twice this number are seriously disabled by mental retardation, dementia, and other disorders of the nervous system. There is no known human group or community—whatever the level of development—which is free of severe mental disease. Estimates vary as to the number of people in the world affected by the less severe but nevertheless incapacitating mental disorders; none, however, is lower than 200 million. Mental disorders make up a substantial proportion of all morbidity seen in the general health services of both developing and developed countries, among both adults and children. Their numbers are likely to grow in the years to come.

Mortality due to acute infectious diseases continues to decline; therefore, more people are surviving throughout the entire period at high risk for such diseases. Apart from this general demographic reason for an increase in mental morbidity, the incidence of specific disorders may rise or fall depending on the rate of occurrence and spread of particular biological and environmental etiological factors in different parts of the world. Thus, a growing rate of accidents results in dramatic increases of toxic or traumatic organic brain syndromes with their accompanying behavioural disturbances. Where infectious and parasitic diseases are prevalent, the occurrence of acute and chronic psychoses due to cerebral involvement can be expected.

Stress, in its various forms, is ubiquitous and contributes to the occurrence of a range of dysfunctional behavioural responses, such as anxiety states, depression, and psychosomatic disorders which affect millions of people. Suicide, according to recent estimates, causes as many as 100 000 deaths a year in Europe alone (76).

Neurological disorders are a major cause of death and of long-term disability in all age groups in all parts of the world. Epilepsy affects two to five of every thousand inhabitants of the industrialized countries; these numbers may be three to five times

higher in some developing countries. Cerebrovascular disorders are also referred to as one of the frequent causes of disability in all countries. Infectious disorders of the nervous system (viral and bacterial) are still very frequent and often have disabling neurological sequelae even if properly treated. Traumatic peripheral nerve diseases are increasing owing to traffic and workplace accidents. Neurological disorders linked to aging increase with the increase of life expectancy.

Of the 400 million disabled people in the world, no less than two out of every five are incapacitated by mental or neurological disease, or by the sequelae of alcohol and drug dependence. The psychosocial dimension, however, is also present in disability which has physical illness or accidents as a primary cause; this dimension is often crucial for the rehabilitation and resocialization of the disabled person in the community.

Modern psychology as a science and profession

Modern psychology was established barely a century ago by the fusion of philosophical inquiry and the methodology of natural science. As it was concerned with the scientific investigation of mental processes and behaviour, psychology soon flourished throughout Europe and North America. The development of mental tests and the study of individual differences led to many applications in child development, education, industry, and mental hospitals. By the end of the Second World War, the scientific and professional contributions of psychologists were firmly established within the broad field of mental health, particularly in the highly industrialized societies of Europe and North America.

Psychology expanded rapidly during the first two decades after the Second World War into a wide variety of areas as both a science and a profession. As scientists, psychologists opened up many new fields of research within the biological and social sciences in their search for a deeper understanding of mind and behaviour. As practitioners, psychologists multiplied rapidly in providing mental health services to individuals seeking help with mental or emotional problems.

Two major specializations soon emerged—*clinical psychology* which originated largely in the mental hospital or clinic, and *counselling psychology* which grew primarily out of educational settings. While graduate training in both these specialties may differ, the distinction between them is much less pronounced in actual practice. Both offer mental health services and their practitioners are frequently teamed with other mental health professionals, especially psychiatrists and psychiatric social workers. A third

specialty, *school psychology*, developed out of the need for specialized professional services to children, teachers, and parents which focused on problems of learning and development among children in school settings. Traditionally, these specialties involved primarily the delivery of mental health services to individuals—sharing in common with the other health services the traditional doctor–patient (or client) relationship with an emphasis on diagnosis, therapy, or care, and leading to improved health and development of the individual.

Another specialization within psychology which has contributed to the health field is *industrial psychology*, sometimes referred to as ergonomics. Psychologists in this branch are concerned with such problems as how to match the capabilities of individuals with the requirements of jobs through appropriate selection and training methods, how to design jobs and environmental conditions to match human capabilities, how to evaluate and improve job satisfaction, reduce accidents, and reduce stress in the workplace, and how to assist individuals in making appropriate occupational choices and in attaining self-fulfilment.

More recently, new specialties have emerged in psychology as part of a growing trend towards community-based preventive interventions and a greater emphasis on the promotion and protection of health and well-being, as distinguished from the treatment of illness in the individual. Two of these new specialties are particularly notable: *health psychology*, which is closely associated with behavioural medicine and is concerned primarily with the preventive and promotional aspects of health care; and *community psychology*, which grew out of social action research and community development.

Health psychology is concerned with the biopsychosocial relationship of mind and body in a sociocultural milieu and the development of new behavioural technologies for the promotion and maintenance of health. It also involves the study of behavioural factors affecting emergency treatment and recovery from physical illness. While interest in the relationship between mind and body goes back many centuries, it is only very recently that new theoretical approaches and technologies have been developed for the maintenance of health and the prevention of illness or dysfunction in otherwise healthy persons. There is a growing awareness today among scientists, health practitioners, and policy-makers that much of what is experienced as illness stems largely from the *behaviour* of individuals rather than simply from biological pathogens. Such health-related behaviours as smoking, drug and alcohol abuse, overeating, excessive use of salt, lack of exercise, failure to use safety belts, failure to seek medical care, and engaging in a highly stressful life-style are but a few

of the behavioural factors responsible for serious illness.

Within every community there are indigenous resources that can be harnessed to promote the health and well-being of the individual, as well as behavioural factors that lead to illness. Community psychology considers these factors when developing social action programmes for improved health of both the community and the individuals within it. Using a highly pragmatic approach, the community psychologist surveys the resources of a community, assesses the needs of its members, searches for natural helpers and care-givers, examines environmental toxins and sources of high stress, and aids the community leaders in developing an intervention programme or social action aimed at improving the quality of life for the entire community.

Each of these very different approaches to health and illness deserves to be spelled out in more detail. But first, it is important to take note of the highly uneven distribution of psychologists in the world and the implications of this for health planning in different countries.

Development and status of psychology in different countries

Recently it has been estimated that there are about 260 000 professionally trained psychologists throughout the world (59). Less than half this number are members of national societies belonging to the International Union of Psychological Science, a non-governmental association representing psychology in 45 countries. The greatest concentration of psychologists live and work within the economically developed countries of western Europe and North America, and in other countries such as Israel, Japan, and Australia. Within the United States alone there are over 100 000 psychologists, most of whom have a doctoral degree. Where there are several hundred psychologists per million population and where there is a long history of strong support for scientific research, one would expect to find much greater development of psychology as a major contributor to health than in countries where there are very few recognized psychologists.

The nature of psychology and the role of psychologists, particularly with respect to health and mental health, vary in different parts of the world which may be categorized into four types: (1) the industrialized, economically developed nations located primarily in North America and western Europe; (2) the socialist countries of eastern Europe and China; (3) the dynamically developing countries in the Third World located primarily in Latin America and Asia; and (4) the less developed Third World countries that are currently overwhelmed by overpopulation and severe economic and social problems.

1. *Highly industrialized nations.* The great majority of psychologists with the highest degree of professional and scientific training are located in North America, western Europe, Japan, and Australia. At least 95% of the scientific research and doctoral-level training in psychology takes place within the universities and research centres of these industrialized countries. Community psychology, with its focus on ecological and environmental analysis as well as social action within the community, and most of the recent advances in health psychology have taken place in these countries.

2. *Socialist countries.* The growth of psychology within the socialist countries of eastern Europe and the USSR has been very uneven, which is partly due to the ideological debates earlier in this century concerning the nature of psychology and its proper role within a communist society. In the USSR, for example, the number of psychologists per million population, particularly those engaged in professional roles offering health services, is considerably smaller than in most western countries. Nevertheless, there is a growing interest in all of the above-mentioned specialties. Elsewhere in central and eastern Europe, particularly in the German Democratic Republic, Hungary, Czechoslovakia, Poland, and Yugoslavia, the number of psychologists and their activities are much more like those in western Europe, largely because of their earlier traditions before the Second World War. The largest socialist country, the People's Republic of China, went through such a period of turmoil that only recently has psychology been reorganized as an important scientific discipline with a major future role in health. With only about 2000 trained psychologists throughout China, it is likely to be several decades before there are sufficient scientifically trained practitioners to reach the masses of people. Realizing the tremendous challenge ahead of them, Chinese psychologists are looking for ways to extend psychology into other fields, thereby having a greater influence on national policy and development (9). In Cuba, psychologists have taken an active role in promoting primary health care, reducing social risk factors, and strengthening the coping abilities of the population through community-based action (22).

3. *Dynamically developing countries.* Most of the countries in Latin America have experienced very rapid growth in the number of psychologists who receive professional training. Although few attain the doctoral degree, a five-year professional programme in most Latin American universities has been completed by many thousands of individuals in the past few decades. Most of these professionally trained psychologists serve as teachers, counsellors, or mental health practitioners. It is very difficult to

estimate accurately the number of qualified psychologists in these countries. In Mexico, for example, while there may be as many as 20 000 individuals studying in the 27 universities for a professional degree in psychology, a much smaller number actually complete the course of study and even fewer find suitable professional work upon graduation (14). The number of doctoral level recipients, though relatively small, is nevertheless increasing very rapidly. In Asia also similar rapid development in psychology is taking place in India, Indonesia, the Philippines, Singapore, Thailand, and Hong Kong. Within Africa, only Nigeria has shown rapid growth, aside from the Republic of South Africa which, within its ruling minority white culture, is more like western Europe in its development.

4. *Less developed countries.* Most of Africa, large parts of Asia, and several Latin American countries have very few psychologists. Those who are present either provide services for highly privileged individuals or engage in teaching at relatively elementary levels. These countries are generally so overwhelmed by problems of uncontrolled population growth, agricultural disasters, economic deprivation, and political instability that it is exceedingly difficult to mount any major scientific or professional programmes except in technologies of most urgent need for national development. It is unlikely that psychology as a profession will grow substantially in these countries within the foreseeable future; nevertheless, many of the findings from psychological research and the proven social experiments successfully completed in the developed countries in health and community psychology provide attractive possibilities for implementation by others, possibly with technical assistance from experts in these subjects.

Psychological knowledge and the resulting new health technologies are not the sole property of psychologists. On the contrary, many of these ideas and programmes can be implemented by individuals without advanced university education, given the proper circumstances and after appropriate training. In those societies where the number of highly trained psychologists is very small, special efforts should be made to involve the indigenous resources and traditional helpers or advisers such as elders, priests, conciliators, teachers, and midwives in applying at least some of the psychological techniques that have proved effective. The dissemination of appropriate technologies is equally needed for their application to the many health problems in those economically advanced countries where large numbers of psychologists are present.

Local solutions emphasizing primary care, illness prevention, the reduction of pathogenic risk factors, and the self-sustaining rewards of healthy behaviour

fit squarely within the programme of the World Health Organization. Of highest priority is the provision of better primary care and wider access to appropriate health care services in the home, the school, the workplace, and other institutions at the community and regional level. In a world of scarce resources, such solutions must inevitably be sought in close concert with policy-makers and existing groups and institutions in the countries concerned. They must reflect a mature knowledge of the political economy of development.

