WHO-EM/MENT/111

REPORT OF A CONSULTATIVE GROUP MEETING ON APPLICATION OF BEHAVIOURAL SCIENCES IN HEALTH SERVICES IN DEVELOPING COUNTRIES

Alexandria, Egypt, 2-5 September 1985

WORLD HEALTH ORGANIZATION
REGIONAL OFFICE FOR THE EASTERN MEDITERRANEAN
1985

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(Meeting Ref.: EM/CGM.ABS.HS.DVC/9)

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EDITORIAL NOTE

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1. INTRODUCTION

A Consultative Group Meeting on Application of Behavioural Sciences in Health Services in Developing Countries was convened in the WHO Eastern Mediterranean Regional Office, Alexandria, on 2-5 September 1985. The meeting was attended by temporary advisers from four countries from the Region and a number of EMRO staff members. A list of participants is given in Annex II. Representatives of major behavioural science disciplines were present as well as representatives of major WHO programme areas (i.e. Disease Prevention, Environmental Health, Health Manpower Development, Maternal and Child Health, Nutrition, Occupational Health, Essential Drugs, Research Promotion and Development).

1.1. Inaugural address

The meeting was opened by Dr Hussein A. Gezairy, Regional Director, who welcomed the participants, noting the important role of the behavioural sciences in the struggle towards the goal of Health for All.

Dr Gezairy stated:

> "... it is slowly becoming apparent that no amount of research in physical sciences can ever make us understand the complexities of human behaviour, the motivation of the individual, his aspirations, and his fears, which ultimately decide why a health programme succeeds or fails. The significance of human behaviour in matters of health and disease is obvious to anyone who cares to examine the issues."

Dr Gezairy remined the participants of the Koranic verse which refers to the basic principle which should guide behaviour: "Lo! Allah changeth not the condition of a people until they change that which is in their hearts".

Following his address, Dr Gezairy proposed that Dr W.A. Hassouna serve as the Chairman of the Meeting. Dr A. Marsella and Dr H. Ahmed were appointed as Rapporteurs. The Meeting then adopted the Agenda (see Annex I), and the proposed programme.

2. OBJECTIVES

The following objectives of the Meeting were approved:

2.1. To review recent developments in the application of behavioural sciences in health services, particularly as it relates to WHO collaborative programmes in developing countries.
2.2. To identify behavioural and mental health interventions which can improve the quality of health services in the Region and to develop an outline of project proposals related to identified behavioural interventions.
2.3. To identify regional facilities and manpower resources in behavioural sciences research related to health problems.

2.4. To recommend steps to promote research and training in the behavioural sciences as related to health in the countries of the Eastern Mediterranean Region.

3. REVIEW OF RECENT DEVELOPMENTS IN THE APPLICATION OF BEHAVIOURAL SCIENCES TO HEALTH SERVICES IN DEVELOPING COUNTRIES

3.1. Behavioural sciences

The behavioural sciences were defined as "that branch of organized knowledge that seeks to describe, understand, modify and predict the determinants and functions of human behaviour". The primary behavioural sciences are anthropology, psychiatry, psychology, and sociology. Certain aspects of economics, geography, political science, and public health may also be considered as behavioural sciences.

3.2. The contribution of behavioural sciences

The behavioural sciences have developed an impressive knowledge base which can be used to structure and facilitate the delivery of health services in developing countries. Scientific data are available that address problems regarding the aetiology, expression, course, outcome, treatment, and prevention of a broad spectrum of health problems, including cardiovascular diseases, cancer and stress problems. There is also considerable behavioural science knowledge on such topics as fertility-regulating behaviour, pain, patient-doctor relationships, compliance, patients' conceptions of disease, service-utilization patterns, indigenous conceptions of disease and indigenous healers.

But perhaps most importantly, the behavioural sciences are concerned with the interrelationships among the patient, the professional, and the bureaucratic system that provide the basis of health services. These sciences deal with the patient's perspective regarding his/her illness, including the ways in which the patient conceptualizes, experiences, and manifests the illness, and the ways in which the patient seeks help and decides to accept and comply with the care prescribed. The behavioural sciences are also involved in the ways in which the professional - indigenous healer or university-trained physician - perceives the illness and the patient, and the way he/she formulates, proposes and provides therapeutic services. Lastly, the behavioural sciences are concerned with the structure and process of health care and services. Behavioural sciences deal not only with the behaviour of clients but equally with the behaviour of the providers of health services.

