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The Impact of Psychosocial Factors of Physical Health Outcomes: A Review of the Biopsychosocial Model in Family Medicine

Najlaa Mohammad Alsudairy [1*], Hussain Abdulkhaliq Alsaif [2], Kefayah Wasel Alhassan [3], Alenzi, Meshari Mosleh G [4], Nawari Essa Mohammed Boobaid [5], Hatim Talak Al-Sawat [6], Faisal S A Bin Owais [7], Hayfa Hussam Alhayyaf [8], Mjd Mazen A Alanazi [9], Roba Jamil Bashawri [10], Sara Jameel Bin Saleh [11], Yahya Dokhi Altamimey [12], Yahya Hassan Rudayni [13], Alsaeed Abdullah Yousef M [14], Alnawfal Abdulsalam Abdullah B [15]

*1*Assistant Consultant Family Medicine, National Guard Hospital, King Abdulaziz Medical City, SCOHS, Jeddah, Saudi Arabia. Email: Najlaa.Alsudairy@gmail.com*
[2] Intern-medical student graduates from Batterjee Medical college, KSA. Email: Hussain.909_fb@hotmail.com
[3]Service Resident -Mental Health Hospital Al Ahsa, KSA. Email: Kefayah.wasel@gmail.com
[4] ENT service Resident at Prince mutaib bin Abdulaziz hospital, KSA. Email: msh.msh2012@gmail.com
[5] Service Resident - Mental Health Hospital Al Ahsa, KSA. Email: Nawarissa.5@hotmail.com
[6] Medical service Resident at King Abdulaziz hospital, Taif, KSA. Email: Dr.hts.2018@gmail.com
[7] Intern, medical student graduate from Prince Sattam Bin Abdulaziz University, Alkharj city, KSA. Email: F.binowais@gmail.com
[8] Al Wadi Health Care Center, KSA. Email: Haivahussam@gmail.com
[9] Psychiatric Resident At Eradah Complex For Mental Health, Tabuk, KSA. Email: dr.mjdmazen@gmail.com
[10] King Abdulaziz University, KSA. Email: ruba.bash99@gmail.com
[11] Dammam medical complex, KSA. Email: Dr.sara2018@yahoo.com
[12] GP, CARDIAC CENTRE, HAIL, KSA. Email: ya3885973@gmail.com
[13] Service resident in Prince Mohammed Bin Nasser Hospital, KSA. Email: yahya.rudayni@gmail.com
[14] Orthopedic Service Resident at Alrass General Hospital, KSA. Email: abdullah.yo.alsaeed@gmail.com
[15] GS service at Buraidah Central Hospital, KSA. Email: Abdulsalamalnofal7@gmail.com

***Corresponding author**: Najlaa Mohammad Alsudairy*
**Assistant Consultant Family Medicine, National Guard Hospital, King Abdulaziz Medical City, SCOHS, Jeddah, Saudi Arabia. Email: Najlaa.Alsudairy@gmail.com*

Abstract

Discontent with the biological model of illness—which is still the predominant healthcare model—led to the development of the biopsychosocial model, which was described in Engel's seminal Science paper forty years ago. It is the foundation of the International Classification of Functioning (WHO ICF) developed by the World Health Organization Clinical outcomes for functional disorders and chronic diseases treated in family medicine may be improved by the biopsychosocial approach. Since clinical performance metrics and standards are biomedically focused, family medicine doctors have no financial incentive to implement the biopsychosocial paradigm in their practices. Implementing the biopsychosocial approach in family medicine may be hampered by workload and incompetence.

Keyword: Family medicine, biopsychosocial model, chronic disease

Introduction

Since The result of a person's biological, psychological, and social ties—all of which have a frequent influence on one another—is their mental health. So according to the biopsychosocial model, a variety of elements interact dynamically to affect well-being and health. Dr. George Engel first introduced the biopsychosocial model in 1977 [1]. He started utilizing it with University of Rochester students according to the model; biological factors play a crucial part in explaining disease, which is defined as a state brought on by infections from outside the body or problems with how organs and systems operate [2]. The addition of constructivism and semiotics expands the model. The vocabulary needed to explain the interactions between a person and his surroundings is provided by semiotics. Constructivism provides an explanation for how an organism views his surroundings. There is a discussion of the BPS model's effects on medical study, education, and implementation [1]. Engel, in his seminal publications, outlined a new model that views social and psychological factors as providing an improved comprehension of the illness process and openly warned of a crisis in the biological framework. The so-called biopsychosocial model has gained widespread recognition recently in a number of scholarly and institutional settings, including public health or medical prevention, psychological science for health education, and even public opinion. It is now well acknowledged that biological, psychological, and social variables interact to cause both health and illness. Nowadays, many authors define health to encompass social and emotional components [3].

