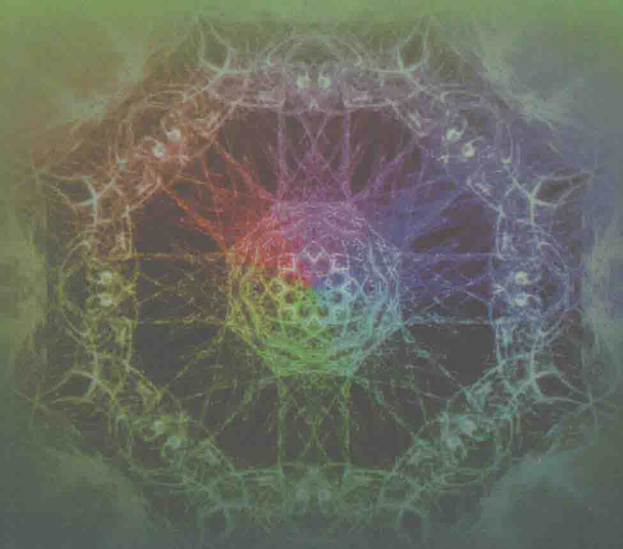


医学教育改革系列教材



Medical Psychology

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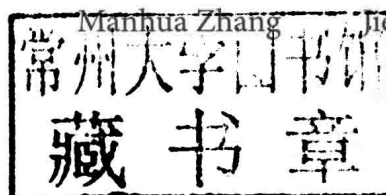
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Foreword

Global developments in medicine and health shape trends in medical education. And in China education reform has become an important focus as the country strives to meet the basic requirements for developing a medical education system that meets international standards. Significant medical developments abroad are now being incorporated into the education of both domestic and international medical students in China, which includes students from the districts of China's Hong Kong, Macao and Taiwan that are taught through mandarin Chinese as well as students from a variety of other regions that are taught through the English language. This latter group creates higher demands for both schools and teachers.

Unfortunately there is no consensus as to how to improve the level and quality of education for these students or even as to which English language materials should be used. Some teachers prefer to directly use original English language materials, while others make use of Chinese medical textbooks with the help of English language medical notes. The lack of consensus has emerged from the lack of English language medical textbooks based on the characteristics of modern medical education in China.

In fact, most Chinese teachers involved in medical education have already attained an adequate level of English language usage. However, English language medical textbooks that reflect the culture of the teachers would in fact make it easier for these teachers to complete the task at hand and would improve the level and quality of medical education for international students. In addition, these texts could be used to improve the English language level of the medical students taught in Chinese. This is the purpose behind the compilation and publishing of this set of English language medical education textbooks.

The editors in chief are mainly experts in medicine from Capital Medical University (CCMU). The editorial board members are mainly teachers of a variety of subjects

from CCMU. In addition, teachers with rich teaching experience in other medical schools are also called upon to help create this set of textbooks. And finally some excellent scholars are invited to participate as final arbiters for some of the materials.

The total package of English medical education textbooks includes 63 books. Each textbook conforms to five standards according to their grounding in science; adherence to a system; basic theory, concepts and skills elucidated; simplicity and practicality. This has enabled the creation of a series of English language textbooks that adheres to the characteristics and customs of Chinese medical education. The complete set of textbooks conforms to an overall design and uniform style in regards to covers, colors, and graphics. Each chapter contains learning objectives, core concepts, an introduction, a body, a summary, questions and references that together serve as a scaffold for both teachers and students.

The complete set of English language medical education textbooks is designed for teaching overseas undergraduate clinical medicine students (six years), and can also serve as reference textbooks for bilingual teaching and learning for 5-year, 7-year and 8-year programs in clinical medicine.

We would like to thank the chief arbiters, chief editors and general editors for their arduous labor in the writing of each chapter. We would also like to acknowledge all the contributors. Finally, we would like to acknowledge Higher Education Press. They have all provided valuable support during the many weekends and evening hours of work that were necessary for completing this endeavor.

President of Capital Medical University

Director of English Textbook Compiling Commission

Zhaofeng Lu

August 1st, 2011

Preface

Medical psychology is a public compulsory course for undergraduates majored in clinical medicine and other subjects related to medicine. The idea for this book came out of the requirements of medical psychology course from Chinese Standard for Medical Education Standard. This book emphasizes basic theories, knowledge and training skills under this premise of ensuring science, advance, inspiration and practicability. This book also strives to reflect features of practicability, systematicness and concision, with which the editors wish it will be easy for self-learning of foreign students and teaching work of the teachers.