3.3. Some basic principles of behavioural sciences

To understand the possible applications of the behavioural sciences to the health care and services of developing countries, it is necessary to discuss some basic tenets or principles of these sciences.

The behavioural sciences assume that human health and disease are determined by a spectrum of forces which extend far beyond simple biological functioning. This assumption, which some people have termed "holistic", acknowledges the fact that every individual functions at many levels and that these levels are interdependent. Further, this assumption concedes that we cannot treat only the individual but must also treat the broader social and physical environment if we are to be successful. Although this perspective obviously complicates the tasks and responsibilities of the medical profession as it currently exists, it also offers this profession a new vision of human health and disease which holds more promise for the treatment, control, and prevention of disease and the promotion of human health and well-being.

Too often medical scientists and practitioners, pursuing the causes of a disease, focus on one single physical agent (e.g. virus, bacterium, aneurism, herniated disc) and concentrate their energies on its removal. This approach runs counter to the causal epistemology that characterizes the behavioural sciences. Behavioural sciences incorporate the belief that, while some forces are formative to the problem (i.e. they help create the context for its occurrence), others serve to precipitate, exacerbate, or maintain a problem.

According to the principles of behavioural sciences, involvement of both patient and community in health services is required for success. Such involvement in health services is not a privilege to be awarded by health professionals but a basic right which acknowledges human dignity and human capability for choice and self-responsibility. Patient and community involvement promotes independence rather than dependence. Within this framework, patients and communities can renew or acquire a sense of personal mastery and competence which is the critical foundation for health and well-being.

The movement toward patient and community involvement has been encouraged by the primary health care (PHC) approach which has stressed self-reliance rather than dependency. This approach emphasizes maximum participation in planning, organization, operation and control in health care. Although these principles are as old as any community, they required restatement in the well-known Alma-Ata Document (1978) because health services in developing countries had disintegrated under centralized controls which were promoting inappropriate goals, services and technologies. The expected benefits of "modern medicine" failed to filter down to the limited-income urban folk and the rural poor.

3.4. Relevance of behavioural sciences for developing countries

It is often argued that the poor develpoing countries have many urgent health problems of malnutrition, infections, poor sanitation, over-population, etc. for which they need urgent practical solutions; their resources are so limited that they cannot afford the "luxury" of getting involved in behavioural science training and research for their health services. This argument is fallacious. In fact, developing countries need the input of behavioural sciences even more than developed ones. As experience during the last few decades has already shown, the health problems of developing countries cannot be resolved only by reliance on the biomedical strategies and technologies

FIGURE 1. Behavioural intervention strategy for health services in developing countries (from Marselia and Higginbotham, 1985)

BEHAVIOURAL GOALS	TARGETS							
	Patient	Family	Health worker	Nurse	Physician	Health Administrator	Policy-maker	Community leader
Reinforce existing positive behaviours and attitudes								
Extinguish existing negative behaviours and attitudes								
Promote new positive behaviours and attitudes								
Prevent new negative behaviours and attitudes								

used in developed countries. The presence of different health problems within the context of radically different cultural and environmental circumstances demands the implementation of new approaches. The PHC approach based on active community participation for the prevention of disease and the promotion of health has emerged as the basic strategy of WHO's efforts in developing countries. The emphasis on PHC has given rise to a unique need for altering behavioural patterns and life-styles of both urban and rural populations in developing countries. This need has produced new and exciting possibilities and challenges for linking the behavioural and biomedical sciences in the world-wide movement toward "Health for All by the Year 2000".

3.5. Application of behavioural sciences

Given the acceptance of an active role for the behavioural sciences in addressing the health service problems of developing countries and given the acceptance of behavioural science assumptions and methods, the challenge is then their application. Clearly, there is a sizeable step between convincing policy-makers, technocrats and medical professionals of the value of behavioural sciences and the actual implementation of their techniques for the prevention of disease and the promotion of health.