Basic research and the most advanced training of psychologists will probably continue to be largely the province of the highly industrialized countries that have the resources for supporting such activities. Some of the more dramatically developing countries of Latin America and Asia also have sufficient resources and highly trained talent to make significant contributions in all areas of psychology related to health. Applied research, particularly from the point of view of community psychology and to some degree health psychology, can become a practical reality now in most countries of the world. These issues are reviewed below in more detail, starting first with the more traditional mental health services, followed by recent advances in health psychology, and finally some examples of community psychology in different parts of the world.

MENTAL HEALTH SERVICES

The most widely recognized application of psychology is concerned with the provision of mental health services to individuals with special personal problems. Clinical, counselling, and school psychologists are the three major specialists who provide psychodiagnostic and treatment services as part of the mental health team. Individuals are assisted through counselling and psychotherapy by psychologists or other professionals who have been given special psychological training. Improved methods of psychological assessment provide a deep understanding of an individual's strengths and weaknesses, special aptitudes and interests, as well as mental, emotional, and behavioural characteristics, and of the environmental circumstances affecting the mental health and personal development of the individual.

Clinical psychology is the oldest and largest health-related branch of psychology. Its practitioners work in a wide variety of settings in both the private and public sectors. Many of them work simultaneously in more than one setting. In the broadest sense, their work involves psychotherapy (individual, group and family) with a great variety of theoretical orientations, consultations (e.g., within industry and other organizations), psychodiagnosics, teaching and research, and educational or health-service adminis-

tration. In the public sector, clinical psychologists are found in the public health services, in regional and municipal hospitals and community mental health centres, and in child guidance clinics at various levels. In the private sector, clinical psychologists operate within individual and group practices and in privately-owned hospitals.

Principles and techniques

The professional work of today's psychologist draws on a century of experience and experiment with human behaviour in natural and controlled surroundings. Over the years, psychologists have devised a variety of therapeutic approaches based on scientific methods of observation, measurement, testing, and evaluation. However, in testimony to the relative youth of psychology as a health-care profession, and to the complexity of human behaviour as a subject of scientific and clinical inquiry, psychologists not surprisingly differ in their assessment of the value of these approaches in meeting the needs of their clients. Because psychologists also differ in their understanding of the very nature of those needs (whether reported by the client or inferred by the psychologist using one of many competing diagnostic instruments), the problem is by no means simply one of technique.

Psychology's actual and potential contributions to physical and mental health have encouraged psychologists to expand their activity far beyond the traditional clinical settings, identifying large populations deemed to be particularly susceptible to certain behavioural or emotional problems and designing "interventions" to mitigate the risks discerned. (See the sections on Health Psychology (page 923) and Community Psychology (page 928).) The widely recognized benefits of psychology have led to efforts to develop the profession in geographical and cultural settings other than those in which it first took root and flourished. Such efforts to expand and transplant psychology, with or without the scientific soil that nourishes it, pose a number of new and important questions.

(1) What are the core principles and techniques of those branches of psychology concerned with physical and mental health?

(2) To what extent can the core techniques of psychology be transferred across cultural boundaries?

(3) How should the application of such transfers be regulated? What level of training is required for their application?

(4) How should the populations who would benefit from the application of psychological techniques be identified? In other words, who is the client?

(5) What are the goals to be accomplished, and how are these defined?

In the traditional western setting of mental health services, the individual with behavioural or emotional problems is generally the unit of analysis. This emphasis is reflected clearly in the texts of the dominant schools of psychotherapy, and in the employment patterns of those psychologists who provide health services. In this respect, the profession of psychology resembles that of medicine, except that the social and epidemiological aspects of psychological health and illness have yet to attain their proper level of recognition within the public health services and ministries, and in the eyes of the public.

Before proceeding to a discussion of the present and likely future roles of professional and para-professional psychologists in the various regions of the world, it would be useful to present a summary of some of the methods psychologists currently employ to treat the emotional and behavioural problems of their clients. In the following discussion, the client will in all cases be understood to be an individual who has sought psychological treatment or who has been recommended or committed to the care of a psychologist. The reader will note wide differences in the circumstances under which the methods are applied, the type and level of training required of the therapist, the type of psychological problems addressed, the explanation of the symptoms presented by the client, and the identification of the agent of change or cure. Despite these differences, it is generally recognized that the personal relationship established between therapist and client is an important factor in determining the success of the treatment.

Psychodynamic therapy. Based largely on Sigmund Freud's theories and techniques of psychoanalysis, in which symptoms are relieved by bringing into consciousness the repressed impulses and conflicts dating from the patient's infancy and childhood, psychodynamic therapy is an intensive and relatively expensive interpersonal process that depends for its success on the *transference* onto the analyst of archaic wishes, impulses, memories, and feelings from the patient's past. Techniques required of the analyst include the ability to analyse and interpret the patient's dreams, free associations, resistances, and "transferred" emotions. After receiving the post-graduate qualification (Ph.D. or M.D. degree), the candidate psychoanalyst must undergo further specialized training and complete a personal analysis. It should be noted, however, that legal regulations concerning the use of the title "Psychoanalyst" vary considerably around the world.

The techniques of a psychodynamic treatment are deeply embedded in the personal relationship that develops between the therapist and the patient, and a long period of training is typically required of the therapist. It is therefore difficult for such techniques

to become a transferable technology, although large portions of the Freudian canon have already been transferred to less expensive and less prolonged therapies that may be carried out in some cases by individuals with a lesser degree of training.

Client-centred therapy. In the place of the universal instinctual drives and social proscriptions that Freud believed shaped the behaviour of all human beings, Carl Rogers and others have posited a "growth hypothesis", according to which each individual is believed to strive to realize his or her inherent potentialities. The direction and effectiveness of the individual's efforts to grow are determined by his or her *self-concept*. It is the job of the Rogerian therapist to enhance that self-concept, and so improve the client's growth prospects, by showing his or her active and unconditional *positive regard* for the client. In contrast to the more passive and oftentimes authoritarian stance cultivated by the psychoanalyst, practitioners of this client-centred type of therapy insist on the importance of establishing a therapeutic environment in which mutual empathy and understanding can be allowed to develop and grow. Although more susceptible to group applications than psychodynamic therapy, client-centred therapy (as practised with groups in the United States and Europe) may nevertheless conflict with varying notions of privacy, correct conduct, pride, and limited self-disclosure prevailing around the world. Client-centred therapy is practised by therapists of varying levels of training.

Group therapy. Group therapy, practised along psychodynamic or Rogerian lines, may be described as a learning process, in which individuals with similar problems come to recognize their own maladaptive behaviours in the actions of other members of the group. When properly channelled by the therapist or group leader, such recognition is said to lead to greater self-acceptance and a greater willingness to accept and assist others. It should also provide the basis for effective behavioural change, although the ultimate source and the lasting effects of such change have yet to be demonstrated by scientific research. Many of the most popular forms of group therapy (e.g., various types of "encounter groups") are organized and led by individuals with a low level of conventional psychological training.

There is good reason to believe that the success, and perhaps even the existence, of group therapy depends on certain implicit cultural norms such as those concerning correct conduct, pride, or self-disclosure. To the extent that the therapeutic group serves as a substitute for other bonds and affiliations that have been lost in many Western societies, the technique may have no value in more community-

based cultures.

Behaviour therapy. The behaviour therapies skirt the issue of the original source of unhealthy or abnormal conduct by focusing on those portions of behaviour that have been acquired or *learned*. Based on respected scientific theories of learning and operant conditioning, the behaviour therapies strive to teach the client, through appropriate *reinforcement*, how to eliminate such maladaptive and self-perpetuating responses from his or her behavioural repertoire.

Certain features of behavioural and learning therapies such as systematic desensitization and modelling make them suitable for transfer across cultures and for application by individuals with varying levels of training. Although the underlying processes are not completely understood by scientists, the basic principles and techniques of operant conditioning are easily grasped and communicated, and therapeutic measures derived from them can be gratifyingly effective and inexpensive. However, in the case of complex or ambiguous behaviour patterns, it is often exceedingly difficult to identify the appropriate reinforcers and to apply them systematically and effectively. To do so requires a certain level of training as well as considerable sensitivity to the cultural and individual requirements of the client. A certain degree of continuity would also seem to be necessary for preventing recidivism and ensuring permanent change. These observations point to the probability that the nature of the relationship between client and therapist accounts for some portion of the success of behavioural approaches.

It is worth noting that despite continuing debate among the advocates of psychodynamic, client-centred, and behavioural approaches to therapy, many psychologists in the world today make use of elements of all three broad schools of thought, designing their approach (ideally) to the needs and the situation of the client, and supplementing it with techniques particular to one or more of the many dozens of subspecialties that have grown up in the fertile field of psychotherapy. A number of these specialties are identified with activities such as art, drama, music, and poetry which are turned by the practitioner to diagnostic/interpretive and therapeutic ends. Other specialties are defined by their target population (children, couples, the family, the elderly, athletes, the physically disabled, the mentally retarded, the intellectually gifted, those with learning disabilities, substance abusers, etc.). Still other specialties are less developed, having to do, for example, with the duration of treatment (brief psychotherapy).

Counselling. As pointed out earlier, counselling

psychologists and counsellors with other forms of training draw upon the same corpus of knowledge as do clinical psychologists. Traditionally, unlike the clinical practitioners, they tend to be concentrated within educational institutions. On the whole, counselling psychologists deal with individuals whose difficulties are either transitory or of a relatively mild nature. In part as a function of their typical employment setting, counsellors are less likely than their clinical colleagues to treat severe and chronic neuroses, personality disorders, and psychoses. Nevertheless, counselling psychologists in schools, in the workplace, and in various community institutions serve important preventive and therapeutic functions.

Psychodiagnostics. Psychologists made early contributions to mental health care through the design and administration of diagnostic and evaluative instruments and inventories intended to assess aspects of human functioning and malfunctioning. Many hundreds of such tools have been developed, and some, such as the MMPI (Minnesota Multiphasic Personality Inventory), have become widely known. Whether they can be used meaningfully in culturally or ethnically diverse populations is a topic of intense current debate in many areas of the world. Problems of conceptual equivalence in test materials, comprehension of the testing procedures, and content all pose serious threats to the valid cross-cultural use of psychodiagnostic instruments (47).

Hypnotism. Hypnotism is a widely practised diagnostic and therapeutic technique that has been applied with some success to the reduction of anxiety and the elimination of unhealthy behaviours such as smoking, overeating, and insomnia. The similar notion of trance occurs in many cultures and may serve certain therapeutic functions.

Psychopharmacology. Although the application of drug therapies continues to fall within the province of physicians, psychologists are often called upon to provide psychotherapy in conjunction with drug treatment. Moreover, scientific psychologists serve as vital members of research teams investigating the psychic and physical effects of antipsychotics, antidepressants, and anti-anxiety drugs.

