

How do biomedical
model and
biopsychological
model influence the
medical practice...



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Title: How do biomedical model and biopsychological model influence the medical practices and public health

Definition : Biomedicine has been around since the middle of the nineteenth century as the major model used by health practitioners to detect diseases (Nettleton, 1995). This biomedical model of health have centred on how the human body functions and how diseases can be stopped, or healed through medical intervention(Taylor and field 2003). This model continues to be the bedrock in which foundation of health care system is based in the western societies, but there has being a lot of queries concerning its influence on the general pattern of health, since majority of health determinant are social and environmental. Arkinson (1988 p. 180)claimed that the biomedical model, which has taken over the formal health care system in the West since the last two centuries view health along the reductionist approach. In this approach illness is said to be caused by injury or infections and there is neglect to the psychological, socio-economic and environmental influences (Taylor and field 2003).

16The biopsychosocial approach is a way of looking at the treatment of patients. Doctors who apply this view of medicine see the patients psychological condition and social situation as integral parts of the individuals overall health. A man named George Engel developed the biopsychosocial theory of medicine during the 1970s, and he generally saw it as an alternative to the dominant biomedical approach, which was entirely focused on physical aspects of illness. The biopsychosocial approach isn't generally considered the norm, but many of the ideas have made an impact on medicine. 2Engel 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 biopsychosocial model.

“ 3BioPsychoSocial Model of Health and Illness Venn

Diagram3The? biomedical? model is often contrasted with the? biopsychosocial model. Although the biomedical? model has remained the dominant? theory? in most places, many fields of medicine including nursing,? sociology, and? psychology? make use of the biopsychosocial model at times. In recent years, some medical professionals have also begun to adopt a biopsychosocial-spiritual model, insisting that spiritual factors must be considered as well. Proponents of the biopsychosocial model argue that the? biomedical? model alone does not take into account all of the factors that have an impact on a patients health. Biological issues, as well as psychological factors such as a patients mood, intelligence, memory, and perceptions are all considered when making a diagnosis.

The? biomedical? approach may not, for example, take into account the role sociological factors like family, social class, or a patients environment may have on causing a health condition, and thus offer little insight into how illness may be prevented. A patient who complains of symptoms that have no obvious objective cause might also be dismissed as not being ill, despite the very real affect those symptoms may have on the patients daily life.

Many scholars in disability studies describe a medical model of disability that is part of the general? biomedical? approach. In this model, disability is an <https://assignbuster.com/how-do-biomedical-model-and-biopsychological-model-influence-the-medical-practices-and-public-health/>

entirely physical occurrence, and being disabled is a negative that can only be made better if the disability is cured and the person is made “ normal.

” Many disability rights advocates reject this, and promote a social model in which disability is a difference ??” neither a good nor bad trait. Proponents of the social model see disability as a cultural construct. They point out that a how a person experiences his or her disability can vary based on environmental and societal changes, and that someone who is considered disabled can often be healthy and prosperous without the intervention of a professional or the disability being cured. Counseling is another field that often uses a more? holistic approach? to healing. Proponents of this framework note that, in the? biomedical? model, a patient looks to an expert for a specific diagnosis and treatment. Many counselors often try not to label patients with a specific condition, and instead help them recognize their strengths and build on their positive traits. The relationship is far more collaborative than in the? biomedical? model where a health care professional instructs a patient to follow medical orders so he or she can be cured.

Biomedicine is characterized by narrow specialization and fragmentation. Physicians know more and more about less and less. The trend toward specialization in medical practice has strongly influenced medical educators to diminish the practical content of the crowded undergraduate program and transfer some of it to post-graduate or vocational training. A new graduate from medical school is therefore unable to treat a patient on his own until he becomes a specialist. Specialty practice however has the great disadvantage

of fragmenting patient care among several specialists such that there is no one doctor to care for the whole patient.

