Health is traditionally equated to the absence of disease. A lack of a fundamental pathology was thought to define one’s health as good, whereas biologically driven pathogens and conditions would render an individual with poor health and the label ‘diseased’. However, such a narrow scope on health limited our understanding of well-being, thwarted our treatments efforts, and perhaps more importantly, suppressed prevention measures. Many institutions and medical doctors have managed to incorporate a holistic view of health in sound medical application, primarily based on the Bio-
psychosocial (BPS) Model of Health and Illness. The concept of wellness is particularly stressed, where the state of being in good health based on the bio-psychosocial model is accompanied by good quality of life and strong relationships (Lakhan, 2006).

In 1977, American Psychiatrist George Engel introduced the major theory in medicine, the BPS Model. The model accounted for biological, psychological, and sociological interconnected spectrums, each as systems of the body. In fact, the model accompanied a dramatic shift in focus from disease to health, recognising that psychosocial factors (e.g., beliefs, relationships, stress) greatly impact recovery the progression of and recuperation from illness and disease. Engel eloquently states: To provide a basis for understanding the determinants of disease and arriving at a rational treatments and patterns of health care, a medical model must also take into account the patient, the social context in which he lives and the complementary system devised by society to deal with the disruptive effects of illness, that is, the physician role and the health care system. This requires a bio-psychosocial model.

Today, individuals are living with diseases that would have taken their lives in the past. We see health and wellness is a broader forum. Medical practitioners are more frequently adopting the bio-psychosocial form in their clinician practice. The following outline compares the presentation, diagnosis, and treatment used by physicians who follow the biomedical and bio-psychosocial model:

**Biomedical Model: Reason for visit—Patient complains of chest pain.**

The focus is on physical causes of disease. The physician will ask few questions on recent diet, pain history, and familial incidence, however, empirical signs and symptoms of myocardial infarction are considered paramount. Diagnosis: The clinician will order objective lab tests and monitor vital signs (i.e., temperature, pulse, and blood pressure) that would form the sole basis of any finding. Therapy: The doctor will prescribe a medicinal plan for the patient based on biological etiology and pathogenesis (Caplan, 1981).

![Fig.: Bio-psychosocial Model- Reason for visit: Patient complains of chest pain.](brainblogger.com)

The aim to ascertain psychosocial and physical processes that may cause the chief complain chest pain. The physician may ask for a history of recent life stressors and behaviours. Diagnosis:
Based on a combination of psychological factors and standard lab tests, the clinician will form a diagnosis. Therapy: The physician discusses the available interventions with special attention to behaviours and lifestyles that could influence her pain and adherence to the treatment plan. The patient is involved in formulating and implementing the plan, and maintains a supportive relationship with the clinician.

The bio-psychosocial model (abbreviated ‘BPS’) is a general model or approach that posits that biological, psychological (which entails thoughts, emotions, and behaviours), and social factors, all play a significant role in human functioning in the context of disease or illness. Indeed, health is best understood in terms of a combination of biological, psychological, and social factors rather than purely in biological terms (Santrock, 2007). This is in contrast to the traditional, reductionist biomedical model of medicine that suggests every disease process can be explained in terms of an underlying deviation from normal function such as a pathogen, genetic or developmental abnormality, or injury (Engel, 1977).

The concept is used in fields such as medicine, nursing, health psychology and sociology, and particularly in more specialist fields such as psychiatry, health psychology, chiropractic, clinical social work, and clinical psychology. The bio-psychosocial paradigm is also a technical term for the popular concept of the mind–body connection, which addresses more philosophical arguments between the bio-psychosocial and biomedical models, rather than their empirical exploration and clinical application (Sarno, 1998). The model was theorised by psychiatrist George L. Engel at the University of Rochester, and putatively discussed in a 1977 article in Science (Engel, 1977), where he posited “the need for a new medical model”; however, no single definitive, irreducible model has been published (McLaren, 2002). However, the general BPS model has guided formulation and testing of models within each professional field. Interestingly, evidence for the application of the bio-psychosocial model was found in ancient Asian (2600 B.C.) and Greek (500 B.C.) civilisations prior to Engel’s introduction of the theory in 1977. The novelty, acceptance, and prevalence of the bio-psychosocial model vary across cultures.

Model Description and Application

The biological component of the bio-psychosocial model seeks to understand how the cause of the illness stems from the functioning of the individual’s body. The psychological component of the bio-psychosocial model looks for potential psychological causes for a health problem such lack of self-control, emotional turmoil, and negative thinking. The social part of the bio-psychosocial model investigates how different social factors such as socio-economic status, culture, poverty, technology, and religion can influence health.