Psychotherapy research. The conditions that affect the outcome of various types of psychotherapy have been the subject of careful study in recent years as psychologists seek to demonstrate the overall effectiveness of mental health care as a preventive and curative agent (37, 70). Studies have also shown that access to and use of mental health services results in

a lower rate of use of medical services (30, 34), because they minimize the somatic complaints that so often lead individuals suffering from acute or chronic mental and emotional problems to seek medical treatment. Other studies show that mental health services result in shorter hospital stays (33, 52, 62).

Most of the above methods as well as variations in the techniques worked out by these specialized practitioners are subject to application across cultures, provided that appropriate attention is paid to matters of cultural translation and adaptation. An adequate level of training must also be given to new practitioners. Both the process of therapy and its outcome in changing behaviour should be evaluated by research before it can be assumed that such applications in different cultures are valid.

The psychologist as a member of the health care team

Through collaborative research and teaching in medical schools, public health services, and other specialized settings, psychologists have long been active participants in a multidisciplinary approach to mental health care at the tertiary (or highest) level. At the secondary level, psychologists serving in certain departments of hospitals (psychodiagnostics, rehabilitation, paediatrics) have also been part of a fruitful team approach, and there appear to be excellent opportunities for further interprofessional integration at this level (for example, in the field of cardiology, oncology, burns, and dentistry, and in work with patients suffering from incurable illnesses such as multiple sclerosis) (8).

The establishment of psychologists as primary health care providers varies considerably across the world. In view of the frequency with which psychosocial problems are presented to physicians and other providers of primary health care, the placement of psychologists and others with psychological training in primary health settings would appear to be a good allocation of resources which would benefit both the present providers, who often lack the necessary skills, and the patient or consumer. In the field of paediatrics alone, some examples of high-incidence disorders with both medical and psychological components include encopresis, enuresis, hyperactivity, juvenile-onset obesity, child-rearing problems, chronic and terminal illness, and compliance with medical treatment regimens for disorders such as diabetes (78). Accordingly, psychologists, particularly developmental psychologists, are emerging as members of private family-medicine practices and of the prepaid health programmes offered to the employees of organizations in Europe and North America (8, 13).

There is good reason to believe that the benefits of

collaboration between psychologists and other providers of primary health care could be widely applied, with due attention to cultural factors and to differences in the structure of the health care system from country to country.

Crisis intervention and disaster relief. Crisis intervention is a relatively recent "frontline" mental health specialty with obvious implications for physical health. Experience acquired in providing assistance to ordinarily well-functioning individuals on occasions of intense stress (e.g., rape or assault, combat shock or panic, transitory episodes of depression related to changes in personal relationships or circumstances of employment) has enabled psychologists to become involved in large-scale efforts to mitigate the harmful effects of natural and man-made disasters. For example, following the earthquake that struck Mexico City in September 1985, Mexican psychologists provided special services to displaced families in 25 tent cities surrounding the earthquake zone. Television was used to carry the psychologists' message to wide audiences.

Professional recognition, training, ethics, and human resources

Recognized as fully independent providers of health care services in North America and western Europe, psychologists are given more limited legal recognition in other areas of the world. Overall, about two dozen countries throughout the world have established some sort of legislation defining the practice of psychology, and efforts are under way in others. In Europe alone, laws licensing or certifying psychological practice were enacted during the 1970s in Hungary, Iceland, the Netherlands, Norway, Portugal, and Sweden (40). A certification bill was enacted in France in 1985 (25). Among the other European countries, legislation is being sought in Austria, Belgium, Denmark, Finland, the Federal Republic of Germany, Ireland, Italy, Poland, Turkey, and the United Kingdom.

The training required for legal qualification as a psychologist ranges from five years of post-secondary professional education to eight or nine years as required for the doctorate in some countries (e.g., United States and Canada). At present in many European countries, practitioners hold a different degree (the French or Belgian *license*, and German *Diplom*) from university faculty members (with a doctorate).

University-based training leading to a nationally accepted professional degree may be followed by postgraduate training in an applied setting. Post-doctoral or other postgraduate programmes constituting a residency-type experience are also increasing

in number. Clearly, there are significant differences between countries in the content of such courses, although all of the major streams discussed in the previous section can be found. In some countries (e.g., Canada, Colombia, Federal Republic of Germany, India, Mexico, Netherlands, United Kingdom and United States), behaviour therapy is continuing to gain influence, particularly within university training settings. A number of national associations of psychology support post-university training programmes, often to make up for deficiencies in university training or lack of legal regulation in their countries (49). For example, in the Federal Republic of Germany, professional training within the university ends after only five years, with no provision for further university-based, post-graduate training. Most such training leading to a qualification occurs in proprietary or nonprofit private organizations that offer continuing-education programmes of varying duration and quality (6).

Codes of ethics covering the practice of professional psychology have been adopted by at least 18 of the 45 national members of the International Union of Psychological Science, and by all but one of the 16 members of the European Federation of Professional Psychologists' Associations. These codes cover basic values such as the protection and promotion of human dignity and welfare, the assumption of responsibility for professional action, restriction of practice to areas of competence, confidentiality, and honesty in all matters. In most countries, the codes are implemented by ethics committees and usually enforced by appropriate sanctions.

Owing to differences between countries in the definition of persons who are qualified to provide psychological services, a correct estimation of the human resources in professional psychology is not possible. However, certain broad differences in the employment patterns of psychological health service providers can be noted among the industrialized countries of the West, the socialist countries, the dynamically developing countries, and the less developed countries.

In the United States, for which data are most readily available, 31% of doctoral-level clinical psychologists work full-time in independent practice, followed by 20% in hospitals, and 14% in clinics. Another 19% work in academic or educational settings, with the remainder distributed among business, government, or other human service settings (65). Counselling psychologists are found in the same general fields in the United States, but in greater concentration in academic settings (40%), where they counsel students in addition to teaching and performing research.

Throughout Europe, the great majority of professional psychologists are salaried employees of public

agencies. Private practice is nonexistent in the socialist countries and fairly rare in many countries of the industrialized West (e.g., in the United Kingdom), where high-quality public health and welfare services may be available. There are wide variations in the specialties in which psychologists may be employed. For example, roughly two out of three professional psychologists in the Nordic countries are clinical specialists, while in certain other areas of Europe with similar levels of social and economic development, psychologists are heavily concentrated in the areas of psychodiagnostics, educational assessment, or guidance and counselling. However, throughout western Europe, the relative importance of psychodiagnostics has declined in favour of providing therapeutic services. This trend has been accompanied by a growing emphasis on preventive care.

The role of the clinical psychologist in central and eastern Europe has been more restricted and has changed less rapidly than in the countries of western Europe or North America. Clinicians in eastern Europe tend to fulfil psychodiagnostic functions primarily (72). Nevertheless, in Leipzig and Berlin, psychologists can specialize in clinical psychology during the last three years of training towards the *Diplom*, following which behaviour therapy and client-centred psychotherapy may then be performed under medical supervision in psychology departments within the state health service (20). In both the German Democratic Republic (60) and Poland (50) programmes lasting five years or more have recently been introduced to train psychologists to hold senior clinical, supervisory, and managerial posts in the health service on an equal footing with medical practitioners. In Poland, where there are 5500 psychologists, the profession is flourishing.

In the USSR, the number of clinical psychologists is less than a thousand and psychotherapeutic treatment within the health-care system is performed almost exclusively by physicians. Clinical psychologists offer services through a number of university-based clinics in the large cities. The use of drugs and other medications predominates among Soviet psychologists, and psychoanalytically-oriented schools of therapy have been almost totally ignored for the past fifty years. In 1977 it was reported that a new specialty in medical psychology would entitle degree-holders to perform some "psycho-corrective" functions within the mainstream health-care system (80), but a more recent article did not mention professional psychology at all (46).

Soviet psychologists have devoted considerable resources to developmental and industrial psychology. The former, while related primarily to learning and moral development, has some implications for a broad conception of health, while the

latter has led to some significant interest in work in the West in the areas of human potential, heightened experience, and peak performance (in the workplace and in athletic competitions).

The differences in the practice of psychology in the countries of Europe and North America are insignificant when compared with those between the industrialized West and the less developed countries of the world. In most countries, psychology plays a small or no role in the health care system owing to the absence of trained personnel, the scarcity of resources, differential patterns of mental illness, a lack of commitment on the part of western aid agencies (71), and the scepticism of Third World governments as to the potential benefits of psychological and psychosocial interventions. While western-style medicine has achieved a foothold in the capitals and in the health planning apparatus of every nation of the world, the same cannot be said for psychology. This situation is understandable because most of the traditional techniques of professional psychology were developed in and for the cultures of Europe and North America. However, it is anticipated that current efforts to introduce psychology into the primary health care system will have the effect of making the discipline more relevant and adaptable to the needs of health care planners and providers in the developing countries.

The dynamically developing countries of Latin America have already assimilated significant aspects of Western professional psychology. Nevertheless, psychological practice is defined and protected in only a few of the major countries, e.g., Argentina, Brazil, Colombia and Venezuela. Psychodiagnostic, psychometric, and epidemiological topics predominate in practice; these activities are centred in the ministries of health and of education, and in certain universities. Unfortunately, the very limited resources for publications and equipment limit the effectiveness of the many university-trained personnel.

In Japan, the Philippines, Thailand, and Singapore, and in China (Province of Taiwan) and Hong Kong, professional psychology has attained a recognized level of development. In India, Nigeria, and several other developing countries, although psychology is taught in a large number of universities and colleges, clinical psychology and psychotherapy have received relatively little emphasis. The rich variety of indigenous healing traditions in mental health in these countries, particularly within rural areas (35), may be partly responsible for this state of affairs. The situation is beginning to change in India, where a number of centres have started graduate-level training in clinical psychology. The number of clinicians has grown to about one thousand, leading to the formation of an active All-India Association of

Clinical Psychologists.

Culture as an important complex of variables in mental health has received widespread attention from psychologists. In Japan, for example, the interfacing of western clinical psychology with the traditions and values contained in Japanese culture has long received attention (16, 17). For other illustrations, including many in Western countries with minority populations, reference can be made to the cross-cultural literature on psychopathology and mental health services (56, 67). Occasionally, the irrelevance of western psychology is stressed (10). Holdstock (31) has criticized his fellow South African psychologists for having failed to work with indigenous healers to address the needs of the Black population. The work of Lambo (42) is significant in bringing both traditional and western approaches to bear on the treatment of the mentally ill in many countries of Africa, especially Nigeria.

Much of what might be described as mental health services in China takes place at the community level through social networks that keep individuals engaged in community life, helping to prevent isolation, delinquency, and much deviance, and forestalling their secondary effects on mental health. The Chinese success in limiting disease, drug abuse, poverty, unemployment, violence, and certain forms of interpersonal competition must have reduced the development of various mental illnesses that often spring from these conditions. On the other hand, treatment of overt mental illness in China is the province of psychiatry, with the medical model predominant. Life experiences that conflict with social and political norms are seen as one factor in the genesis of mental disease. The Chinese medical model accommodates herbs, acupuncture, exercise, and political instruction, in addition to western medicine (7, 45).