The fragmentation of medicine is reflected in the balkanization of administration (by department), stages of education (pre-medical, pre-clinical, and clinical) and by discipline or specialty. Separate curricular tracks for research and practice have even been suggested. In many cases each department teaches independently of others. Specialist physicians find it difficult to teach students who are just being introduced to medicine.

4Trends of modern research in biology, biomedicine and drugs
discovery7Modern biological and biomedical research in is driven by the 4M-model: By first formulating hypotheses in the form of a mathematical-statistical-computational Models (network, biochemical,??!), via experimental design such as molecular genetics, cell engineering or sampling patients, (Manipulate), data are Measured (e. g. via high throughput technologies, imaging, biodevices, markers) and then, via computations and web searches Mined, to (in-) validate the original hypotheses. This leads to a new model and the cycle is repeated.

Nowadays in biological/biomedical research, one tries to explain complex phenotypes as the outcome of local interactions between numerous biological components, the activity of which might be spread temporally and spatially across several layers of scale, from atoms over molecules to tissues and organisms, and from genomics, transcriptomics, and proteomics to metabolomics. Indeed, biological systems are inherently characterized by multiscale complexity, over several layers of complexity. Biomedical

technology refers to the application of technological and engineering
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advances to medical science. Biomedical research has made strides in a number of fields, such as pharmaceuticals, creating biopharmaceuticals, drugs produced by using biomedical technology that can treat a number of diseases. Genetic testing uses biotechnical methods to provide information about a person's genetic makeup.

Gene therapy, where faulty genes are replaced using biomedical technology, can help cure genetic diseases. Medical teaching and information management also utilize advances in computer science.

Biopharmaceuticals are proteins or nucleic acids produced with biomedical technology. These types of drugs have been around since 1982, when biomedical engineers created synthetic insulin. Biopharmaceuticals can treat a variety of diseases, such as anemia, leukemia, multiple sclerosis, and some types of arthritis. Genetic testing, another application of biomedical technology, can detect genetic diseases and mutations. Newborn screening is one of the most common genetic tests.

Newborn screening uses biotechnical genetic testing techniques to test newborns for inherited disorders such as phenylketonuria, a disorder that can lead to mental illness if not treated. When a person shows signs of a genetic disorder, diagnostic testing is used to determine if the cause is genetic. People who have a family history of a genetic disorder may also receive carrier testing to show if they are carrying faulty genes that could lead to the disease occurring in their children.

Prenatal testing can detect genetic abnormalities such as Down syndrome and inherited diseases. Often there is no cure for genetic diseases

because they are caused by mutations or problems in the genetic code. A new branch of biomedical technology called gene therapy allows doctors to actually inject a new, functional gene into a person's cells to replace a faulty gene. Researchers have used bioengineering to modify certain types of bacteria or viruses so they can carry the replacement gene into the cells. Biomedical informatics is another application of technology to medical problems.

This branch of biomedical technology uses computer science to store and retrieve vital medical information in a virtual environment. For example, patient charts containing background and diagnostic information can be digitized, so a physician can simply pull them up on a computer for quick reference. Biomedical technology has also been incorporated into medical teaching. Computer models are often used to demonstrate the functions of certain organs or show what the organs look like when they are diseased. Medical students can get experience working with virtual models before they treat an actual patient. Tailored Assessment Approach Many institutions and medical doctors have managed to incorporate a holistic view of health in sound medical application, primarily based on the Biopsychosocial (BPS) Model of Health and Illness. The concept of wellness is particularly stressed, where the state of being in good health based on the biopsychosocial model is accompanied by good quality of life and strong relationships.