All the editors of this book are experts or professors with extensive teaching experience who have been working in medical psychology teaching, clinical practice or research for many years. In the preparation process, we seriously discussed and ensured the science and integrity, which were of meticulousness and responsibility we have for the readers of this book. We greatly appreciate the substantial support from participant units and the proofreading work of the graduates of applied psychology in Capital Medical University. Thanks also to the authors of all the references, we benefit a lot from their writings.

Medical psychology does not have a long history, however, the construction and development of this discipline are faced with many challenges, at the same time, our editors' academic ability and English skills are also limited. We strive for perfection, though, there must be a certain gap between this book and our original intention. We welcome comments and suggestions from medical psychology fellows and overseas students in order to help us improve this book in the future.

Fengchi Yang
January 28, 2015

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An Introduction to Medical Psychology

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- 1.4 Contents and Tasks of Medical Psychology
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- 1.5 Research Methods
 - 1.5.1 Control of Variables
 - 1.5.2 Qualitative Study and the Quantitative Study
 - 1.5.3 Technical Methods

▪ Objectives

- 1. To understand the definition and subject nature of medical psychology.
- 2. To master main points and tasks of medical psychology.
- 3. To be familiar with research methods of medical psychology.

▪ Key Concepts

Basic subject; Applied subject; Social psychology; Cognitive psychology; Heredity; Clinical psychology; Counseling psychology; Health psychology; Biopsychosocial model; Sample; Independent variable; Dependent variable; Observation; Case study; Investigation; Experimental approach

1.1 Introduction

Medical psychology studies many interesting phenomena, for example, how people are motivated to take a certain action, why people do the things they do, and why some people act aggressively and other people show obedience. Psychological ideas are popular in daily life. We all use the principles of psychology everyday and probably don't even realize them. When we face a troublesome situation, and talk to ourselves in our minds, "calm down" or "give up", we are utilizing cognitive approaches to change our behaviors and emotions. When we become sad and anxious, we may remind of an unforgettable and painful experience during childhood. In a word, medical psychology covers a great range from our daily lives to a variety of professional fields. It investigates our mental processes and behaviors, and provides meaningful explanations of our experiences. In this chapter, there will be an introduction of medical psychology, including the subject's history and development, its tasks and contents and research methods.

1.2 Overview of Medical Psychology

1.2.1 What Is Medical Psychology

What is medical psychology? Medical psychology is a branch of applied psychology devoted to psychological problems arising in the practice of medicine.

Medical psychology focuses on the psychological aspects of pain, disability, terminal illness, bereavement, and reactions to medical advice according to this conception.

Medical psychology addresses that behaviors are important factors in onset, diagnosis and treatment of mental disorders. Medical psychology studies the intervention methods or skills of psychological therapy and nursing.

1.2.2 Disciplinary Quality of Medical Psychology

Medical psychology is an emerging discipline that combined by medicine and psychology. It studies psychological problems in medical field, that is, studying the roles and rules of psychological factors in health, disease and their mutual transformation, and applies psychological theories and techniques to clinical practice.

From the perspective of subject nature, medical psychology is a basic subject as well as an applied subject. As a basic subject, it reveals biological and social foundation of human behavior and the rules of interaction between physical activity and mental activity; it explores psychological approaches that human overcome disease and keep and improve health. As an applied subject, it applies theories and techniques to medical practice, and explores and solves series of problems in clinical medicine, e. g. , etiology and pathogenesis, psychological prevention, diagnosis, treatment, recovery of disease.

1.2.3 Change of Medical Model

1.2.3.1 Biological Medical Model

Since the nineteenth century, with the advances in productivity and technology, medicine and biology have also been greatly improved, and the practice of medicine has been guided by biomedical concept, namely the biomedical model. This model is based on the biological sciences, which divides human body into different parts with biological view, to find causes and prevention methods from the aspects of struc-

ture, organs and cells, and even the molecular level. People who support this model hold that pathogens invading the body are like foreign objects invading the machine, and pathogens can be found in every disease. Confirmed diagnostic criteria are physiological and biochemical indicators and specific treatment can be found. Pathogen eradication is an important factor to cure disease completely. Its weakness is that this model only studies the natural essence of human diseases, deviating from that human's integrity as a research object and ignoring the effect of psychological and social factors on human and disease. On the whole, the biomedical model as the core and mark of modern medicine makes a significant contribution for human health.