Problems in the transfer of psychological knowledge and skills

This survey of psychology's contribution to mental health services opened with a discussion of some of the difficulties inherent in attempting to abstract the "technological component" from the art and science of psychotherapy. Although techniques may be derived from extensive clinical practice and tested in tightly controlled experiments, the cultural variable escapes detection far too often to ensure that a given psychotherapeutic technique will travel well.

Questions on the cross-national or cross-cultural applicability of service delivery models (56), like those on psychotherapeutic theory and technique, also have a cultural component, in addition to institutional and political components which are generally more obvious. Studies in the United States pointing out the persistent "underutilization" of mental health

services by Hispanic-Americans illustrate both of the foregoing problems (24).

On the positive side, psychologists have been very successful in transmitting their knowledge to physicians, nurses, and social workers during training in their respective professional schools, and in preparing paraprofessionals in areas such as psychodiagnostics and crisis counselling. Because psychologists have been slow to establish themselves as primary care providers in mental health, with some notable individual exceptions, the transmission of vital primary and preventive skills to other health workers has been less well documented. In one promising initiative, the World Health Organization is currently supporting a project on psychology training for health personnel that will develop primary care training models in four psychological areas: (1) parenthood preparation/adolescent reproductive health/family life education; (2) substance abuse (with particular attention to smoking); (3) stress management and cardiovascular disease; and (4) management of chronic illness and disability.

On a cautionary note, it is worth observing that many new and promising psychological techniques are not yet ready to be removed from the scientific hothouse in which they are developing. There is a dilemma here, because the vital work of testing the new techniques for their applicability across cultures often cannot be done within that hothouse. However, as the history of psychosurgery has taught us, the introduction of new techniques in the absence of adequate testing can have unfavourable consequences. Fortunately, psychology is rich enough, vital enough, and diversified enough that it should not be necessary to apply any of its techniques prematurely in order to derive concrete benefits even in the short term.

From the foregoing discussion, several trends are apparent.

(1) The movement towards therapeutic eclecticism is not likely to be reversed. Instead, it will probably be accentuated as cultural variables and religious beliefs continue to be assimilated into the body of psychotherapeutic knowledge and technique.

(2) Clinical and counselling psychologists who offer their services to individuals are likely to continue broadening their fields to take into account emotional problems associated with social conditions and problems (e.g., urbanization, crime and violence, family stress, substance abuse, alienation of the elderly, and marginalization of minorities). A concomitant trend towards specialization by many practising psychologists will pose problems in the organization of specialized training and in the legal recognition of specialties.

(3) At the same time, pressures towards more

uniformity in the basic training of professional psychologists will continue to grow, both at national and international levels, although it is unclear what form such training will take twenty years from now.

HEALTH PSYCHOLOGY

Historical perspective

Health psychology, which is strongly linked to behavioural medicine, began about twenty years ago. Its historical roots, however, can be traced to early religious beliefs. In early times, there was no clear-cut division between behaviour and health because if individuals were not acting as they should, they were then considered to be ill. This illness might have been a response to any number of behavioural or environmental events, including wrong deeds, ritual curses, or possession by spirits. Regardless of the dynamics of illness, most explanations did not separate the individual's emotions from the diseased state of his or her body. In a sense, treatment was primarily behavioural: sacrifice, prayer, and the power of suggestion were all an integral part of health care. The practice of medicine was substantially a philosophical or religious enterprise.

Studies in psychosomatic medicine and health psychology were primarily descriptive and clinically orientated until the present century. Only in more recent times have they become quantitative and psychophysiological. One of the original scientific efforts to demonstrate mind-body-environment interactions in the causation of disease states was the photographic recording of the effects of stress on the stomach wall through a gastric fistula (an abnormal opening in the stomach wall) by Harold Wolff and Stewart Wolf in the late 1940s. These observations provided direct evidence that emotional states influence physiological processes which could produce somatic illness. Also, at about this time, research was being done on the effect of placebos and on the development of iatrogenic illness. During the late 1950s and 1960s, Holmes and Rahe reported that the incidence of physical illness correlates with the number of stressful life changes, a relationship that has subsequently been proved to be more complex than originally thought (5). The recently revised *Diagnostic and statistical manual of mental disorders* (DSM III) reflects an increased emphasis on demonstrable relationships between physical and mental illness by grouping psychosomatic illnesses under "Psychological factors affecting physical disorders" (81).

The fields of experimental and physiological psychology have contributed greatly to the evolution

and development of health psychology. Psychophysiological measures have always played a dominant role in this area. In particular, the concept of the conditioned reflex provided the basis for much of classical learning theory, including Pavlov's work with dogs. In 1906 the English physiologist, Sherrington, demonstrated that cognitions can alter the reflex arc; in the 1920s Cannon introduced the concepts of homeostasis and fight versus flight into the vocabulary of many behavioural scientists who were concerned with psychophysiology and learning; and in the 1940s and 1950s Dollard and Miller translated many of the psychoanalytic constructs into learning theory. Miller later applied aspects of this theory to an understanding of the role of conditioning in psychophysiological change. Modern use of bio-feedback treatment to train an individual in controlling muscle tensions, blood pressure, migraine headaches, and other physiological processes developed out of these earlier efforts.

One of the first theories of systemic organismic dysfunction was proposed by Hans Selye, a physician, during the late 1930s, as an explanation for his research findings on the effects of stress on the physiology of organisms. With the growing acceptance of general systems theory during the 1950s, Selye's work finally began to enter the mainstream of medicine and psychology. A biopsychosocial model proposed by an internist, a psychologist, and a psychiatrist also emerged as one of the early efforts in systems theory (27). Disease was no longer reduced to a single germ or mutated molecule. Instead, the pathogenic agent, whether microbial, psychological, or whatever, was seen as interacting with a host who was susceptible owing to genetic endowment or the residue of a specific past experience.

Health promotion

Systems theory provides a model that focuses on health as well as disease, both states being merely endpoints in a continuum. Health care is seen as an interpersonal event, and as such, it is both behavioural and biomedical. Early models of the health-care relationship described it as a unified system with the single goal of mending a weakened unit.

As the medical interest in disease shifted from a narrow concern with clinical and laboratory reports regarding diseased organs or physiological systems and analyses to a broader concern with human discomfort and its dynamics, humanistic health promoters have pointed out shortcomings in medical education. As this shift occurred, it has become obvious that few physicians are receiving training in the communication skills or social scientific methods emphasized by health psychologists. The technology

of behaviour change in health-enhancing directions is generally neglected in the traditional curriculum of medical schools, although many medical schools now include social and behavioural science tools and findings in their curriculum.

An individual's life-style has always been an important factor in personal health. Hygiene, diet, and living conditions have long been recognized as critical variables, especially during the time when most deaths were attributed to communicable or acute diseases. Although behavioural change was instrumental in changing mortality and morbidity patterns, the changes were primarily due to improved nutrition, immunization, and higher living standards.

Corroborating the health psychologists' belief that life-style and health or disease are correlated, the U.S. Surgeon General issued the Report on Health Promotion and Disease Prevention which attributed *half* of all American deaths in 1976 to unhealthy life-styles. The U.S. Surgeon General's report also blamed inadequate health care for another 10% of deaths.

Health and the environment

The epidemiological picture has changed in recent years. At the present time, most serious diseases in the highly industrialized countries are chronic conditions which may be prevented or modified by changing the behaviours that generate ill health. Epidemiologists report that the leading causes of death for the citizens of the world's technologically most advanced nations are heart disease, cancer, cerebrovascular disease, and accidents. All four of these causes of death have at least one behavioural correlate, and none has a known vaccine or pharmacological cure. A promising area of behavioural research involves a long-term comparison of people who have been persuaded to change their behaviour (e.g., to quit smoking) with people who have not changed in order to find out whether modifying a risk factor can alter the incidence or course of disease (e.g., lung cancer). The practice of behavioural epidemiology has grown out of this realization. In concert with professionals from a number of other health disciplines, health psychologists familiar with behavioural measures and quasi-experimental methods have joined in this effort to document the impact of risk-factor intervention programmes.

Along with the individually-oriented model implied in attempts at modifying life-styles, an environmental approach has developed out of behavioural research in the areas of occupational health and safety. It is of utmost importance to be able to detect early signs of symptoms related to stress and life-style. The sensory system of man is a very sensitive instrument for

detecting disturbances in the environment (e.g., the smell of a dilapidated building) or in the human body (e.g., the effort and pain caused by circulatory and respiratory insufficiencies). Physical and physiological measurements of stress are therefore often complicated by psychological-perceptual indicators of strain. Certain types of psychological job demands have been identified as risk factors with regard to disease, drug consumption, and general well-being (43).

Time pressure, fragmented and repetitive tasks, social isolation, and non-use of personal qualifications belong to the adverse factors, and their impact tends to be reinforced by a lack of autonomy and personal freedom on the job (36). Based on these findings, work reorganization programmes have been introduced in order to improve psychosocial work conditions and, thereby, to improve health and to reduce periods of sick-leave. One example is the attempt in car manufacturing industries to introduce alternatives to assembly-line production. In the Scandinavian countries this research resulted in an enlarged work environment concept, and influenced recent work environment legislation to include the psychosocial aspects of work as an important issue in occupational health and safety (23).

The incidence of stress-related illnesses in industry is increasing. Stress is a complex, individual experience with both objective and subjective features that are revealed in a nonspecific bodily response to a threatening or noxious situation which, if prolonged, can lead to exhaustion or illness. How the individual interprets the potential stressors in the environment can be just as important as the objective nature of the noxious stimuli themselves. All aspects of work can be a source of stress: heat, noise, too much or too little light, too great or too small a workload, too much or too little responsibility. The stressors and their short- and long-term consequences on mental and physical health have been the topics of many research works in recent years. Among the sources of stress that have been investigated are work overload, work schedule, roles in the organization (ambiguity and conflict), social relationships at work, and organizational climate. Individual coping responses and their effects are now well known; and individual variables as a moderator of stress-induced negative effects on mental and physical stress have been heavily investigated. Much of this work has been covered in recent reviews of health psychology (41).

Environmental conditions such as crowding, noise, temperature, and air pollution cause harm to people, whether they are found in the workplace or in the larger environment. The stress effect is not only linked with the physical characteristics of the environment but also with the perception and evalu-

ation of the stressor, the behavioural and emotional reactions to it, and the success or failure met by coping responses. Crowding has been subject to research both in animals and men. Its link with infections, mental health and health behaviour, although a complicated one, is taken into account by architects and designers. Noise is another stressor which is caused by urbanization and industrialization and is associated not only with auditory deficiencies but also with non-auditory effects on social behaviour, learning, and physical diseases. Research in urban settings, in schools, and in leisure environments has shown that non-auditory noise effects are mediated by social variables. Here also, potential and actual applications are important.

