
BEHAVIOURAL SCIENCE

LEARNING MODULES

The World Health Organization has published a number of scientific background papers on how certain behaviours influence health. They review the evidence that such behaviours can be changed and certain skills can be learnt by health workers that will positively influence health and health care. The papers are intended to lead to the production of teaching "modules", which should set out methods for:

1. demonstrating the skills to students
2. practising the skills by students
3. providing feedback to students about their performance
4. certifying that the skill has been learnt to a certain standard.

A few sample "modules" are provided and further ones can be circulated as models as they become available. Each school or group of schools for health workers, however will need to create their own modules or adapt existing ones according to their local teaching opportunities and examining methods.



DIVISION OF MENTAL HEALTH

WORLD HEALTH ORGANIZATION

GENEVA

INTRODUCTION TO THE BEHAVIOURAL SCIENCE PROJECT

Behaviour in relation to medicine can refer to a number of different entities. It can refer to the behaviour of people who may not be ill, but whose behaviour can lead them into becoming ill, so-called risk behaviour. Conversely it can refer to actions healthy people take to maintain their good health. Such behaviour can also refer to those things done by people who are already ill and whose condition is cured or at least improved by a change in their behaviour, including the ways they seek out care and treatment. Finally such behaviour can refer to that of health workers themselves and the ways in which this can influence their patients or the others with whom they deal.

The way that a physician manages the consultation with a patient, how the examination is carried out, the way questions are asked, the non-verbal communications given or picked up and the way explanations or instructions are conveyed are all very important. If the best use is to be made of the interaction, then students need to be taught the skills to do all these things effectively, for without expertise in these fields, a treatment may fail despite being technically correct.

Psychosocial and behavioural factors influence health and disease at every stage of their natural history. How people eat and their cigarette smoking predispose an adult to ischemic heart disease. Acute emotional stress or unusually heavy exercise can precipitate arrhythmia and sudden cardiac death in persons with compromised cardiac vasculature. The extent of collateral circulation, influenced by exercise, affects the outcome of the *acute stage* of a myocardial infarction. And finally, levels of anxiety, depression, and social support have a measurable impact on the physical recovery process after myocardial infarction or coronary artery bypass surgery. The same kind of sequence can be observed for many other kinds of acute and chronic illnesses. Thus we see that giving attention to psychosocial and behavioural factors should be a critical part of the education and practice of professionals in preventive medicine, primary health care, acute advanced medicine and surgery, and rehabilitation.

The actual science of psychosocial and behavioural factors in health can refer to the study of behaviours in relation to health and diseases, to the search for ways to induce behaviour change in risk populations or patients, to the search for social and cultural patterns that influ-

ence health for better or worse and to the teaching of behavioural skills to health workers. The series of papers produced by the World Health Organization, relates to all four of the above categories: namely, prevention of disease by reducing unhealthy behaviours, improving treatment by changing a patient's behaviour, community diagnosis to identify high risk groups and areas, as well as behaviour change in health workers for greater effectiveness.

The papers presented are background scientific documents which review the evidence that certain behaviours relate to certain health outcomes and describe ways to intervene that have been documented to be effective. These papers should lead to the production of learning materials which will describe what needs to be done so that the student learns about the importance of these behaviours and about ways to induce or reduce such behaviours in certain target groups. Such learning is incomplete unless the student's own professional behaviours are actually changed. A few learning modules have been prepared to illustrate how this could be done, for instance in the case of low back pain, or breaking bad news to patients. Other modules are in preparation, but the aim is that schools or groups of schools should prepare modules which will fit in with their own style of teaching, evaluation and certification. The modules that have been produced, are being made available so as to give examples that can serve as models for adaptation. In addition, WHO would welcome receiving any modules that have been prepared by schools already¹ for its files and further distribution.

Behavioural science should not only be taught as a separate science in a distinct pre-clinical course for students. Rather, behavioural skills should be taught as part of the teaching around specific diseases or problems. For instance, the teaching about behaviour change for back pain should be taught as part of the teaching about back pain. How to get mothers to change their behaviour as it relates to the treatment of diarrhoea, should be included when the students learn about infant diarrhoea and not as some separate teaching exercise about "compliance" in abstract. Interviewing skills and other interactional skills need to be learned when the students are taught about *what* they should ask about in the clinical examination.