The application of the behavioural sciences' knowledge and techniques to health care and services in developing countries must proceed beyond theory to practice. However, if this is to occur, it is necessary that strategic plans be developed to implement the actual application processes. The formation of a strategic plan requires the identification of goals, problems and resources. It also involves the identification of specific implementation procedures. For the latter, behavioural targets must be selected and specific tactics must be planned. A conceptual summary of the latter process is displayed in Figure 1.

Each cell in this figure is characterized by its own set of problems and needs and should be considered unique.

3.6. Some examples of behaviour-oriented interventions in health services

Although medical skills and treatments will always remain the mainstay of dealing with various diseases, the behavioural sciences can provide a number of alternatives which can complement and enhance the skills and capabilities of health professionals including health workers, nurses and physicians. These are briefly listed below.

(a) Communication enhancement

Communication is perhaps one of the most vital elements in the role of a health provider. Yet so little attention is paid to this aspect in our current system of health services. The application of behavioural sciences can greatly improve health education and training in this regard.

(b) Behavioural modification

Although the idea of behaviour change through the systematic use of rewards, punishments, and incentives is not new, there has been a remarkable development of specific principles and techniques for behaviour description, management and control in recent years, through the work of B.F. Skinner and other behavioural theorists. This behavioural technology has come to be termed "behaviour modification".

This technology can be used to systematically change and maintain behavioural patterns relevant to such health areas as nutrition, occupational safety, smoking, exercise, sanitation and many others.

(c) Stress management

Behavioural sciences research has demonstrated that stress management can effectively reduce disease and enhance psychological and physical well-being. Stress management refers to a broad arena of techniques for reducing levels of stress in high-risk individuals. They include: (1) meditation, (2) time management; (3) cognitive control of behaviour; (4) hypnosis; (5) coping skills; (6) muscle relaxation; (7) imagery; (8) systematic desensitization and (9) biofeedback.

All of these non-medical interventions can be used effectively to reduce stress and thus control disease. For example, research has indicated that stress is implicated in a spectrum of disease including immunological disorders, headaches, back pain, ulcers, asthma, diarrhoea, constipation, high blood pressure, impotence, frigidity, arrthymias, insomnia, etc. Stress management techniques can be easily learned and applied by a spectrum of health professionals, with great benefits.

(d) Compliance

One of the major barriers to the reduction of morbidity and mortality in the health services is non-compliance with prescribed biomedical regimens.

The medical approach to compliance is based on the assumption that the doctor knows best and that the patient should do exactly what the doctor prescribes - to do less suggests ignorance, laziness, or willful neglect. This approach has led to the labelling of patients as "compliers" or "non-compliers". In contrast, the behavioural science viewpoint emphasizes situational circumstances that may influence "adherence" to a regimen and subjective or phenomenological perceptions by the patient of his/her illness, its causes, severity and preferred treatment. Behavioural science research clearly indicates that treatment regimens and risk-reduction programmes which are sensitive to life circumstances and patient representations of illness result in adherence, whereas those which do not are largely failures. This fact leads us to another behavioural science finding, that can be applied to health service problems in developing countries - i.e. indigenous perceptions of causality, illness and treatment.

(e) Indigenous concepts of causality, illness and treatment

Whereas the biomedical approach to health care and services proceeds from an assumption of the universality of disease entities identified through scientific research, the behavioural sciences proceed from the viewpoint that the patient's perspective is a critical determinant of health services utilization and treatment as well as risk-reduction compliance.

If the health workers were familiar with the indigenous categories of causality, illness and treatment, he/she would have more insight into the patient's perceptions and preferences for health services and this would enhance his/her credibility, communication, technical skills, and general potency as a change agent. Although it does not need saying, it is useful to remember that no matter how well-trained a health professional may be in technical skills, he/she is of no use if the patient will not seek care nor adhere to prescribed treatments. Knowledge of the indigenous perspective increases the latter possibilities and thus should be encouraged as a part of training and practice.

3.7. Some limitations of the behavioural science approach in developing countries

Several problems must be considered prior to any application effort. These are:

(a) Ethnocentricity

Virtually all behavioural science knowledge has been developed in the industrial world and much of it may not be relevant to the developing countries. A careful examination of what knowledge is relevant should be made.