Although improvements are now taking place in many parts of the world, the psychological aspects of the work-setting will deserve continued attention for at least two reasons. First, highly mechanized and automated production technologies, which have been criticized in the western world, are now being exported to developing countries, thereby posing a new threat to the health of manual industrial workers in the Third World. Second, the introduction of computers and other forms of information technology tends to bring some of the adverse factors characteristic of traditional mechanized industrial production into the white-collar sector. Thus, occupational health and safety have become an issue of concern in clerical and administrative work where an enlarged, psychosocial and psychobiological concept of the work environment will be necessary.

No day passes without a reference in the media of many countries to the untoward effects of the chemical environment on public health and the quality of life. With the coming of the industrial revolution there began to appear changes in the nature of the chemical environment within which the world's living organisms had evolved. Some of the changes were beyond the capabilities of organisms to adjust, resulting in effects including death, carcinogenesis and behaviour-related pathologies.

Studies of behaviour-related pathologies have shown them to be among the most sensitive signs of toxicity. Because they can be measured in the intact organism without invading the body, they give promise of being useful in monitoring environments where persons may be exposed to toxins in the workplace or adventitiously in the general community. The development of *neurobehavioural toxicology* deserves support, not only for the roles it can play in public health and in enhancing the general quality of life, but also in averting the rapidly increasing economic costs associated with monetary awards to persons affected by exposure to adverse environmental conditions.

Prevention and control of chronic illness

In the 1960s, the U.S. National Institute of Dental Research recognized the possible contribution of psychologists to the prevention and control of dental disease by supporting research at the University of Houston. This work raised questions concerning the relationship between one's beliefs about health and actual health behaviour, a line of research pursued further as the University of Houston Group began working closely with the Baylor College of Medicine National Heart Center. A number of research programmes directed at the deterrence of addictive smoking in adolescents were developed at Houston by Richard Evans and his colleagues. These programmes have become a model of how health psychology might address the problems of disease prevention (18).

Two cardiologists, Friedman and Rosenman (21), were among the first to identify a "coronary-prone" behaviour pattern that has been widely studied as a risk factor for coronary heart disease. Known as Type A behaviour, this pattern is characterized by excessively competitive drive, impatience, hostility, and quick movements. Psychologists have been involved extensively in both experimental research and clinical studies of coronary-prone behaviour patterns, ranging from the examination of specific components of Type A behaviour (12) to behaviour modifications based on relaxation training, cognitive restructuring, and guided practice (66).

The North Karelia Project (57) was begun in 1972 following a determination that death from cardiovascular disease in this small rural province was extraordinarily more frequent than elsewhere in Finland. Acting on that finding, Puska and colleagues from the National Public Health Institute in Helsinki designed and carried out a community-based, large-scale, educational intervention programme that successfully reduced, over its five-year period, the levels of smoking and other known cardiovascular risk factors (i.e., elevated cholesterol, hypertension) among the population of North Karelia.

The finding in Belgium that two chronic diseases, cardiovascular disease and cancer, are responsible for more than 65% of that country's mortality led investigators associated with the World Health Organization during the 1970s to carry out a controlled, multifactorial intervention project on some worksites in that country. These initial worksite studies showed the need for intervention to be directed to whole communities. As a consequence, researchers at universities in four different Belgian cities (Brussels, Ghent, Leuven, and Liège) teamed up, designed, and currently are executing a large-scale intervention targeted at the inhabitants of a number of provinces, counties, and regions in Belgium (39).

These two community-focused intervention studies in Finland and Belgium are similar to community studies designed to decrease morbidity and mortality associated with cardiovascular disease in several U.S. cities (48).

Many large-scale biobehavioural research projects have utilized the skills of health psychologists in recent years: the NIH-supported Multiple Risk Factor Intervention Trial, the Stanford Heart Disease Prevention Program, and the Baylor College of Medicine National Research and Demonstration Center are three examples within the United States. These programmes are not limited to health education; emphasis is given to life-style change. Large-scale epidemiological studies and programmes in preventive cardiology and cancer in parts of Africa, Australia, France, Federal Republic of Germany, Israel, Japan, Mexico, the Nordic countries, the United Kingdom and the USA have made extensive use of health psychologists in both assessing and modifying health risk behaviours. Principles of social learning theory, community organization, and communication-persuasion have been employed in these efforts to modify life-style in health-enhancing directions at the "population" level.

Evidence for behavioural treatment techniques and for combinations of pharmacological and non-pharmacological therapies has been carefully scrutinized in terms of applicability to other cultures and societies beyond those of the western industrialized nations. At present several such studies are being conducted under the auspices of the USA-USSR scientific exchange agreement to determine the transferability of U.S. and Soviet methods of non-pharmacological treatment of hypertension to each other's cultural milieu (68, 69).

The World Health Organization is sponsoring the MONICA study, a large-scale cardiovascular morbidity-mortality surveillance study involving over 40 centres around the world. The objectives of this ten-year study involve assessing the relationship of these trends to changes in known risk factors, life-style patterns, socioeconomic status, and health care. In the 26 centres expressing interest in collecting data on psychosocial determinants of cardiovascular diseases, the dominant themes were stress, social support, life events, Type A behaviour and social/geographical mobility. Efforts to standardize assessment and the development of uniform protocols by biomedical and behavioural scientists should provide a unique and important data source for these variables.

New organizations

The desire for enhanced scientific exchange in

biobehavioural research and application pertaining to issues of health and disease has led to the formation of new organizations. In the USA, for example, health themes have become standard in the major societies representing the behavioural sciences (e.g., American Psychological Association, Biofeedback Society of America, Association for the Advancement of Behavior Therapy, and the Society for Psychophysiological Research). Within the past seven years, the formation of the Society of Behavioral Medicine, the Academy of Behavioral Medicine Research, and the Division of Health Psychology within the American Psychological Association has reflected the attention being accorded to these emerging areas. Numerous new journals devoted to basic and clinical research have accompanied the proliferation of these organizations.

Internationally, a similar pattern has been developing. The establishment of a Division of Health Psychology within the International Association of Applied Psychology, and the major health-oriented efforts within the European Association of Behaviour Therapy complement the increased interest in psychosocial factors being expressed by WHO and the Commission of the European Communities. Discussions are currently under way to form a European Society of Behavioural Medicine. The Task Force on Health Psychology and Behavioral Medicine of the Interamerican Society of Psychology has been active since 1983. These are only some examples of the many organizations that are now recognizing health psychology by the establishment of special divisions or committees.

Access to health care

The increased emphasis throughout the world on equal opportunities and social welfare has contributed significantly to the development of health psychology. Access to health care has been recognized as a human right within the International Covenant on Economic, Social, and Cultural Rights (Article 12.1). Major programmes have been funded in the wealthier nations to bring health care to the poor and the elderly. The growing interest in health care costs and national health insurance has made many governments more concerned with disease prevention and the availability of quality medical care, a concern which health psychologists can help address. Currently in these countries, responsibility for quality health care is increasingly shifting from the medical practitioner to the patient and the government.

In the context of the Alma Ata Declaration and WHO's efforts towards health for all by the year 2000, which has been accepted as a national goal by most developing countries, health is considered as an essential aspect of national development. With an

emphasis on social welfare, health care is considered as a right of every individual, and has become a primary concern of the government. The preventive and promotional aspects of health care are considered to be more important than the curative aspects. Many diseases have their roots in poor hygiene which is due to ignorance of the people; therefore, health education through the mass media is a primary need. Psychologists can play an important role in these efforts because of their special training in social scientific methods, communications skills, and technology of behaviour change at both the individual and the community levels.

Applications in the developing countries

Within many less developed countries, culturally appropriate applications of behavioural science can be addressed to questions of public health and primary health education, e.g., in the areas of nutrition, disease-preventing behaviour, reproductive behaviour, and literacy (11, 71). One successful case, that of Japan, involving the adaptation of western psychology to the norms and needs of a very different culture has been described (1). Other authors have recently discussed the problems of applying western psychological knowledge to culturally distinct or less developed countries such as the Philippines, Nigeria, Venezuela, Mexico, and five Arab states in the Gulf area (64). An overview of some developments in Mexico, South America, and a number of other countries on the role of personal behaviour in one's own health, including the prevention of illness and disease, was provided by Diaz-Guerrero (15).

The principles underlying health psychology appear to be equally relevant in different contexts. In Third World countries behavioural factors are responsible for malnutrition, higher fertility, and the spread of infectious diseases. Studies by Guthrie and his associates in the Philippines can be mentioned in support of this viewpoint (19, 26). Among other things they found that folk beliefs and practices often lead to unnecessary termination of lactation. Similarly, resistance to reliable methods of contraception were due to fears about side-effects including the disruption of the relationship between husband and wife. When field workers responded to these fears and reinforced acceptance, high rates of continued use of contraceptives were achieved.

From the above examples, it is obvious that health psychology can make substantial contributions to the efforts to promote health and prevent disease around the world. Health psychologists will find allies among community psychologists for the development of methods and strategies of intervention to promote better health.

COMMUNITY PSYCHOLOGY

The origins of community psychology are rooted in the group and organizational dynamics and decision-making processes pioneered by Kurt Lewin and other social psychologists during the late 1940s and early 1950s. One of the premises of community psychology is that many problems can best be resolved at the community level. There is a sense of achievement when citizens and groups join together in coping effectively with a problem that faces the community.

Community-based treatment of mental patients was practised for centuries in the Belgian village of Geel, and a similar experience has been described in Nigeria (42). But the term "community psychology" was first used at a conference on the education of psychologists for community health sponsored by the U.S. National Institute for Mental Health in 1965 (2). As the responsibility for delivery of services to the mentally ill in the United States shifted in the 1960s from the state mental institutions to some five hundred community mental health centres, new approaches to treating and caring for mentally ill and emotionally disturbed persons in the community had to be developed; thus, more responsibility was given to community-based treatment centres and communities in general.

These changes led to a sharp reduction in the number of patients in institutions. Unfortunately, there is strong evidence that the general welfare of chronically mentally ill persons deteriorates when they are placed in the community if there is no special support for their management and treatment on a long-term basis. Many persons classified as mentally ill do not need hospitalization; community-based treatment can result in improvement in the quality of their lives at a significantly lower cost.

A systems approach

Community psychology has developed a broad approach to the community that is based on systems and on ecological thinking. According to the systems view, the organization of the community affects the individual who is a part of various structures in the community (53). The ecological view emphasizes the interaction of the person with community structures, using the concepts of adaptation and coping to describe the dynamics of this transaction (38). Groups such as the family, church, neighbourhood, or voluntary associations serve as mediating structures between the individual and the community. A major goal of the community psychologist is to understand the ways in which people actively participate in the life of the community through these mediating structures. This broader focus in community settings promises to be significant, not only in promoting

better health care, but also in encouraging health promotion in different social settings.

The values held by community psychologists, the issues and concepts they deal with, and especially the models they have developed for promoting mental health through social action have been well described in recent books and reviews (32, 58). A handbook by Seidman (63) covers a wide range of programmes and research directly relevant to the broad areas of community psychology, linking it to health, economics, social intervention strategies, evaluation, and programme analyses.