For skills to be learned requires the student to be able to observe the skills being

practised (or at least to read a detailed description of how to do it). It then requires opportunities for the student to practise the skill, starting in safe, controlled settings and then extending to real situations. There also needs to be ways in which the students receive feedback as to whether they are practising the skill correctly or how they may need to change in order to do so. There needs finally to be a system which can certify that a particular behaviour has been learned to a satisfactory standard. If such teaching is to be taken seriously by the students, they should not be able to progress further unless they have achieved a certain standard (i.e. passed a test or the equivalent). All the above should be included in the "module" relating to the particular skill. This does not necessarily imply that a single skill is taught at one time only. Certain skills may be taught on repeated occasions, with the expectation that greater complexity will be involved and greater proficiency achieved each time. The overall curriculum could thus be designed so that there is continuity ideally applying right through undergraduate to postgraduate and even continuing education.

WHO expects now that some medical schools and other schools for health workers will

take up certain of the back ground material supplied and would support efforts by these schools to develop such modules. WHO would also wish to collaborate with them in their pilot testing as well as helping schools to examine their curricula and teaching methods to ensure that these are suited to the learning of behavioural principles and skills by students.

The fields of medical science and medical practice are changing rapidly in many parts of the world. Those countries not yet caught up by these changes - in technology, in the roles of health professional, and in patient's expectations and responsibilities - soon will be. Even as the content of the medical curriculum of the Mid-Twentieth Century has become out-of-date, so have the ways we organize courses and the old styles of teaching. Our responsibility as educators of health professionals is to prepare our students to deal with both the known and the newly emerging diseases of the Twenty-first Century. It will be equally important then as now to treat whole people and not just their current disease and to promote health in total communities. The Learning Modules Series of the WHO Division of Mental Health helps mark the path toward that future.

¹ WHO has for instance received eight complete modules from the Department of Behavioural Science in Relation to Medicine, Medical Faculty, University of Newcastle, New South Wales, Australia. These are: Compliance Aiding Strategies, Childhood Behavioural Disturbance, Smoking Cessation Programmes for the Use of Medical Practitioners, Detecting and Treating Minor Alcohol Problems, Breaking Bad News, Dietary Change and Taking Pap Smears.

Acknowledgement

The work of the Division of Mental Health on this project was significantly taken forward by Professor David Jenkins while serving as a consultant with WHO, Geneva in 1989-90. He and colleagues at the WHO Collaborating Centre for Psychosocial Factors and Health at the University of Texas Medical Branch, Galveston, Texas, have continued to provide a major input to this programme since 1990. Thanks are also due to Dr H. Munitz for helping with the finalization of these documents while working with the Division of Mental Health in 1994. The work has been financially supported by a grant from the Carnegie Corporation of New York, USA.

Dr John Orley, Senior Medical Officer of the Division of Mental Health, WHO, has been responsible for the project. Mrs Lydia Kurkcuoğlu, Secretary of the Division of Mental Health has been responsible for the layout of the documents.

Behavioural Science Learning Modules

The following papers are now available from WHO:

- Preparing Patients for Invasive Medical and Surgical Procedures: Behavioural and Cognitive Aspects (WHO/MNH/PSF/93.2A)
- Communicating Bad News (WHO/MNH/PSF/93.2B)
- Introducing Parents to their Abnormal Baby (WHO/MNH/PSF/93.2C)
- Promoting Nonpharmacologic Interventions to Treat Elevated Blood Pressure (WHO/MNH/PSF/93.2D)
- Psychological Interventions for Patients with Chronic Back Pain (WHO/MNH/PSF/93.2E)
- Self-Management of Recurrent Headache (WHO/MNH/PSF/93.2F)
- Improving Adherence Behaviour with Treatment Regimens (WHO/MNH/PSF/93.2G)
- Insomnia : Behavioural and Cognitive Interventions (WHO/MNH/PSF/93.2H)

Further copies of this document and the above papers may be obtained from

Division of Mental Health
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Further papers and modules are in preparation:

- Adherence to dietary regimens
- Implementing and stimulating continued compliance with a low salt diet
- Teaching mothers about oral rehydration therapy
- Child physical and emotional abuse
- Child sexual abuse
- Developing supportive social networks
- Working with traditional healers
- Increasing screening behaviour for female cancer
- How to help defer youth from excessive alcohol consumption
- A programme for the prevention of tobacco use among African children
- Helping health providers make smoking interventions
- Keeping children and adolescents from starting to use tobacco and habit-forming drugs

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