The bio-psychosocial model of health is based in part on social cognitive theory. The bio-psychosocial model implies that treatment of disease processes, for example, type two diabetes and cancer, requires that the health care team address biological, psychological and social influences upon a patient’s functioning. In a philosophical sense, the bio-psychosocial model states that the workings of the body can affect the mind, and the workings of the mind can affect the body (Halligan and Aylward, 2006). This means both a direct interaction between mind and body as well as indirect effects through intermediate factors. The bio-psychosocial model presumes that it is
important to handle the three together as a growing body of empirical literature suggests that patient perceptions of health and threat of disease, as well as barriers in a patient’s social or cultural environment, appear to influence the likelihood that a patient will engage in health-promoting or treatment behaviours, such as medication taking, proper diet, and engaging in physical activity (DiMatteo, Haskard & Williams, 2007).

While operating from a BPS framework requires that more information be gathered during a consultation, a growing trend in U.S., health care (and already well-established in Europe such as in the U.K. and Germany) includes the integration of professional services through integrated disciplinary teams, to provide better care and address the patient’s needs at all three levels. As seen, for example, in integrated primary care clinics, such as used in the U.K., Germany, U.S., Veteran’s Administration, U.S., military, Kaiser Permanente, integrated teams may comprise of physicians, nurses, health psychologists, social workers, and other specialties to address all three aspects of the BPS framework, allowing the physician to focus on predominantly biological mechanisms of the patient’s complaints (Gatchel & Oort, 2003).

There are also theories that the state of mind directly affects the immune system, and there are many carefully-planned studies that show this to be the case; see psycho-neuroimmunology. Psychosocial factors can cause a biological effect by predisposing the patient to risk factors. An example is that depression by itself may not cause liver problems, but a depressed person may be more likely to have alcohol problems, and, therefore, liver damage. Perhaps it is this increased risk-taking that leads to an increased likelihood of disease. Most of the diseases referred to in BPS discussion tend to be such behaviourally-moderated illnesses which have known high risk factors, or so-called “bio-psychosocial illnesses/disorders (Bruns & Disorbio, 2006). An example of this is type 2 diabetes, which with the growing prevalence of obesity and physical inactivity, is on course to become a worldwide pandemic. For example, approximately 20 million Americans are estimated to have diabetes, with 90% to 95% considered type (Wild, et al., 2004).

It is important to note that the bio-psychosocial model does not provide a straight forward, testable model to explain the interactions or causal influences (that is, amount of variance accounted for) by each of the components (biological, psychological, or social). Rather, the model has been a general framework to guide theoretical and empirical exploration, which has amassed a great deal of research since Engel’s 1977 article. One of the areas that have been greatly influenced is the formulation and testing of social-cognitive models of health behaviour over the past 30 years (Armitage & Conner 2000). While no single model has taken precedence, a large body of empirical literature has identified social-cognitive (the psycho-social aspect of Engel’s model) variables that appear to influence engagement in healthy behaviours and adhere to prescribed medical regimens, such as self-efficacy, in chronic diseases such as type 2 diabetes, cardiovascular disease, etc. (Allen, 2004; Carlson, et al., 2001).

These models include the Health Belief Model, Theory of Reasoned Action and Theory of Planned Behaviour, Trans-theoretical Model, the Relapse Prevention Model, Gollwitzer’s implementation-intentions, the Precaution–Adoption Model, the Health Action Process Approach, etc. (Schwarzer, 1992; Garcia & Mann, 2003; Carels, et al., 2004; Carels, et al., 2005; Blanchard, 2003).
In assessing the bio-psychosocial model, Ghaemi provides a philosophically grounded evaluation of the concept of mental illness and the relation between evidence-based medicine and psychiatry. He argues that its conceptual core is eclecticism, which in the face of too much freedom paradoxically leads many adherents to enact their own dogmas. Throughout, he makes the case for a new paradigm of medical humanism and method-based psychiatry that is consistent with modern science while incorporating humanistic aspects of the art of medicine. Ghaemi shows how the historical role of the BPS model as a reaction to biomedical reductionism is coming to an end and urges colleagues in the field to embrace other, less-eclectic perspectives.

Recent advances in psychological, medical, and physiological research have led to a new way of thinking about health and illness. This conceptualisation, which has been labeled the bio-psychosocial model views health and illness as the product of a combination of factors including biological characteristics (e.g., genetic predisposition), behavioural factors (e.g., lifestyle, stress, health beliefs), and social conditions (e.g., cultural influences, family relationships, social support).