Consultative strategies

Community psychologists focus their efforts mainly on working with groups and institutions representing community power structures and needs. Many community psychologists at the same time occupy teaching and research appointments in colleges and universities. An increasing number of psychologists with community psychology backgrounds are being employed in public agencies as programme directors, planners, and evaluators. Their special training in psychology gives them an advantage in developing, evaluating, and revising social action programmes. One of the special skills of community psychologists is to work with representatives of other disciplines, institutions, or groups in a consultative relationship where they assist community leaders in dealing with various problems. There is evidence that consultation strengthens not only health resources in various settings, but can also be of great value in setting up general methods for coping with the many different problems presented by communities. Effective consultation to schools, for example, has been of help in such areas as behaviour disturbances and racial integration (55).

Planning, implementation, and evaluation are all applied to help organizations function better. Planning includes assessment of the specific needs of community members, determination of the characteristics of client groups who might receive services, and analysis of how well the existing service systems are functioning. Implementation often means coming into a system that is malfunctioning, applying general problem-solving principles to open up communication and participation, and helping leaders to function more effectively. Evaluation can involve the monitoring of ongoing processes as well as the assessment of programme outcomes with respect to their original goals.

Although a relatively new field, community psychology has made reasonably good progress in helping citizens deal with the complex problems of their communities. Procedures have been developed for systematic citizen output into decision-making

(54). Assessment of the mental health needs of communities has reached a more advanced stage (79). Stimulating the increased use of mental health services, as well as those of community-based agencies, by disadvantaged cultural and ethnic groups is receiving greater attention in many places as a result of the emphasis given by community psychologists to cultural diversity in the design, delivery, and evaluation of health services. Methods of evaluation and procedures for promoting change in community settings, as well as instruments to measure various aspects of a city's readiness for social action, have been developed (51). Citizens have organized themselves to meet national problems at a local level and community psychologists have played a part in this activity. One example is the work of Levine (44) in organizing the citizens of Love Canal (a neighbourhood near a toxic waste dump) to take appropriate social action for improving public health.

Self-help groups, social support, and social systems networks

Community psychologists, by means of consultation, have assisted in establishing self-help groups to tap the indigenous resources latent in any society. Self-help groups in western societies are typically formed by persons who are experiencing similar problems such as mental illness, alcoholism, drug abuse, disfiguring injury, or family disintegration. Four key elements have been discovered that lead to effective social support: (1) the structure and function of support networks; (2) the personal attributes of individuals which keep the network open; (3) appraisals that discern if support is available; and (4) support-seeking behaviour (29). The relationship between community psychology, health, and social support groups is one that is only now beginning to receive research attention.

Trends in developing countries

The roots of community psychology in the USA and Europe are based in both clinical and social psychology with a strong orientation towards mental health and the prevention of mental disorder. In other parts of the world there is a heavier emphasis on social psychology and on organizing the indigenous resources of the community. While some programmes are developed through already-established health service systems, most are part of general community development strategies and involve working with lower income, often socially marginal, people.

Actual project work is scattered and generally small in scale. Descriptions of the principles and strategies

are more common than reports of demonstration projects or research; there is, however, a growing awareness of the discrepancies between current realities and what could be. Community psychology often serves as a way to take an alternative position and to carry out a critical analysis of a contemporary reality.

In Latin America, one finds the most direct application of community psychology in countries bordering the Caribbean Sea—Colombia, Cuba, Dominican Republic, Mexico, Panama, Puerto Rico, and Venezuela. Among these, the best organized and well-sustained application of community psychology to health settings is the national programme in Cuba (3), where, since 1959, psychologists have become an important part of health teams serving the local community in polyclinics. They are also involved at every level of the health system, doing research and providing care in specialized health centres and participating in the health planning process. Of all the socialist countries, Cuba has the highest proportion of psychologists in the health care system per capita. There is an emphasis on integration of personal health and community life (22).

This concept of integration within community psychology is particularly important among the Latin American countries. Sometimes referred to as the person-environment fit, integration generally means mutual adaptation and interdependency of individuals and social structures so that both individual and collective needs are met.

Organizing a community for united action on behalf of its members is a political undertaking. How far a community psychologist should go in providing leadership for such action is a matter of continuing debate. The primary role of the psychologist is to provide technical assistance by employing scientific methods in the analysis of the needs, goals, and characteristics of community members; in the planning, implementation, and evaluation of community programmes; and in helping the citizens and their leaders to deal with complex problems in their communities.

Many of the programmes in community psychology are so new that published references are not yet available. Long-term definitive research is still in its infancy. And yet, the potentialities of community psychology are great, particularly in the dynamically developing countries where community action based on local research is the key to better health for millions of people.

Relevance of psychology for health in Third World countries

In each section of this review some specific observations have been made about the relevance of mental

health services, health psychology, and community psychology for health in Third World countries. More generally, Dasen et al. (10) have concluded that while there is much in the Western psychological literature that is relevant to issues of health, there is little that is immediately and directly applicable to the promotion of health in Third World countries.

This conclusion was based on a review of the literature, by a number of authors, of such factors as child development, education, acculturation, social change, nutrition, and parasitic infection, and their influence on mental and physical health. The reason for this cautious conclusion is that most psychological knowledge is based on studies of people in the industrialized world, by psychologists trained there, using theories and methods developed there. That is, much of psychology is culture-bound, and because of this, many potential applications have to be tried out in other cultures. While this point has been made with respect to the findings of psychology and the need to develop theories and laws that are pan-human in scope, it can be made even more forcefully when application to the solution of human problems is intended. Thus, while it is tempting to offer help when help is needed, lessons from cross-cultural psychology and transcultural psychiatry remind us that culturally-insensitive help may be no help at all.

CONCLUSIONS: FUTURE TRENDS

Psychologists are major contributors to health throughout the world in many different ways. Since the turn of the century, but especially during the past fifty years, clinical and counselling psychologists have provided extensive psychodiagnostic and treatment services for individuals with mental or emotional disorders. School psychologists and industrial psychologists have also contributed significantly to health care in many countries, the former working with children, teachers, and parents within educational settings, and the latter focusing more on problems of health, safety, and human engineering within the work setting. Two additional specialties have emerged in the past several decades: health psychology, which is closely associated with behavioural medicine, and community psychology, which grew out of social action research and community development.

The distribution of these health care providers and research scientists is uneven throughout the world. The great majority of scientific research activities take place in the highly developed industrial societies of the west. While mental health services are available from psychologists in nearly every country of the world, they are most prevalent within North America and Europe. Some of the most rapid growth in the professional training of psychologists, however, is

taking place within the dynamically developing countries of Latin America and, to some extent, Asia.

Advances in psychological science and training in the use of psychological techniques to improve health care services need not be limited to professional psychologists and behavioural scientists. On the contrary, many of the principles and scientific findings of psychology, as well as the biosociobehavioural technologies that are rapidly being developed for the improvement of health care, are suitable for implementation by health care providers, public health personnel, and others who have not had years of advanced technical training in psychology. Both the professional psychologists and the laymen have much to gain from these new developments.

WHO's global medium-term programme in mental health for the period 1984-89 cites four major activities in which psychologists can play a central role: (1) the development of mental health policies and the promotion, coordination, evaluation, and support of programmes throughout the world; (2) the improved understanding and utilization of psychosocial factors in the promotion of health and human development; (3) the prevention and control of alcohol and drug abuse; and (4) the prevention and treatment of mental and neurological disorders (76).^a This ambitious programme was endorsed by two resolutions adopted recently by the World Health Assembly. These resolutions recognize "that mental disorders are a major public health problem; that use of mental health knowledge and skills can improve health care in general; and that sociocultural factors using appropriate means can be harnessed to promote mental health" (resolution WHA 28.84), and "confirmed the urgency of action which should be taken immediately if 'irreversible damage to social and productive aspects of individuals and communities is to be prevented' and requested the Director General to make technical cooperation between countries in the field of mental health a special focus of WHO action" (resolution WHA 30.45).

The global medium-term programme emphasizes the value of mobilizing communities to deal with their own health and social problems. It also recognizes the importance of rapid social change and how in many countries such change can erode traditional support systems, reducing the capacity of individuals, families, and communities to cope with distress, disease, and disability. It is clear that many of the new ideas in health psychology and community psychology are particularly appropriate in furthering the mandate set forth by the World Health Assembly in this programme.

When examining urban areas and rural towns

^a WORLD HEALTH ORGANIZATION. *Global medium-term programme 10. Protection and promotion of mental health*. Unpublished document MNH/MTP/83.19, 1983.

throughout the world, it is important to keep in mind the heterogeneity of communities. Many cities require people of different backgrounds to live close together and interdependently. This heterogeneity may involve language, race, religion, social class, nationality, or a preferred life-style. Stress is sometimes associated with this diversity, and with pressures and conflicts that may accompany acculturation. Factors such as national policies that force assimilation, or historical and economic factors that generate intergroup conflict, are predictive of high stress, while their absence is predictive of low stress (4). The weakening of traditional support systems makes such stress especially difficult to handle.

Increases in the rates of divorce, child abuse, crime, and mental illness within urban centres of the world are requiring more services from psychologists than has been typical in the past. To be effective, such services must take the cultural background of the client into account. Psychologists who are competent to deal with cross-cultural issues in health and human development have developed techniques for measuring and reducing personal alienation, for adapting psychotherapy to local conditions, and for improving the mental health of diverse populations (67).

Several future trends appear likely from this brief survey of psychology and its contributions to health care throughout the world:

1. New and innovative service delivery systems, including those that emphasize primary mental care in cooperation with other providers, will continue to be developed owing to rising costs of conventional health care and increased demands for psychosocial guidance and treatment.

2. Together with other social and behavioural scientists, psychologists will play a central role in devising and disseminating new behavioural technologies for the promotion of health, the changing of life-styles, and the reduction of behavioural factors that produce disease as well as the deleterious aspects of the environment. Psychological principles and technologies will also prove increasingly valuable in the rehabilitation of persons suffering from physical injury or illness. The new activities in behavioural medicine and health psychology will draw increasing

numbers of practitioners into these specialties, supplementing and to some extent replacing conventional psychotherapeutic activities.

3. Many health problems, particularly within school or work settings, will be better controlled, and in some cases eliminated, as the findings of psychologists working within industry, schools, laboratories, and other institutional settings are implemented.

4. Programmes of community development, self-help, leadership training, and the harnessing of indigenous resources to improve the quality of life are bound to have a major positive effect upon health as psychologists and other behavioural scientists work more effectively within communities, especially within the dynamically developing countries of the Third World.

Several important issues for the future remain unsettled. Of great concern is the question of how to ensure wider access to health and mental health services, consistent with the goals expressed by the World Health Organization. Wider access will require expanded cooperation with other culturally indigenous health care providers, as well as professionals in a variety of fields of specialization. Particularly in the developing world, such cooperation will have to be extended to a variety of technicians and non-specialists, including traditional healers. The forms of such cooperation, and their theoretical and practical significance, will have to be worked out carefully in coming years.

A second issue, occasioned by the expansion of the field beyond the bounds of conventional health care, is that of the definition of the purpose of professional psychology in regard to medicine, culture, and political and economic behaviour. Psychology as a profession is still very young and growing in several directions simultaneously.