(b) Research problems

Research materials will require careful attention with regard to translation, conceptual equivalence and methodological equivalence. It will be necessary to devise new norms and to adjust standards to local customs.

(c) Concepts of health and disease

Industrial countries have concepts of health and disease that are based on distinctions between body, mind and spirit. In many developing countries, these distinctions are not made.

(e) Behavioural science resources

The behavioural sciences are not well developed in non-industrialized countries and there are shortages in manpower, fiscal resources and technical support services. There are also problems in interdisciplinary cooperation. Considerable time, money and institution-building will be necessary to ensure development of these sciences.

The Eastern Mediterranean ACMR, which met in Cyprus in April 1983, discussed the role of biobehavioural sciences and mental health and proposed the following activities:

(a) A review and identification of resources for research and training.

(b) Strengthening of training activities and development of training material.

(c) Active participation in the planning and implementation of global activities.

(d) Participation in intervention trials concerned with disease-prevention and health-promotion.

(e) Translation into local languages of appropriate material in order to increase awareness of decision-makers and the scientific community about needs and opportunities for work in this area.

4. APPLICATION OF BEHAVIOURAL SCIENCES TO SPECIFIC WHO PROGRAMMES

WHO has committed itself to the goal of "Health for All by the Year 2000". PHC has been designated as the basic approach for achieving this goal and programmes have been developed to address the officially identified components of PHC efforts.

4.1. Some examples of the relevance of behaviour to human health and disease

The current meeting included presentations by workers involved in these efforts including environmental health, disease prevention, nutrition, occupational health, maternal/child health, essential drugs, health manpower development and research promotion and development. Based on these discussions, a sample of health-relevant behaviours capable of being promoted or changed was identified. These sample behaviours are displayed in Table 1.

As Table 1 indicates, there is reason to believe that reductions in the *rates of morbidity and mortality and increases in human health and well-*being could be attained by modifying human behaviour patterns and life-styles regarding: (i) increase in breast-feeding and reduction in bottle-feeding; (ii) changes in domestic sanitation, including improved disposal of refuse and human waste; (iii) changes in personal hygiene including regular brushing of teeth and washing of hands; (iv) elimination of spitting and indiscriminate discharge of nasal secretions; (v) changes in diet including reduction in salt and fat intake and increase in that of vegetables and fruits; (vi) reduction in the use of alcohol, tobacco, and certain other substances; (vii) increased use of immunizations and other health services; (viii) wearing of shoes; (ix) proper use of medications, including essential drugs, and (x) (possibly most important of all) changing the attitude and style of functioning of the providers of health services.

TABLE 1: Some examples of desirable behaviour change required for major health problems in the Eastern Mediterranean Region

Health Problems	Behaviour change required
1. Communicable diseases	
1.1 Diarrhoeal diseases	1.1 Promote breast-feeding, personal hygiene, domestic sanitation
1.2 Malaria	1.2 Eliminate water-collection locations
1.3 Hookworm	1.3 Promote use of shoes, use of latrines and refuse disposal
1.4 Ascaris	1.4 Eliminate use of human excreta as fertilizer; promote use of latrines
1.5 Schistosomiasis	1.5 Eliminate urination and defaecation in streams
1.6 Leprosy	1.6 Eliminate spitting and indiscriminate discharge of nasal secretions
2. Non-communicable diseases	
2.1 Cardiovascular diseases	2.1 Reduce salt intake, fats, and alcohol in diets; reduce smoking; reduce stress; increase exercise
2.2 Cancer	2.2 Promote consumption of vegetables and fruit; fibres; reduce smoking, alcohol consumption and use of betel nut
2.3 Traffic accidents	2.3 Reduce alcohol use while driving; educate parents and children
2.4 Dental caries	2.4 Promote brushing teeth and dental hygiene
2.5 Emotional disorders	2.5 Reduce stress; increase coping skills
2.6 Malnutrition	2.6 Promote proper nutrition through education of the public and health professionals

It was observed that these behaviour patterns were all amenable to change through behavioural science technologies concerned with attitudinal and habit formation alteration (e.g. behaviour modification). The role of legislation in behaviour modification was also considered. It was pointed out that little is yet known about the use of legislative rather than educational approaches to behaviour change. For example, legislation has been used to control certain diseases; however, its exact role in health promotion is highly complex and remains to be scientifically evaluated.

