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Introductory Chapter: Bio-Psychosocial Model of Health

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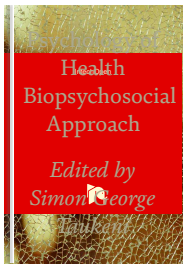

FROM THE EDITED VOLUME

Psychology of Health - Biopsychosocial Approach

Edited by Simon George Taukeni

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Chapter sections

1. Introduction

Health psychology explores different ways in the pursuit of getting people to embrace health promotion, illness prevention and health maintenance. As a speciality, health psychology examines how biological, psychological and social factors influence people's behaviour about their health status. The aim of this chapter is to examine possible contributory connections between bio-psychosocial factors and health at the population level. The book explores bio-psychosocial model which can help individuals to develop and maintain healthy lifestyles so as to promote good health and prevent illness. Friedman and Adler [ ] noted that the original bio-psychosocial model shaped not only research and theory on health but also the development of health psychology

2. Definitions

2.1 Health

Kazarian and Evans [ ] suggest that people commonly think about health in terms of an absence of (1) objective signs that the body is not functioning properly and (2) subjective symptoms of disease or injury, such as pain or nausea. World Health Organization defined health as 'a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity' (WHO, 1946 cited in [ ]:4). Some health psychologists defined health as a positive state of physical, mental and social well-being not simply the absence of injury or disease that varies over time along a continuum [ ]. At the wellness end of the continuum, health is the dominant state. At the other end of the continuum, the dominant state is illness or injury, in which destructive processes produce characteristic signs, symptoms or disabilities [ ]. For further detail, see .

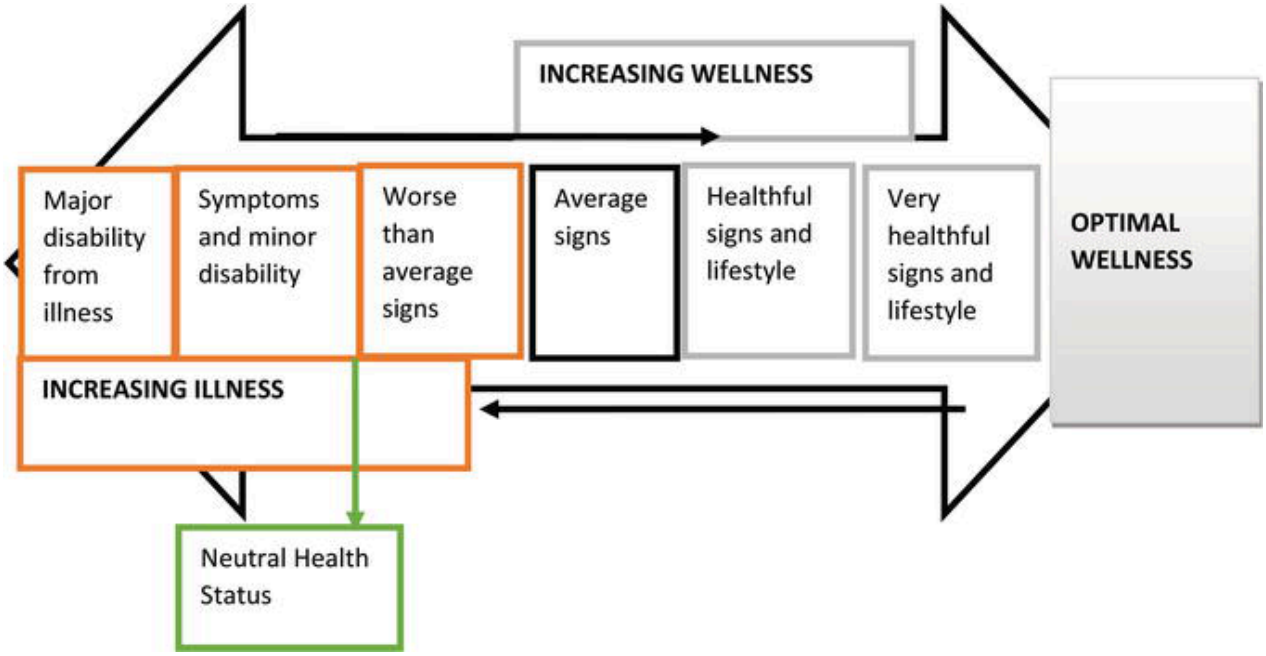

Figure 1.
Health (source: adopted from Sarafino [4]).