And finally, the most important challenge of all for psychology is the dissemination of new knowledge and technology in a sufficiently clear, relevant, and appealing form so that these important ideas can be applied by others with less specialized training in psychology for the benefit of people throughout the world.

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RÉSUMÉ

PSYCHOLOGIE ET SANTÉ: CONTRIBUTIONS DE LA PSYCHOLOGIE À L'AMÉLIORATION DE LA SANTÉ ET DES SOINS DE SANTÉ

Partout dans le monde, les contributions des psychologues à la santé sont multiples. Depuis le début du siècle, mais surtout depuis 50 ans, la psychologie clinique et les consultations de psychologie apportent une aide importante, en matière de psychodiagnostic et de traitement, aux personnes atteintes de troubles mentaux ou affectifs. Les psychologues scolaires ou d'entreprise contribuent eux aussi de façon significative aux prestations de santé dans de nombreux pays, les premiers avec les enfants, les enseignants et les parents dans le contexte pédagogique et les seconds s'occupant davantage de problèmes de santé, de sécurité et d'ergonomie dans le contexte professionnel. Deux spécialités nouvelles sont apparues au cours des dernières décennies: la psychologie sanitaire, étroitement associée à la médecine comportementale, et la psychologie communautaire, issue de la recherche-action sociale et du développement communautaire.

Ces spécialistes et chercheurs sont inégalement répartis dans le monde. L'essentiel de la recherche scientifique se fait dans les sociétés industrielles développées du monde occidental. Si des psychologues offrent des prestations de santé mentale dans presque tous les pays du monde, ils sont plus nombreux en Amérique du Nord et en Europe. Toutefois, leur formation professionnelle est en expansion rapide dans les pays en plein essor d'Amérique Latine, et dans une certaine mesure, d'Asie.

Les progrès de la psychologie et de la formation à ses techniques pour les prestations de santé ne concernent pas nécessairement les seuls psychologues professionnels et spécialistes des sciences du comportement. Au contraire, nombre des principes et des découvertes scientifiques de la psychologie, ainsi que les techniques biosocio-comportementales mises au point pour l'amélioration des soins de santé, peuvent être mis en pratique par des agents de soins de santé, des agents de santé publique et bien d'autres qui n'ont pas fait d'études poussées en psychologie. Les psychologues professionnels comme les non spécialistes ont beaucoup à y gagner.

Le programme mondial à moyen terme de l'Organisation mondiale de la Santé pour la période 1984-1989 prévoit notamment quatre activités majeures dans lesquelles les psychologues pourraient jouer un rôle central: 1) élaborer des politiques de santé mentale ainsi que promouvoir, coordonner, évaluer et soutenir des programmes dans le monde entier; 2) améliorer la compréhension et l'utilisation des facteurs psychosociaux pour la promotion de la santé et du développement humain; 3) prévenir et combattre l'abus de l'alcool et des drogues; et 4) prévenir et traiter les troubles mentaux et neurologiques. Cet ambitieux programme a été entériné par deux résolutions récentes où l'Assemblée mondiale de la Santé reconnaît que les troubles mentaux constituent un important problème de santé publique, que l'on peut accroître l'efficacité globale des services de santé par une utilisation appropriée de compétences en santé mentale, enfin, que l'on peut renforcer la santé mentale par une planification tenant compte des facteurs psychosociaux et une utilisation appropriée des

ressources disponibles (résolution WHA28.84), confirme la nécessité de prendre immédiatement des mesures pour "éviter que le potentiel social et productif d'individus et de communautés ne subisse des dommages irréversibles" et prie le Directeur général de donner à la coopération technique entre pays dans le domaine de la santé mentale "une importance toute particulière dans le programme de l'OMS" (résolution WHA30.45).

Le programme mondial à moyen terme souligne l'intérêt qu'il y a à mobiliser les collectivités pour qu'elles s'occupent de leurs propres problèmes sanitaires et sociaux. Il admet aussi l'importance et la rapidité de l'évolution sociale qui, dans bien des pays, peut éroder les systèmes traditionnels de soutien et réduire la capacité de l'individu, de la famille et de la communauté à faire face à la souffrance, à la maladie et à l'invalidité. Il est évident que beaucoup des idées nouvelles exprimées en psychologie sanitaire et en psychologie communautaire seraient particulièrement aptes à favoriser la réalisation des objectifs fixés par l'Assemblée mondiale de la Santé dans le cadre de ce programme.

Lorsque l'on étudie les structures urbaines et les villes rurales partout dans le monde, il est important de ne pas oublier le caractère hétérogène des communautés. Beaucoup d'agglomérations sont constituées d'individus venus d'horizons très divers qui vivent proches les uns des autres en interdépendance. Cette hétérogénéité peut concerner les langues, les races, les religions, les classes sociales, les nationalités ou les modes de vie. Elle est parfois source de tensions ainsi que des pressions et conflits liés à l'acculturation. Certains facteurs, par exemple des politiques nationales d'assimilation forcée ou des conditions historiques et économiques génératrices de conflits entre groupes, sont source de stress alors que leur absence favorise le manque de stress. L'affaiblissement des structures traditionnelles de soutien rend ces tensions particulièrement difficiles à supporter.

L'augmentation des taux de divorce, des mauvais traitements aux enfants, de la délinquance et des maladies mentales dans les centres urbains exige que les psychologues interviennent beaucoup plus que ce n'était normalement le cas autrefois. Pour que leurs prestations soient efficaces, ils doivent tenir compte des valeurs culturelles de l'individu. Les psychologues qui s'occupent des problèmes de croisements culturels dans le contexte du développement sanitaire et humain ont mis au point des techniques pour mesurer et combattre l'aliénation de l'individu, adapter la psychothérapie aux conditions locales et améliorer la santé mentale de populations diverses.

Il est possible de dégager plusieurs tendances de ce bref survol de la psychologie et de ses contributions à l'action de santé dans le monde:

- 1) Des prestations d'un type nouveau privilégiant entre autres les soins primaires de santé mentale en coopération avec d'autres services continueront de se développer en raison de l'augmentation du coût des services traditionnels

et de la demande de conseils et de soins psychosociaux.

2) Avec d'autres spécialistes des sciences sociales et comportementales, les psychologues joueront un rôle capital dans la conception et la diffusion de nouvelles techniques comportementales propres à promouvoir la santé, à modifier les modes de vie et à combattre les facteurs de comportement susceptibles d'engendrer la maladie ainsi que les influences délétères de l'environnement. Les principes et les techniques de la psychologie s'avéreront également de plus en plus utiles pour la réadaptation des victimes de traumatismes ou des malades. Les activités nouvelles de la médecine comportementale et de la psychologie sanitaire attireront un nombre croissant de praticiens vers ces spécialités qui compléteront et dans certains cas remplaceront les psychothérapies traditionnelles.

3) De nombreux problèmes de santé, en particulier dans le cadre scolaire ou professionnel, seront plus efficacement combattus et dans certains cas éliminés par la mise en application des compétences des psychologues travaillant dans les industries, les écoles, les laboratoires et d'autres institutions.

4) Les programmes de développement communautaire, d'auto-assistance, de formation à l'encadrement et la mobilisation des ressources locales en vue d'améliorer la qualité de la vie auront un impact positif important sur la santé à mesure qu'augmentera l'efficacité de l'action des psychologues et des autres spécialistes du comportement au sein de la communauté et en particulier dans les pays en développement du Tiers-Monde.

Plusieurs problèmes importants se poseront dans le futur. La nécessité de développer l'accès aux services de santé et de santé mentale conformément aux vœux de l'Organisation mondiale de la Santé en est un. Un plus large accès à ces prestations exigera une coopération accrue avec d'autres agents de santé locaux ainsi qu'avec des professionnels dans toute une gamme de disciplines. Dans le monde en développement en particulier, cette coopération devra être étendue à différents techniciens et non spécialistes, y compris les guérisseurs traditionnels. Les formes qu'elle revêtira ainsi que leur signification théorique et pratique demanderont à être soigneusement précisées dans les années à venir.

Un deuxième problème, lié à l'expansion des soins de santé au-delà de leurs frontières traditionnelles, se posera lorsqu'il s'agira de définir les objectifs de la psychologie professionnelle par rapport à l'action médicale, culturelle, politique et économique. La psychologie en tant que profession est encore très jeune et elle se développe simultanément dans plusieurs directions.

Enfin, et c'est le plus important, il faudra que les psychologues sachent diffuser et exprimer ces connaissances et techniques nouvelles de façon suffisamment claire, appropriée et séduisante pour que ces idées importantes puissent être mises à profit, pour le bien des peuples du monde entier, par des personnes ne possédant pas de connaissances aussi spécialisées.

REFERENCES

1. AZUMA, H. Psychology in a non-Western country. In: Sinha, D. & Holtzman, W. H., ed. *International journal of psychology*, **19** (special issue): 45-56 (1984).
2. BENNETT, C. C. ET AL. *Community psychology: a report of the Boston Conference on the Education of Psychologists for Community Mental Health*. Boston, Boston University Press, 1966.
3. BERNAL, G. & MARIN, B., ed. *Community psychology in Cuba*. *Journal of community psychology*, **13** (special issue): 103-235 (1985).
4. BERRY, J. W. & KIM, U. Acculturation and mental health. In: Dasen, P. R. et al., ed. *Health and cross-cultural psychology: toward applications*. London, Sage, 1987.
5. BLOOM, B. L. *Stressful life event theory and research: implications for primary prevention*. Rockville, National Institute of Mental Health, 1985.
6. BRENGELMANN, J. C. & WITTCHEN, H.-U. Professional psychology and private health services: developing trends in the Federal Republic of Germany. *American psychologist*, **41**: 306-308 (1986).
7. BROWN, L. B. *Psychology in contemporary China*. Oxford, Pergamon Press, 1981, p. 232.
8. BUDMAN, S. & WERTLIEB, D., ed. *Psychologists in health care settings*. *Professional psychology*, **10** (special issue): 397-644 (1979).
9. CHING, C. C. Psychology and the four modernizations in China. In: Sinha, D. & Holtzman, W. H., ed. *International journal of psychology*, **19** (special issue): 57-66 (1984).
10. DASEN, P. R. ET AL., ed. *Health and cross-cultural psychology: toward applications*. London, Sage, 1987.
11. DAVID, H. P. Population, development, and reproductive behaviour: perspectives for population and health psychology. *American psychologist*, **41**: 309-312 (1986).
12. DEMBROSKI, T. M. ET AL. Components of Type A, hostility, and anger-in: relationship to angiographic findings. *Psychosomatic medicine*, **47**: 219-233 (1985).
13. DERKSEN, J. Clinical psychologists in the primary health care system in the Netherlands. *American psychologist*, **41**: 313-314 (1986).
14. DIAZ-GUERRERO, R. Contemporary psychology in Mexico. *Annual review of psychology*, **35**: 83-112 (1984).
15. DIAZ-GUERRERO, R. Behavioral health across cultures. In: Matarazzo, J. D. et al., ed. *Behavioral health: a handbook of health enhancement and disease prevention*. New York, John Wiley, 1984, pp. 164-178.
16. DOI, T. Amae: a key concept for understanding Japanese personality structure. In: Smith, R. J. & Beardsley, R. K., ed. *Japanese culture: its development and characteristics*. Chicago, Aldine, 1962, pp. 132-139.