The use of educational methods will require the development of manpower, materials and potent communication channels. Many non-health professionals, will most probably have to be involved, including teachers, the police, sanitation workers and mass-media specialists. It will also be necessary to inform both mid-level administrators, legislators, policy-makers, and national leaders regarding the important role of behaviour in human health and disease.

4.2. Some problems in the application of the behavioural sciences in the Eastern Mediterranean Region

Throughout the meeting, problems regarding the application of behavioural sciences to health services in the Eastern Mediterranean Region were identified and discussed. These problems included the following: (i) minimal manpower development in the behavioural sciences; (ii) limited opportunities to incorporate behavioural science material in medical curricula; (iii) location of behavioural university science programmes in faculties of arts, education, or humanities which are far removed from health problems; (iv) conflicts within the behavioural science fields (e.g. sociology versus psychology); (v) poor linkages between behavioural scientists and health and education ministries; (vi) misperceptions regarding behavioural science knowledge, methods, and technologies; and (vii) outdated material in the behavioural sciences and lack of access to contemporary information.

In addition, it was observed that the behavioural sciences are often concerned with basic rather than applied research, that they are often concerned with diseases rather than broader aspects of health, and that fears exist that the involvement of behavioural scientists in the health field will result in competition with physicians for limited financial resources.

The meeting also included discussion of the many health service problems of developing countries to which behavioural scientists must be alert if they are to be successful in applying their knowledge and technologies. These problems include: (i) low national priorities for health programmes, because of agricultural, construction, and military priorities; (ii) lack of integration of health programmes with education, economic, political, cultural, and technical sectors; (iii) bureaucratic systems which are inefficient and (iv) cultural customs and traditions which may interfere with health behaviour changes.

5. REVIEW OF SPECIFIC INTERVENTIONS AND IDENTIFICATION OF RESEARCH PROPOSALS

The meeting considered various possible behavioural science interventions which can be moulded into specific research proposals. It was agreed that, wherever possible, such research proposals should involve more than one country and should be helpful in developing appropriate research methods for local use. The meeting reaffirmed the following criteria for selection of a research project:

(a) The research problem is clearly defined.

(b) Lack of knowledge on the topic is the main obstacle to programme delivery.

(c) The topic is suitable for collaborative effort (and for international collaboration).

(d) Research is likely to produce results in the short- and medium-term perspectives.

(e) The investigation will support growth of expertise and development of manpower.

(f) The project allows productive collaboration between the researchers and those who will apply results, both in the conduct of research and in the implementation of findings.

The following two multicentric proposals were recommended for urgent implementation:

5.1. Psychosocial skills for improving effectiveness of PHC workers

At present most of the PHC staff in developing countries lack both the knowledge of behavioural sciences and the psychosocial skills needed to deal with a multitude of health problems. It is believed that if PHC workers acquire certain minimum psychosocial skills their performance will improve. These psychosocial skills would include ability to: (i) communicate better (e.g. by careful listening; by developing warmth, trust and non-judgemental attitudes); (ii) assess health problems in a holistic and psychosocial way (not concentrating only on disease or symptoms); (iii) provide counselling and emotional support when required; (iv) acquire cultural sensitivity to local needs, etc. The research proposal essentially consists of providing such training in short courses, followed by a period of in-service supervision and consultation. The results of such training would be measured by various parameters of work satisfaction, acceptability by the community, effects in programmes (e.g. increase in immunization, reduction in cases of diarrhoea, etc.). Following a pilot phase demonstrating the feasibility of the project, the study would be conducted on an experimental and a control group.

5.2. Psychosomatic symptoms and psychosocial problems in PHC services

It is estimated that at least 15-20% of persons attending PHC facilities and general care services do not have significant physical pathology, although they present with multiple somatic complaints. Such complaints are generally regarded as emotional in origin, attributable to stress in the psychosocial environment. The study aims at identifying these types of disorder and developing intervention methods for dealing with them. The latter will include recognition of psychosocial elements in the history of the patient and use of supportive techniques for management.