The medical model is a fundamental view, or orientation, that guides medical practices like diagnosing diseases and designing treatment plans. The biomedical model has taken a dominant place in the past centuries. The biomedical model only holds an orientation of biomedical perspective while excluding psychological and social factors, when understanding both health and illness. For example, the traditional explanations to the pathological process of coronary heart disease (CHD) based on the biomedical model appear quite limited. Numerous studies support the idea that psychological and social factors are important risk factors in CHD. Many studies suggest that high levels of depressive symptoms are an independent risk factor for mortality in patients with CHD, and economic status and some demographics characteristics are also associated with the morbidity and mortality of CHD. The biomedical model is limited for us to understand the human health and illness comprehensively.

1.2.3.2 Biopsychosocial Medical Model

In modern medical practice, the medical community has gradually realized the limitation of the biomedical model. In fact, both health and illness are highly associated with psychological and social factors. More and more, clinicians believe that many health problems are influenced by multiple domains of human experience, including biological, psychological and social impacts. They have begun to redefine the concepts of health and illness from these multiple aspects. After the late 1970s, American psychiatry George Engel wrote an article for *Science*, and proposed a new way to conceptualize human health and illness; the biopsychosocial model. The biopsychosocial model soon became a landmark

event for understanding medical practice. Beginning with Engel's model, medical thinking has slowly evolved by incorporating and integrating psychosocial components. Engel argued that medical community only holds the biomedical model, and neglects its weaknesses and limitations. He criticized the biomedical model for its acceptance of the notion including "the body as a machine, of the disease as the consequence of the breakdown of the machine, and of the doctor's task as repair of the machine." What is the biopsychosocial model? As Stevens and Smith said, "the biopsychosocial model is a comprehensive, integrative, and elegant model that allows us to address all major areas of the presenting issue across three spheres: physical, psychological, and socio-cultural. It encourages us to holistically examine the interactive and reciprocal effects of environment, genetics, and behavior."

The biopsychosocial model is a way that looking at illness under a basis of taking a patient at a coherent consideration. Firstly, "bio" stands for biological aspect and reflects the physical, biochemical, and genetic factors associated with individual illnesses and medical treatments. A basic upholding of biology theory can help individuals to understand how their bodies and brains are constructed and functioned, and how a disease develops based on biological causes. Secondly, "psycho" reflects individual psychological factors related to illness and health, and helps assess a wide variety of individual behaviors, affect, sensations, cognitions, and interpersonal relationships, etc. An acceptance of psychological theories can help people understand how the mind develops and operates, how thoughts and emotions work, and how behaviors and attitudes can be changed. Finally, "social" reflects the individual social-cultural contexts, including marital status, socioeconomic status, life-style, religious preference, and culture. It refers to the general understanding about the relationships and other social processes in human experience.

The biopsychosocial perspective has been applied to numerous medical, psychological, and behavioral phenomena. For instance, a patient with depression might simultaneously suffer from diabetes (a medical condition), and unemployment (a social condition). Furthermore, the depression will likely show: physical symptoms, such as insomnia and lessened appetite; psychological symptoms, such as suicidal thoughts; and social symptoms,

such as isolation. In this case, it is certainly inadequate to treat depression if only choosing physical intervention. Regardless of how the depression got started, the treatment plan must have physical support, such as anti-depressant medicine; psychological support, such as cognitive therapy; and social support, such as urging the patient to get out and interact with other people. It will effectively improve patient's depressive symptoms if the treatment plan is under the basis of the biopsychosocial model. The applications of the biopsychosocial model promote a comprehensive consideration to health and illness. Number of study evidence supported that psycho-social factors, such as stress, social support, and emotions, play important roles in the progression and management of cardiac disease and cancer. Today, the psychological and social factors have been routinely taken into account in the treatment plans of many diseases. It makes treatment more effective, such as in pain management, chronic fatigue, gastrointestinal illness, substance abuse, the infection of the human immunodeficiency virus (HIV/AIDS).