Example Of A BPS Model a patient of a physician requires a treatment plan because the patient's recent back surgery is not mending as fast as anticipated. Using the BPS approach, the physician observes that the surgery has resulted in a number of biological factors, such as discomfort, weak muscles, and restricted mobility for daily tasks. The patient lives alone, he doesn't want to bother his family to drive him to appointments, and he lacks the equipment needed to perform his workouts at home. These social considerations are also taken into account by the doctor. The physician acknowledges the possibility that psychological elements could be involved as well. He finds out via his inquiries that the patient feels too old to think he would get better. The physician discovers that he lacks motivation to participate in treatment. In addition to medicine and rehabilitation for his physique, the doctor might advise the patient to see a counselor to help him work through his situation or to address the social issues preventing him from making progress

BPS Model & Physical Health

The validity of the biopsychosocial paradigm has been questioned, and it is not immune to criticism. Scholars have examined the ways in which therapists comprehend and utilize the biopsychosocial model in their clinical work. Research indicates that different doctors exhibit different degrees of competence and confidence in their psychosocially oriented clinical knowledge and skills. Approaches to physical therapy that are psychologically informed have been developed, tested, and the results demonstrate varying effect sizes concerning patient-related outcomes [4]. The clear examples of the roles of multiple factors—biological, psychosocial, and sociopolitical—that interact in complex ways to determine exposure, vaccination status, populations prevalence, individual caseness, course, mortality, and longer-term recovery and quality of life are especially pertinent in the current COVID-19 pandemic [5]. According to this new research, the biopsychosocial model of at least certain medical problems is still in use today and is also applied to the modeling of infectious diseases in addition to non-communicable illnesses. The general biopsychosocial model can be applied transdiagnostically to a fairly broad variety of illnesses in addition to specialized ones. The literature has made the new notions widely recognized a novel analytical biopsychosocial in nature theory that has broad applicability explains how pain perception is influenced by psychological, neurological, and periphery physiological or anatomical damage. The person's unfavorable assessments of what their suffering signifies and the anticipated bad impacts on their lives, as well as the related central nervous system pain-processing systems, are implicated in the new models of pain perception. This new perspective of pain is, at the very least, neurobiopsychological and takes into account psychosocial elements to the extent that people's perceptions of the negative impacts of pain on their lives are contingent upon task demands and social context. Biopsychosocial techniques are already used in psychiatry, particularly but not only in the setting of multidisciplinary teams. In the field of mental wellness services, psychosocial formulas and therapies are already commonplace [5, 6].

Global medical and health-related services are facing challenges due of the COVID-19 pandemic. Prolonged durations of healing and illness are expected in groups worldwide due to the high infection prevalence, quick transmission, and established dangers regardless of prior health state. Furthermore, it has been observed in the past that the BPS model is helpful in directing the understanding of pandemics and in reduction planning. For instance, Flowers et al[7]. used a BPS method to analyze pandemic behavior in the setting of influenza, emphasizing sociocultural and psychosocial factors that influence behavior, such as social context and capacity, as well as psychosocial factors like agency, cognitions, and identity . A literature review was undertaken to determine the use of BPS in studies of COVID-19 In 2020. The research demonstrates that risk factors for each aspect and their interactions may be taken into account using the BPS framework. The results demonstrate how the framework may be used to comprehend both the individual and combined effects of COVID-19 on BPS. Furthermore, both in the short and long terms, each new trait has the potential to influence BPS in the future and the reverse. Therefore, a purely biological response to the pandemic is insufficient; it is also necessary to take into account the psychological and social aspects. Thus, the BPS theoretical framework supports recovery planning, helps organize client talks, and evaluate risk variables. The BPS model is supported by the concept of complexity, which is helpful in situations as complicated and unusual as a worldwide pandemic. It serves as a helpful theoretical foundation as well as a handy action manual. The extent to which the BPS framework's explanation of complexity improves community outcomes requires more investigation [7,8].

BPS Model & Family Medicine

Family medicine faces a constant challenge in providing whole-person treatment that addresses a broad range of biopsychosocial elements contributing to patients' health concerns. For example, a patient may exhibit psychological distress due to depression and/or food insecurity, which can have a significant effect on their control of diabetes. These elements may also influence the patient's choice to engage in certain health-related behaviors, such as alcohol use, which may have a detrimental effect on long-term medical issues this explains why family medicine doctors were urged to embrace the biopsychosocial model, which acknowledges the interplay of biological, psychological, and social elements that influence health and well-being, in place of the old models that exclusively emphasize biological aspects of health the limits of expertise for any one family medicine resident team member are stretched by patients presenting with a range of medical concerns that are often further complicated by psychological distress and unmet social needs. In addition, family medicine team members are frequently required to rapidly shift clinical practices to stay up-to-date with the latest research. For instance, research has demonstrated the value of using psychological treatments for several health concerns as insomnia , chronic pain Family medicine residents, however, find it difficult to accept novel clinical procedures and involve patients in these novel therapies. By including people in the behavioral health provider (BHP) community, who have complementary and specialized skill sets, in teams, the change toward collaborative treatment in PC settings aims to help close these gaps and enhance the quality of patient care as psychologists, social workers. These new team members are equipped with the abilities to help family physicians better communicate with and assist patients [9]. Family medicine doctor do not use biopsychosocial medicine in their practices, and the biopsychosocial model has not advanced very quickly. Instead, the predominant model continues to be biological thinking and methodology. Chronic diseases and functioning disorders were identified by biopsychosocial research as conditions that required the use of biopsychosocial models biopsychosocial framework has been supported by family medicine as a component of the discipline's worldwide [10].