5.3. Other research proposals

In addition to the multicentric projects, the following additional research proposals were recommended:

- Epidemiology of injury in young children.
- Psychosocial dimension of rural sanitation.
- Effectiveness of medical education in local languages.
- A comparison of education/legislation approaches for changing behaviour toward essential drugs.
- Effectiveness of problem-oriented medical education for PHC.
- Influence of family counselling on PHC work.
- Survey of teaching and research in behavioural sciences in the health field in the Eastern Mediterranean Region.

6. PLANS FOR STRENGTHENING BEHAVIOURAL SCIENCE RESEARCH AND TRAINING IN THE EASTERN MEDITERRANEAN REGION AND LINKING THESE WITH HEALTH SYSTEM DEVELOPMENT IN MEMBER STATES

As section 4.2. of the present report indicates, there are many problems facing the development and strengthening of behavioural science research and training in the Eastern Mediterranean Region. The present meeting gave specific attention to the question of behavioural science research and training resources in the Region and the steps necessary for their effective application to the problems of PHC.

It was pointed out that current resources are distributed across a variety of settings and institutions including universities, medical schools, research institutes, health ministry research units and national health councils. This dispersion has led to poor communication, duplication of effort, limited funding and lack of coordination. Frequently, the resources which are available have failed to develop any sustained interest in health problems. As a result, relevant training curricula and materials are virtually absent.

The discussion emphasized that it will be necessary to develop resources in behavioural science training and research by a coordinated programme which must include: (i) increased communication among behavioural sciences educators and health services planners and practitioners; (ii) education and sensitizing

of senior health services and policy officials regarding the potential contributions of behavioural sciences to health programmes, particularly by orienting these officials to new advances in behavioural science knowledge and technology; (iii) the development of behavioural sciences curricula and training materials; and (iv) the further training of behavioural scientists with health interests. A number of specific actions were proposed to implement these suggestions. These are reflected in the recommendations and include the structuring of workshops, the training of research fellows, the initiation of behavioural science research, and the preparation of educational objectives and region-specific materials.

7. CONCLUSIONS

7.1. In view of the demonstrated importance of human behaviour in the aetiology, control and prevention of human disease and the promotion of human health, it is critical that appropriate behavioural science knowledge and technology be immediately applied to the health services of developing countries.

7.2. Appropriate behavioural science knowledge and technology should be conveyed to health service policy-makers, planners and professional health workers and laymen through the development of new research and training programmes and the strengthening of existing ones.

7.3. Existing coordination and collaboration between the WHO Mental Health Programme, which has responsibility for promoting behavioural sciences, and other WHO programmes and units should be continued and expanded.

7.4. WHO should continue to assist in promoting collaboration in the behavioural sciences between universities, research centres, and health ministries.

8. RECOMMENDATIONS

8.1. Advocacy

8.1.1. Inform regional countries of possible applications of the behavioural sciences to health services through the use of consultation visits, national and regional workshops, and the distribution of relevant materials.

8.1.2. Prepare and distribute appropriate behavioural science bibliographies and research and training materials to research and training institutions in the Region.

8.1.3. Organize two national workshops during the next two years (1986/87) to bring together biomedical and behavioural scientists to exchange views on areas of common interest and to develop national plans for collaboration in research and training in the application of behavioural sciences for the improvement of health services.

8.2. Infrastructure

8.2.1. Identify centres and individuals who can collaborate in the development and expansion of programmes for the application of behavioural sciences to health services in the Eastern Mediterranean Region.

8.2.2. Strengthen selected centres by exchange visits, fellowships programmes and financial support for research, training, supplies and equipment.

8.3. Training

8.3.1. Identify one or more institutions in the Eastern Mediterranean Region to function as focal centres for the promotion and improvement of behavioural sciences for health personnel including training, curriculum development, and the design and production of materials.

8.3.2. Assemble three working groups in 1986/87 to develop instructional and organizational objectives for the teaching of behavioural sciences to medical students, nurses and sanitation professionals. Each working group should further design evaluation strategies to assess the achievement of these objectives.

8.3.3. The EMRO clearinghouse should review the available instructional material for the behavioural sciences in indigenous languages and take urgent steps to develop appropriate training material in behavioural sciences for different categories of health personnel.