17. DOI, T. *The anatomy of dependence*. Tokyo, Kodensha International, 1973.
18. EVANS, R. I. Behavioural medicine: a new challenge to social psychologists. *Applied social psychology annual*, 1: 279-395 (1980).
19. FERNANDEZ, E. L. & GUTHRIE, G. M. Belief systems and breast-feeding among Filipino urban poor. *Social science and medicine*, 19: 991-995 (1984).
20. FICHTER, M. M. & WITTCHEN, H.-U. Clinical psychology and psychotherapy: a survey of the present state of professionalization in 23 countries. *American psychologist*, 35: 16-25 (1980).
21. FRIEDMAN, M. & ROSENMAN, R. H. Association of specific overt behaviour pattern with blood and cardiovascular findings—blood cholesterol level, blood clotting time, incidence of arcus senilis, and clinical coronary artery disease. *Journal of the American Medical Association*, 162: 1286-1296 (1959).
22. GARCIA-AVERASTURI, L. Community health psychology in Cuba. *Journal of community psychology*, 13: 117-123 (1985).
23. GARDELL, B. Strategies for reform programmes on work organization and work environment. In: Gardell, B. & Johansson, G., ed. *Working life. A social science contribution to work reform*. Chichester, John Wiley, 1981, pp. 3-13.
24. GAVIRIA, M. & STERN, G. Problems in designing and implementing culturally relevant mental health services for Latinos in the U.S. *Social science and medicine*, 14B: 65-71 (1980).
25. GHIGLIONE, R. Réglementation de la profession de psychologue en France: année 1985. *International journal of psychology*, 20: 791-798 (1985).
26. GUTHRIE, G. M. ET AL. Small-scale studies and field experiments in family planning in the Philippines. *International journal of intercultural relations*, 8: 391-412 (1984).
27. GUZE, S. B. ET AL. A formulation of principles of comprehensive medicine with special reference to learning theory. *Journal of clinical psychology*, 9: 127-136 (1953).
28. HART HANSEN, J. P. & BERRY, J. W. Problems of family health in circumpolar regions. *Arctic medical research*, 40: 7-16 (1985).
29. HELLER, K. & SWINDLE, R. W. Social networks, perceived social support and coping with stress. In: Felner, R. D. & Jason, L. A., ed. *Preventive psychology: theory, research and practice in community intervention*. New York, Pergamon, 1983, pp. 87-103.
30. HOEPER, E. W. ET AL. Estimated prevalence of RDC mental disorder in primary care. *International journal of mental health*, 8: 6-15 (1979).
31. HOLDSTOCK, T. L. Psychology in South Africa belongs to the colonial era: arrogance or ignorance? *South African journal of psychology*, 11: 123-129 (1981).
32. ISCOE, I. & HARRIS, L. C. Social and community interventions. *Annual review of psychology*, 35: 333-360 (1984).
33. JACOBS, D. F. Cost-effectiveness of specialized psychology programs for reducing hospital stays and outpatient visits. *Journal of clinical psychology*, (1987) (in press).
34. JONES, K. R. & VISCHI, T. R. Impact of alcohol, drug abuse and mental health treatment on medical care utilization: a review of the research literature. *Medical care* (suppl.), 17: 1-82 (1979).
35. KAKAR, S. *Shamans, mystics and doctors*. Delhi, Oxford University Press, 1982.
36. KARASEK, R. A. Job demands, job decision latitude, and mental strain: implications for job redesign. *Administrative science quarterly*, 24: 285-308 (1979).
37. KAZDIN, A. E., ed. Psychotherapy research. *Journal of consulting and clinical psychology*, 54 (special issue): 3-118 (1986).
38. KELLY, J. G. Community psychology: ecological approach. In: Wolman, B. B., ed. *International encyclopedia of psychiatry, psychology, psychoanalysis, and neurology*, Vol. 3. New York, Aesculapias Publishers, 1977, pp. 264-270.
39. KITTEL, F. The interuniversity study on nutrition and health. In: Matarazzo, J. D. et al., ed. *Behavioural health: a handbook of health enhancement and disease prevention*. New York, John Wiley, 1984, pp. 1148-1153.
40. KJOLSTAD, H. Professional psychologists' associations in Europe 1982. *Tidsskrift for Norsk Psykologforening*, 20: 544-549 (1983).
41. KRANTZ, D. S. ET AL. Health psychology. *Annual review of psychology*, 36: 349-383 (1985).
42. LAMBO, T. A. A plan for the treatment of the mentally ill in Nigeria: the village system at Aro. In: Linn, L., ed. *Frontiers in general hospital psychiatry*. New York, International University Press, 1961.
43. LEVI, L. ET AL. Report on work stress related to social structures and processes. In: Elliott, G. R. & Eisdorier, C., ed. *Stress and human health. A study by the Institute of Medicine/National Academy of Sciences*. New York, Springer, 1982.
44. LEVINE, A. *Love Canal: science, politics, and people*. Lexington, Lexington Books, 1982.
45. LIVINGSTONE, M. & LOWINGER, P. *The minds of the Chinese people: Mental health in new China*. Englewood Cliffs, Prentice-Hall, 1983.
46. LOMOV, B. F. Soviet psychology: its historical origins and contemporary status. *American psychologist*, 37: 580-586 (1982).
47. LONNER, W. J. & BERRY, J. W., ed. *Field methods in cross-cultural research*. London, Sage, 1986.
48. MATARAZZO, J. D. ET AL., ed. *Behavioral health: a handbook of health enhancement and disease prevention*. New York, John Wiley, 1984.
49. MCPHERSON, F. M. The professional psychologist in Europe. *American psychologist*, 41: 302-305 (1986).
50. MELLIBRUDA, J. Development of professional training of psychologists in Poland: evolution of the clinical model. Paper presented at the EFPPA Expert Conference on Postgraduate Training in Psychology, Vienna, September 28-29, 1984 (unpublished).
51. MOOS, R. H. Context and coping: towards a unified conceptual framework of community. *American journal of community psychology*, 12: 5-25 (1984).
52. MUMFORD, E. ET AL. The effects of psychological intervention on recovery from surgery and heart attacks: an analysis of the literature. *American journal of public health*, 72: 141-151 (1982).

53. MURRELL, S. *Community psychology and social systems*. New York, Behavioral Publications, 1972.
54. MURRELL, S. A. & SCHULTE, P. A procedure for systematic citizen input to community decision-making. *American journal of community psychology*, **8**: 19-30 (1980).
55. O'NEIL, P. & TRICKETT, E. J., ed. *Community consultation*. San Francisco, Jossey-Bass, 1982.
56. PEDERSON, P. B. ET AL., ed. *Mental health services: the cross-cultural context*. Beverly Hills, Sage, 1984.
57. PUSKA, P. Community-based prevention of cardiovascular disease: the North Karelia Project. In: Matarazzo, J. D. et al., ed. *Behavioural health: a handbook of health enhancement and disease prevention*. New York, John Wiley, 1984, pp. 1140-1147.
58. RAPPAFORT, J. *Community psychology: values, research and action*. New York, Holtz, Rinehart & Winston, 1977.
59. ROSENZWEIG, M. R. Trends in development and status of psychology: an international perspective. *International journal of psychology*, **17**: 117-140 (1982).
60. ROSLER, H. D. Postgraduate studies for diploma psychologists employed in the health and social services of the German Democratic Republic: legal basis, organization, programme, and initial experience. Paper presented at the EFPPA Expert Conference on Postgraduate Training in Psychology, Vienna, September 28-29, 1984 (unpublished).
61. SARTORIUS, N. Cross-cultural research on depression. *Psychopathology*, **19** (supplement 2): 6-11 (1986).
62. SCHLESINGER, H. J. ET AL. Mental health treatment and medical care utilization in a fee-for-service system: outpatient mental health treatment following the onset of chronic disease. *American journal of public health*, **73**: 422-429 (1983).
63. SEIDMAN, E. *Handbook of social intervention*. Beverly Hills, Sage, 1983.
64. SINHA, D. & HOLTZMAN, W. H., ed. The impact of psychology on Third World development. *International journal of psychology*, **19** (special issue): 3-192 (1984).
65. STAPP, J. & FULCHER, R. The employment of APA members: 1982. *American psychologist*, **38**: 1298-1320 (1983).
66. SUINN, R. M. Intervention with Type A behaviors. *Journal of consultative clinical psychology*, **50**: 797-803 (1982).
67. TRIANDIS, H. C. & DRAGUNS, J., ed. *Handbook of cross-cultural psychology*, Vol. 6. Boston, Allyn & Bacon, 1980.
68. U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES. *Hypertension: biobehavioral and epidemiological aspects* (NIH Publication No. 82-2015). Bethesda, National Institutes of Health, 1982.
69. U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES. *Proceedings of the 4th Joint US-USSR Symposium on Hypertension* (NIH Publication No. 86-2704). Bethesda, National Institutes of Health, 1984.
70. VANDENBOS, G. R., ed. Psychotherapy research. *American psychologist*, **41** (special issue): 111-214 (1986).
71. WAGNER, D. A. Child development research and the Third World: a future of mutual interest? *American psychologist*, **41**: 298-301 (1986).
72. WORLD HEALTH ORGANIZATION. *The role of the psychologist in mental health services: Report on a working group* (Euro 5428 I). Copenhagen, WHO Regional Office for Europe, 1973.
73. WORLD HEALTH ORGANIZATION. Psychosocial factors and health: new program directions. In: Ahmed, P. & Coelho, G., ed. *Toward a new definition of health*. New York, Plenum, 1979, pp. 87-111.
74. WORLD HEALTH ORGANIZATION. Global review of mental health. In: *Sixth report on the world health situation, Part I*. Geneva, 1980, pp. 153-168.
75. WORLD HEALTH ORGANIZATION. *Social dimensions of mental health*. Geneva, 1981, 40 pages.
76. WORLD HEALTH ORGANIZATION. *Changing patterns in suicide behaviour*. Copenhagen, 1982 (EURO Reports and Studies 74).
77. WORLD HEALTH ORGANIZATION. *Evaluation of the strategy for health for all by the year 2000. Seventh report on the world health situation. Vol. 1. Global review*. Geneva, 1987.
78. WRIGHT, L. Psychology and pediatrics: prospects for cooperative efforts to promote child health. *American psychologist*, **40**, 949-952 (1985).
79. ZAUTRE, A. & SIMONS, L. S. An assessment of a community's mental health needs. *American journal of community psychology*, **6**: 351-362 (1978).
80. BIELIAUSKAS, V. J. Mental health care in the USSR. *American psychologist*, **32**: 376-379 (1977).
81. AMERICAN PSYCHIATRIC ASSOCIATION. *DSM-III: diagnostic and statistical manual of mental disorder*. 3rd edition. Washington, DC, 1980.