Steady Advancement of the Biopsychosocial Model

Although it is assumed that the biopsychosocial model would have been widely embraced given the early enthusiasm for it, no reliable implementation guidelines have ever been created. Medical practice is still largely driven by biological thinking, which holds that abnormal molecular, pathological, and clinical markers that doctors may observe can explain disease and be understood independently of the patient. The critics of the biopsychosocial model point out that in order to apply the model effectively, patients' psychological, behavioral, sociocultural, and moral problems must be thoroughly evaluated. This requires a significant amount of work on the part of healthcare providers, who are already overworked with administrative, clinical, and possibly research responsibilities. The biological method might be the best suitable for certain disorders that exhibit visible structural alterations in tissues and organs, such fracture and laceration. Conversely, functional disorders that have a well-defined pathophysiology or do not result from pathological alterations brought on by established diseases are more suited for a biopsychosocial approach [11]. Implementing the biopsychosocial model is hampered by more factors than just a lack of time for clinical case management.

Thorough biopsychosocial assessment and patient care require a lot of time, and physicians' proficiency in biopsychosocial model has to improve. The lack of psychological, social, and spiritual aspects of patient care is congruent with the widespread perception that it is difficult to define a practical biopsychosocial model for a single patient [12].

Family medicine physicians can use the biopsychosocial model to support the ability of patients to take charge of their diseases via active and hybrid doctor-patient relationships and a collaborative approach to patient care. They may also employ it to enhance medical results by raising awareness of the interactions among biological, psychological, sociocultural, and spiritual factors. The biopsychosocial paradigm is very helpful in treating long-term conditions and vague disorders that cause patients to react differently [10].

Critics of BPS model

The 3 categories encompass the main objections to the biopsychosocial approach:
1-The model could not be tested since it was too loosely defined. Several scholars have proposed that theoretical underdevelopment and lack of operationalization—which required the concession that the model was not yet ready for practical testing—were a fundamental flaw in Engel's original model. Given that it does not adhere to the definition of a "model," which is defined as a formal working representation of an idea or theory that can be empirically tested and has some predictive or explanation capability, some authors, like McLaren[13], have even gone so far as to suggest that the model can't be referred to as a "model."

2-The model's breadth was too broad and impractical for practical use. Other authors have emphasized how the biopsychosocial model's version is so broad in scope that it offers little assistance to medical professionals and presents the issue of how to use the model selectively in the absence of guiding criteria to identify and define pertinent patient data. An excessive amount of unrelated biopsychosocial data may arise from this, making the model too labor-intensive and ineffective to use for specific patients in work. This has led some to question "whether there can be a point of diminishing returns in fighting reductionism with inclusionism[14]
3- There was no mechanism in the model to find pertinent biopsychosocial data. Certain scholars have observed that the model primarily emphasizes the necessity of extracting biopsychosocial data, without offering any methodological recommendations to facilitate this procedure. Critics have also noted that the model does not specify which level of analysis—biological, emotional, or social—to prioritize or at what time. Additionally, because it is frequently unclear which factor is ultimately responsible for a particular condition, all levels of analysis frequently coexist, leaving clinicians free to select the level that seems to work best without a shared explanation for why a particular clinician chooses to focus on one area over another[15] .

But it seemed that the concept of a biopsychosocial approach to medical work had a particularly strong resonance, and Engel's proposition was appealing even in the face of critique and calls for better, more modern models. Therefore, despite its perceived flaws, the concept of a biopsychosocial approach that would enhance the traditional biomedical approach without alienating it struck a chord with different segments of the medical community. These groups desired to see medical practice grounded in a deeper knowledge of wellness and disease, which was more in line with the real experiences of patients obtaining care. The biopsychosocial model continued to have an impact on important facets of medical practice, research, and education in spite of the critiques [16].

Conclusion

Stronger biopsychosocial techniques compared to those of Engel or Grinker might yet surface in fields like developing biology/psychopathology and social epidemiological studies. While such endeavors are commendable, it remains unclear how they advance medical humanism or method-based psychiatry, or offer a new paradigm for family medicine the historical significance of the biopsychosocial paradigm has passed, but it was a useful counter to biomedical reductionist thinking in its day. Biology alone cannot explain mental disease since it is complicated, but the biopsychosocial paradigm does not imply this. There are also less ambiguous, less generic, and less eclectic options. Instead of applying a new label to an old one, family medicine would be better off looking to them.

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