2.2 Health psychology

Health psychology is a speciality within the discipline of psychology concerned with individu²¹ behaviours and lifestyles affecting physical health. The discipline strives to enhance health, prevent and treat disease, identify risk factors and improve the healthcare system public opinion regarding health issues [ ]. Matarazzo in 1980 (as cited in [ ]:4) offered a definition of health psychology which has become widely accepted:

Health psychology is the aggregate of the specific educational, scientific and professional contributions of the discipline of psychology to the promotion and maintenance of health, the prevention and treatment of illness, the identification of etiologic and diagnostic correlates of health, illness and related dysfunction, and the analysis and improvement of the health care system and health policy formation.

2.3 The goals of health psychology

Sarafino ([ ]:11) mentioned the following goals of health psychology as to:

Promote and maintain health

Prevent and treat illness

Identify the causes and diagnosis correlates of health, illness and related dysfunction

Analyse and improve healthcare systems and health policy

2.4 Background of health psychology to public health

The recognition of health psychology as a designated field is widely acknowledged. The relationship between mind and body and the effect of one upon the other has always been a controversial topic amongst philosophers, psychologists and physiologists. Within psychology, the development of the study of psychosomatic disorders owes much to Freud [ ]. It has been observed in the recent studies that more deaths are caused now by heart disease, cancer and strokes which are by-product of changes in lifestyles in the twentieth century. Psychologists can be instrumental in investigating and influencing lifestyles and behaviours which are conducive or detrimental to good health [ ].

2.5 Health behaviours

Health behaviour is part of maintaining a healthy lifestyle and avoiding ill health. These are known as protective health behaviours. Health protective behaviours include the following categories:

Environmental hazard avoidance—avoiding areas of pollution or crime.

Harmful substance avoidance—not smoking or drinking alcohol.

Health practices—sleeping enough, eating sensibly and so forth.

Preventive health care—dental check-ups and smear tests.

Safety practices—repairing things, keeping first aid kits and emergency telephone numbers handy.

Although most of us are familiar with the need to engage in these health behaviours, only a few of us actually do so, and that is what we need to work on to remind people of adopting a better health lifestyles. Many other researchers such as Berg (1976 as cited in Pitts, 1998) asserted that most people are aware of which health behaviours should be engaged in; however, they frequently do not do so, and they instead do engage in activities which they know to be harmful to their health. It is this cantankerousness which psychologists have spent a great deal of time examining. The dilemma for health psychologists is to explain why some or many people do not do what they know is in their own best interest to do and why some people are more amenable to the adoption of healthy habits than others.

This chapter is therefore in support of a consistent focus on the role of knowledge in informing people of the risks to themselves that certain behaviours can engender. Pitts [ ] reported studies that examining a range of issues relevant to health such as smoking, drug-taking, medical checks and adopting safer sex have fairly consistently shown that knowledge, by itself, does not lead to behaviour change. The only question left to ask is: So what is required, other than knowledge, to persuade people to look after their health? This question is the guiding principle to understand the role of health psychology in persuading people to look after their health informed by bio-psychosocial model.

2.6 Models of health

It is generally recognized that there are two models of health, namely, biomedical and bio-psychosocial models. Biomedical model focuses on treatment and elimination of symptoms, while bio-psychosocial model focuses on individual's perception of their symptoms and how they and their families respond to symptoms they are experiencing [ ]. Also Deacon [ ] asserts that under the biomedical model, illnesses were understood as having physiological aetiologies that were diagnosed through distinct biochemical markers and were to be treated through physical interventions. This chapter however is primarily focusing only on the bio-psychosocial models of health. Its founder, Engel [ ], discovered that bio-psychosocial model represents the contribution of biological, psychological and social factors in determining health. shows the differences between the two models.

Focal area	Biomedical model	Bio-psychosocial model
What causes illness?	Biological factors (chemical imbalances, bacteria, viruses and genetic predisposition)	Biological (virus), psychological (beliefs, behaviour) and social (unemployment)

Focal area	Biomedical model	Bio-psychosocial model
Who is responsible for illness?	Individuals are regarded as victims of some external force causing internal changes. Because illness is seen as a result of biological changes beyond their control, individuals are not seen as responsible for their illness	Individuals should be held responsible for his/her health and illness
How should illness be treated?	Through vaccination, surgery, chemotherapy and radiotherapy, all of which aim to change the physical state of the body	The whole person should be treated, e.g. behaviour change, change in beliefs and coping strategies and compliance with medical recommendations
Who is responsible for treatment?	The responsibility for treatment rests with the medical profession	The focus is the whole person to be treated not just their physical illness; the patient is therefore responsible for their treatment (e.g. taking the medication or changing their behaviour)
What is the relationship between health and illness?	Health and illness are seen as qualitatively different—you are either healthy or ill—there is no continuum between the two	Health and illness exist on a continuum. Individuals progress along this continuum from health to illness and back again
What is the relationship between the mind and the body?	The mind and body function independently of each other. In other words, the mind and body are separate entities	The focus is on an interaction between the mind and the body. The mind and body interact
What is the role of psychology in health and illness?	Illness may have psychological consequences, but not psychological causes (e.g. cancer may cause unhappiness, but mood is not seen as related to either the onset or progression of the cancer)	Psychological factors not only as possible consequences of illness but as contributing to it at all stages along the continuum from healthy to being ill

Table 1.
Comparing biomedical and bio-psychosocial models of health.