8.4. Research

8.4.1. WHO should provide the financial and technical support to implement the major research proposals developed at this meeting, particularly those which have a multicentric collaborative design.

8.4.2. To enhance the research potential and skills of behavioural scientists in the Region, WHO should organize a workshop during the next two years to provide training in behavioural science research. WHO should further collaborate with selected universities and other centres to organize similar training workshops at national level. Suitable young behavioural scientists should also be provided fellowships for advanced training in behavioural science research.

8.5. Further programme development

8.5.1. A similar consultation meeting should be convened in about two years' time to review the progress achieved in this field and to suggest new avenues for future development.

8.5.2. In order to provide additional impetus and technical input into this programme area, it is recommended that the services of consultants for six to nine months be provided for this programme, starting from 1986.

ANNEX I

AGENDA

1. Inauguration of the meeting

2. Elections of officers

3. Adoption of the Agenda

4. Review of recent developments in the application of behavioural sciences to health services programmes relevant to developing countries.

5. Relevance of behavioural sciences to specific WHO programmes

   5.1 Global view

   5.2 Environmental health

   5.3 Disease prevention

   5.4 Nutrition

   5.5 Occupational health

   5.6 Maternal and child health

   5.7 Essential drugs

   5.8 Health manpower development

   5.9 Other programmes

6. Review of some specific topics to identify behaviour-related interventions to improve the quality of health services

   6.1 Training in behavioural sciences for general physicians and paramedical staff

   6.2 Psychosocial factors in child development

   6.3 Role of family and social network in health

   6.4 Life-style, health and illness

   6.5 Other areas

7. Development of outlines of project proposals related to some of the identified interventions

8. Review of research facilities and significant research in behavioural sciences in the Eastern Mediterranean Region

9. Plans for strengthening of behavioural science research in the Eastern Mediterranean Region and linking it with health system development in Member States

10. Consideration and adoption of the draft report

11. Conclusions and recommendations.

ANNEX II

LIST OF PARTICIPANTS

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Dr N. Sartorius	Director, Mental Health Division	WHO Headquarters
Dr N.N. Wig	Regional Adviser on Mental Health and Secretary of the Meeting	WHO Eastern Mediterranean Regional Office

*did not attend

Dr D.R. Billington	Regional Adviser, Educational Development and Support	WHO Eastern Mediterranean Regional Office
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ANNEX III

LIST OF BASIC DOCUMENTS

1.	Agenda	EM/CGM.ABS.HS.DVC/1
2.	Programme	EM/CGM.ABS.HS.DVC/2
3.	List of participants	EM/CGM.ABS.HS.DVC/3
4.	Some applications of the behavioural sciences to health care and services in developing countries. Part I: Terms of reference, conceptional/methodological issues and theoretical foundations (A.J. Marsella, N.H. Higginbotham)	EM/CGM.ABS.HS.DVC/4.1
5.	Some applications of the behavioural sciences to health care and services in developing countries. Part II: Assumptions, practical considerations and applications (A.J. Marsella)	EM/CGM.ABS.HS.DVC/4.2
6.	Suggested resource materials for application of the behavioural sciences to health care and services in developing countries (A.J. Marsella, N.H. Higginbotham, L.H. Connor)	EM/CGM.ABS.HS.DVC/4.3
7.	Relevance of behavioural sciences to the WHO programme in health manpower development (R. Billington)	EM/CGM.ABS.HS.DVC/5.8
8.	Project to implement an integration of field work, educational research and health service functions in the combined teaching and community and behavioural sciences (M. Shaalan)	EM/CGM.ABS.HS.DVC/6.1
9.	From symbiosis to individuation: the bodily interface between biological and cultural-symbolic organizers (E. Jeddi)	EM/CGM.ABS.HS.DVC/6.2
10.	Life-style, health and illness (H. Ahmed)	EM/CGM.ABS.HS.DVC/6.4
11.	Review of research facilities and significant research in behavioural sciences in the Eastern Mediterranean Region (W.A. Hassouna)	EM/CGM.ABS.HS.DVC/8.1
12.	Teaching and research activities in behavioural sciences in Suez Canal University (I. Izzat).	EM/CGM.ABS.HS.DVC/8.2