Strivers who Understand Influencing Factors of Health and Illness

Psychologists who strive to understand how biological, behavioural, and social factors influence health and illness are called health psychologists. The term ‘health psychology’ is often used synonymously with the terms ‘behavioural medicine’ and ‘medical psychology’. Health psychologists work with many different health care professionals (e.g., physicians, dentists, nurses, physician’s assistants, dietitians, social workers, pharmacists, physical and occupational therapists, and chaplains) to conduct research and provide clinical assessments and treatment services. Many health psychologists focus on prevention research and interventions designed to promote health and reduce the risk of disease. While more than half of health psychologists provide clinical services as part of their duties, many health psychologists function in non-clinical roles, primarily involving teaching and research. Leading journals include Health Psychology, the Journal of Health Psychology, the British Journal of Health Psychology, and Applied Psychology: Health and Well-Being.

Clinical health psychology (CIHP) is a term for a division of health psychology that reflects the fact that the field was originally a branch of clinical psychology. CIHP is also a major contributor to the field of behavioural medicine within psychiatry. Clinical practice includes education, the techniques of behaviour change, and psychotherapy. In some countries, a clinical health psychologist, with additional training, can become a medical psychologist and, thereby, obtain prescription privileges.

Occupational health psychology (OHP) is a relatively new discipline allied with health psychology. The ancestry of OHP includes health psychology, industrial/organisational psychology, and occupational health (Everly, 1986). OHP has its own doctoral programs, journals, and professional organisations. The field is concerned with identifying psychosocial characteristics of workplaces that give rise to health-related problems in people who work. These problems can involve physical health (e.g., cardiovascular disease Bosma, 1997) or mental health (e.g., depression Tucker, Sinclair and Thomas, 2005). Examples of psychosocial characteristics of workplaces that OHP has investigated include amount of decision latitude (Karasek, 1979) a worker can exercise and the supportiveness of supervisors. (Moyle, 1998) OHP is also concerned with the development and implementation of interventions that can prevent or ameliorate work-related health problems (Schmitt, 2007). In addition, OHP research has important implications for the economic success of organisations.
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(Adkins, 1999). Other research areas of concern to OHP include workplace incivility (Cortina, 2001) and violence, work-home carryover (Haines, Marchand & Harvey, 2006), unemployment (Feldt, Leskinen & Kinnunen, 2005) and downsizing (Moore, Grunberg & Greenberg, 2004) and workplace safety (Kidd, Scharf & Veazia, 1996) and accident prevention (Williamson & Feyer, 1995). Two important OHP journals are the Journal of Occupational Health Psychology and Work and Stress. Organisations closely associated with OHP include the Society for Occupational Health Psychology and the European Academy of Occupational Health Psychology.

Public health psychology (PHP) is population oriented. A major aim of PHP is to investigate potential causal links between psychosocial factors and health at the population level. PH psychologists present research results to educators, policy-makers, and health care providers in order to promote better public health. PHP is allied to other public health disciplines including epidemiology, nutrition, genetics and biostatistics. Some PHP interventions are targeted towards at-risk population groups (e.g., undereducated, single pregnant women who smoke) and not the population as a whole (e.g., all pregnant women).

Community health psychology (CoHP) investigates community factors that contribute to the health and well-being of individuals who live in communities. CoHP also develops community-level interventions that are designed to combat disease and promote physical and mental health. The community often serves as the level of analysis, and is frequently sought as a partner in health-related interventions.

Critical health psychology (CrHP) is concerned with the distribution of power and the impact of power differentials on health experience and behaviour, health care systems, and health policy. CrHP prioritises social justice and the universal right to health for people of all races, genders, ages, and socio-economic positions. A major concern is health inequalities. The CrH psychologist is an agent of change, not simply an analyst or cataloger. A leading organisation in this area is the International Society of Critical Health Psychology.

Health psychology is both a theoretical and applied field. Health psychologists employ diverse research methods. These methods include controlled randomised experiments, quasi-experiments, longitudinal studies, time-series designs, cross-sectional studies, and case-control studies as well as action research. Health psychologists study a broad range of variables including genotype, cardiovascular disease, smoking habits, religious beliefs, alcohol use, social support, living conditions, emotional state, social class, and much more. Some health psychologists treat individuals with sleep problems, headaches, alcohol problems, etc. Other health psychologists work to empower community members by helping community members gain control over their health and improve quality of life of entire communities.

Finally in the light of above description we can say that the bio-psychosocial model for understanding health and illness related factors, is gives an elaborated view to the general persons and psychologists who strive to understand how biological, behavioural, and social factors influence health and illness. So, if any human being does develop to understanding towards own behaviour, then his/her hole life (family, occupational, social, spiritual, etc.) would be stress less, successful and enjoying.
REFERENCES


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