The biopsychosocial model is a comprehensive and integrative model. It provides a scientific orientation in modern medical practice, and allows clinicians and psychologists a way to comprehensively understand relationships between patients, diseases, and their environment. In the past three decades, many basic and applied studies have affirmed the value of the biopsychosocial model and demonstrated how biological, psychological, and social processes operate together to affect physical health outcomes. As a guiding framework, the biopsychosocial model has proven considerably successful. More and more practitioners make efforts to view health and illness from a multilevel, multisystem approach.

1.2.4 Main Points of Medical Psychology

1.2.4.1 Harmony among Biology, Mentality and Society

Human beings not only have natural property, but also have social attributes. We should not only consider disease and health from biology, but also emphasize psychological and social factors, and study human's biological, psychological and social characteristics as a whole. As long as the person is in equilibrium, and physiology, psychology and social aspects co-ordinate with each other, the person will keep healthy, otherwise, he will be ill.

1.2.4.2 Cognition Affecting Health

Cognition has a great impact on human health, and psychological researches found that the impact is reflected in the following aspects:

(1) Cognition and loneliness

In the social cognitive process, if people only pay attention to the negative aspects of life, then he is likely to experience greater loneliness. Anderson et al. pointed out that depressed people, those long lonely people often fall into the negative circle where they belittle themselves, they often adopt a negative attitude towards their own repression, often blame themselves for not having a good social relations, and they believe things are always out of control and so on.

(2) Cognition and anxiety

Anxiety is an inevitable thing in our life, for example, when we go to a company for a interview, or to see an important figure, or we are evaluated by others, many of us are likely to feel anxious. Psychologists Zimbardo et al. studied the situations we feel anxiety, found that cognition and control on the situation can make us avoid anxiety.

(3) Cognition and physiological disorders

With the development of the process of industrialization, psychologists found that our cognition and behaviors have important influence on our own health. Behavioral medicine and health psychology are developed under the influence of this idea. Health psychologists hold that, cognition on our own emotions and tensions are closely linked with disease.

1.2.4.3 Disease and Client as a Whole

Disease is a kind of life experience that every person has to face and nobody can keep healthy all his life. It is a consecutive process from disease to health and there will be no concept of health if there is no ill. Therefore, disease and the client are the whole and a system.

1.2.4.4 Adaptation and Adjustment Affecting Health

In the process of growth, individuals gradually form their specific patterns for external things and relatively stable personality characteristics. Individuals can maintain a dynamic balance through these patterns and characteristics when dealing with others and the environment around. In the process above, adaptation and adjustment are the key factors that individuals can keep their behaviors harmonious with external world; and they are important force

for individuals to keep healthy and fight disease.

1.3 History and Development

1.3.1 Origin

According to many researchers, medical psychology has a long history as medicine and psychology. As early as 2000 years ago, there were abundant records in the earliest documented human medicine and philosophy classics. In ancient times, China's "*Huangdi Neijing*" and western medicine founder Hippocrates have quite incisive exposition on the effect of psychological factors in human health and disease.

The words "medical psychology" is put forward firstly by German philosophical and medical professor R. H. Lose in 1852.

1.3.2 Development

Scientific psychology is generally considered to have begun with the work of German psychologist Wilhelm Wundt (1832—1920), who founded the first laboratory for the study of psychology at Leipzig University in Germany in 1879. His creative works is known as the landmark that psychology comes into the science world as a separate discipline. During his time, chemistry made great advances by analyzing complex compounds and developed the extremely useful periodic table of elements, in the 19th century. Wundt attempted to find or understand the basic elements in mind, and he proposed that mental process is composed of psychological compounds. He trained researchers to report their observations in a rigorous and objective way. Wundt's works showed that mental processes could be studied through scientific methods. Early psychology used the technique of introspection to study the structure and function of the mind. Introspection refers to observing and recording the nature of one's own perceptions, thoughts, and feelings.

Scientific psychology was introduced to China at the early 20th century, and Peking University opened psychological course in 1917 and established simple psychology laboratory. In the ensuing decades, medical psychology began to form and had preliminary development. The work of medical psychology, however, is paralyzed in the "Cultural Revolution".

After the late 1970s, medical psychology began to recover and enter a rapid development stage. Pro-