Within health psychology one model that has enjoyed considerable popularity is the 'stress-diathesis' model (Steptoe cited in [ ]) which is currently called bio-psychosocial model. This model was first described by G.L. Engel in 1977. It emphasizes the interactive effect of environment and individual vulnerability (genetic and psychological characteristics) factors upon health [ ]. According to bio-psychosocial model, psychological, physical and social threats present demands upon an individual's resources and capacity for coping which give rise to physiological reactions involving the autonomic nervous system (ANS) and endocrine and immune system of the body.

The effects include both short-term and long-term components, and these may have consequences on health depending upon the individual's predisposition or vulnerability to adverse effects. Vulnerable individuals develop chronic allostatic reactions such as reduced immunocompetence or

exaggerated sympathetic activation of the ANS or increased secretion of adrenal hormones. Physiological reactions of these types have been implicated in the development of many disease states, including cancers, cardiovascular diseases and other non-communicable diseases susceptibility to infections [ ]. The following section presents the strengths and critical views of bio-psychosocial model.

2.7 Strengths of bio-psychosocial model

Bio-psychosocial model benefits the patients and healthcare system as revealed by research [, , , , , , ,]:

Guiding application of medical knowledge to the needs of each patient.

Improved patient satisfaction, better adherence to prescriptions, more maintained behaviour change, better physical and psychological health and less of a tendency to initiate malpractice litigations.

Development and application of techniques to reduce health risk behaviour.

Reduce multiple visits and admission into hospitals.

Individuals with health challenges are acknowledged to be active participants in the recovery process and good health, rather than mere passive victims.

Increase efficiency of care by reducing unnecessary prescription of drugs (i.e. diabetes and other chronic conditions).

Development of psychological techniques in the strengthening of immune reaction to illness.

Bio-psychosocial model can be used as a predictor of pain and other psychosocial problems resulting into development appropriate prevention and intervention strategies.

Improvement of communication between health staff and the patients.

Development and introduction of programmes of life quality improvement for chronic patients, physically disabled individuals and the elderly patients.

A significant influence on contemporary understanding of mental health difficulties.

Development and application of psychosocial support for the terminally ill patients and their families.

2.8 Critical views of bio-psychosocial model

A list of critical views of bio-psychosocial model has been noted in literature [, , , , , ,] as follows:

Time-consuming and expensive apply.

It requires more information be gathered during the assessment about an individual's socioeconomic status, culture, religion, as well as psychological factors that might affect the individual's condition.

There is a lack of theoretical basis of bio-psychosocial model and scientific evidence to support the model.

The complex relations between causes and effects of biological, psychological and social factors to influence the state of health and or occurrence of diseases.

The holistic nature of the bio-psychosocial model makes it a luxury many healthcare systems in resource-poor settings cannot afford.

Insufficient training opportunities or financial resources available to support the existence of multidisciplinary teams consisting of psychiatrists, clinical psychologists, mental health nurses and social welfare workers to allow for a full understanding of the biological, psychological and social factors involved in individual's condition.

The model's failure to provide straightforward guidelines for clinical treatment or rules for prioritization in clinical practice.

Medical students receive very limited amount of content in psychosocial subjects compar biomedical-oriented courses.

3. Conclusion

The focus of this chapter was mainly on integrating bio-psychosocial model in public health discipline. Authors like Nadir et al. [ ] found that bio-psychosocial model has been a mainstay in the ideal practice of modern medicine. It is attributed to improve patient care, compliance and satisfaction and to reduce physician-patient conflict. Both strengths and critical views of bio-psychosocial model were presented in the chapter. Even though it appears that patients and healthcare system are likely to benefit from the utilization of bio-psychosocial model, further research is still needed to determine whether or not bio-psychosocial model is a workable model in healthcare system to benefit all patients. In particular, more knowledge about how psychosocial factors can influence health and disease remain unclear to most public health professionals.

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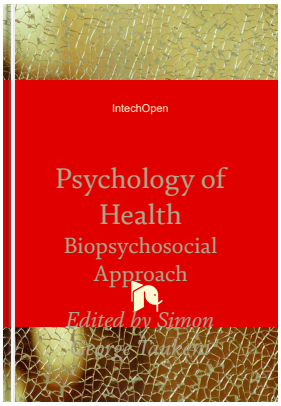

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