38 Application of BPS Model * E. g.

Social isolation and joblessness ---->

depression/self-incrimination/sedentary lifestyle -->

hypercholesterolemia/myocardial infarction/diabetes * BPS model implies that
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treatment of cancer/diabetes/mental disorders should address biological, psychological and social components of the problem. * Multi Axial dimension to APA classification of mental disorders - DSM IV and WHO ICD-10 classification of mental disorders are efforts to apply BPS in mental health care. Studies over the years have shown some real physiological consequences when it comes to a person's mental state. A fairly well-known example of this is the idea of a placebo effect. Patients can be told that they are taking a medicine when they actually aren't, and they might experience some level of relief just because they believe the medicine is real. Other studies have shown that happy patients heal more rapidly and have a better chance at recovery than those who are depressed. These bits of data generally support the idea behind the biopsychosocial approach.

Another concept that favors a broader approach to treating patients is the idea that behaviors are often directly related to illnesses. For example, people often become sick because of their inability to control themselves when eating or using harmful substances. This could be seen as a psychological issue with direct physical consequences. Doctors who follow the biopsychosocial approach tend to view every aspect of the patient as an important key to overall health, and they often look for psychological tendencies that might make a person more likely to be sick. When people do become ill, sometimes a biopsychosocial approach can help them tolerate their illness better. Even if treating the patient's psychological or social life doesn't have a direct physical consequence, it can still play a role in that patient's overall life experience and, therefore, affect the patient's perception of health. For example, if a patient is depressed about his

sickness and generally in a bad mood overall, his physical symptoms might improve without really changing his overall negative outlook.

A doctor using a biopsychosocial approach would probably take that into account and may help the patient by providing a counselor or antidepressant medication. The biopsychosocial assessment refers to a series of questions asked at the beginning of treatment of an individual that obtain information about the major physical (bio), psychological, and social issues of the individual. This approach is called holistic because it posits that separate issues are often related. The course of a physical illness could influence social interaction or psychological function, or a social and familial background might have an impact on a biological or psychological problem. By asking a series of questions that may establish the most important elements in each of these spheres, a better treatment plan may be derived. A number of practitioners use biopsychosocial assessment, including social workers, psychiatrists, doctors of osteopathy, and psychotherapists..

It's useful to examine some of the questions that might be asked in a biopsychosocial assessment. Questions covering the biological sphere could include any history of disease, addiction, surgeries, medication use, and family history of illness. Sociological questions may concern family, living arrangements, relationships, finances, and stability of work, home, and school arrangements. Psychological assessment could have questions that cover the presence of psychiatric illness, strong stressors like recent bereavements, and risk of suicide. While the assessment is holistic, it is often directed toward treating a problem in a specific sphere. A doctor of

osteopathy would want to treat a medical or bio problem and might look at <https://assignbuster.com/how-do-biomedical-model-and-biopsychological-model-influence-the-medical-practices-and-public-health/>

how psychosocial features contribute to it. The therapist could be helping a patient with a psychological issue, and would evaluate its social and physical components.

The social worker might be trying to solve a client's social problem and would want to know the biological and psychological aspects that could be exacerbating it. Any good biopsychosocial assessment needs to take into account that people may either lie intentionally or by omission. Ongoing assessment after an initial examination is useful to determine if a problem has been appropriately explored in all three spheres or whether new information creates new ways to visualize a targeted issue.

|| The following outline compares the presentation, diagnosis, and treatment used by physicians who follow the biomedical and biopsychosocial model: 3

-----Biomedical Model
Reason for visit: Patient complains of chest pain. Presentation: 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.-----

Biopsychosocial Model
Reason for visit: Patient complains of chest pain.

Presentation: 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 behaviors. 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 behaviors 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.

CONCLUSION: Biomedicine seeks to predict, control, and regiment.

Biomedicine is not democratic. It gives all decision-making power to the physician and leaves the patient powerless. It has medicalized human life. It has distorted relations between humans and medicine. Pre-biomedicine humans controlled medicine and used it as they like. Post-biomedicine medicine controls human life and behavior. 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 biopsychosocial form in their clinician practice. ? By integrating these multiple, interacting components of the subject of our science??” the patient??” we also become more humanistic. We link science and humanism. Reference 1: <http://www.ukessays.com/essays/sociology/biomedical-model-of-health.php>, Annandale,?

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