

THE BIOPSYCHOSOCIAL PATIENT-CENTERED APPROACH IN THE ERA OF EVIDENCE-BASED MEDICINE

Yaltseva NV ✉, Gauert VR, Leontyeva EA, Politova DA, Yaltsev AV, Politov SY, Belova BG

Yaroslavl State Medical University, Yaroslavl, Russia

The article examines the contradiction between the biopsychosocial approach and evidence-based medicine. The traditional biomedical model, that has been dominating since the 17th century, focuses on pathophysiology and ignores the psychological and social factors. The alternative biopsychosocial model, offered by Engel G (1970–1990), treats a disease as a result of interacting biological, psychological and social factors. It corresponds to the definition of health provided by the WHO. The approach is, however, limited due to highly personalized nature, complex objective assessment of factors and risk of subjectivism. As evidence-based medicine became widespread, clinical focus transitioned toward statistically average patient populations. Consequently, this standardization minimized the individual differences, particularly psychosocial factors. The doctor-patient relationship becomes mechanistic. The authors stress that the biopsychosocial and evidence-based approaches cannot be opposed. Their synthesis is perspective. They rely on evidence-based data taking into account psychosocial characteristics of a patient. They include various integration options from the way the multidisciplinary team functions to the formation of the basis of patient's profiles indicating psychosocial features. The central idea that unites three groups of factors as viewed by the patients includes the internal picture of illness. The complex approach is taken as an essential element of modern clinical thinking and medical culture.

Key words: biopsychosocial approach, evidence-based medicine, biomedical model, internal picture of illness, personalized medicine, psychosomatics, doctor-patient interaction, holistic approach, health factors, clinical reasoning

✉ **Correspondence should be addressed:** Natalia V Yaltseva
Revolutionnaya Str., 5, Yaroslavl, 150000, Russia; yaltsewa@yandex.ru

Received: 09.06.2026 **Accepted:** 21.08.2026 **Published online:** 09.09.2026

DOI: 10.24075/medet.2026.024

Copyright: © 2026 by the authors. **Licensee:** Pirogov University. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

БИОПСИХОСОЦИАЛЬНЫЙ ПОДХОД К БОЛЬНОМУ В ЭПОХУ ДОКАЗАТЕЛЬНОЙ МЕДИЦИНЫ

Н. В. Яльцева ✉, В. Р. Гауэрт, Е. А. Леонтьева, Д. А. Политова, А. В. Яльцев, С. Я. Политов, Б. Г. Белова

Ярославский государственный медицинский университет, Ярославль, Россия

В статье рассматривается противоречие между биопсихосоциальным подходом и доказательной медициной. Традиционная биомедицинская модель, доминирующая с XVII в., фокусируется на патофизиологии, игнорируя психологические и социальные факторы. Альтернативная биопсихосоциальная модель G. Engel (1970–1990 гг.) рассматривает болезнь как результат взаимодействия биологических, психологических и социальных факторов, что соответствует определению здоровья ВОЗ. Однако внедрение этого подхода ограничено высокой персонализированностью, сложностью объективной оценки факторов и риском субъективизма. С распространением доказательной медицины (evidence-based medicine) акцент сместился на статистически усредненные группы пациентов, что привело к стандартизации и нивелированию индивидуальных, особенно психосоциальных, особенностей больного. Отношения врач–пациент приобретают механистический характер. Авторы подчеркивают, что нельзя противопоставлять биопсихосоциальный и доказательный подходы. Перспективным является их синтез: опора на доказательные данные с одновременным учетом психосоциальных характеристик пациента. Предлагаются различные варианты интеграции — от работы мультидисциплинарной команды до формирования баз профилей пациентов с указанием психосоциальных особенностей. Центральным понятием, объединяющим три группы факторов с позиции самого больного, предлагается считать внутреннюю картину болезни. Такой комплексный подход рассматривается как неотъемлемый элемент современного клинического мышления и медицинской культуры.

Ключевые слова: биопсихосоциальный подход, доказательная медицина, биомедицинская модель, внутренняя картина болезни, персонализированная медицина, психосоматика, взаимодействие врач–пациент, холистический подход, факторы здоровья, клиническое мышление

✉ **Для корреспонденции:** Наталья Викторовна Яльцева
ул. Революционная, д. 5, г. Ярославль, 150000, Россия; yaltsewa@yandex.ru

Статья поступила: 09.06.2026 **Статья принята к печати:** 21.08.2026 **Опубликована онлайн:** 09.09.2026

DOI: 10.24075/medet.2026.024

Авторские права: © 2026 принадлежат авторам. **Лицензиат:** РНИМУ им. Н. И. Пирогова. Статья размещена в открытом доступе и распространяется на условиях лицензии Creative Commons Attribution (CC BY) (<https://creativecommons.org/licenses/by/4.0/>).

In Russian and global medicine, the pathophysiological framework remains the cornerstone of the etiology and pathogenesis of somatic diseases [1]. The biomedical model [2], which traces its roots back to the mechanistic model of illness formulated by René Descartes, has established

itself as the dominant framework in medical science since the 17th century. Classical Russian textbooks written by Lang GF, Tareev EM, Myasnikov AL, monographs of Zakharyin GA, Konchalovsky MP, and Ado AD, which are currently used to prepare academic programs, contain a brief and poorly

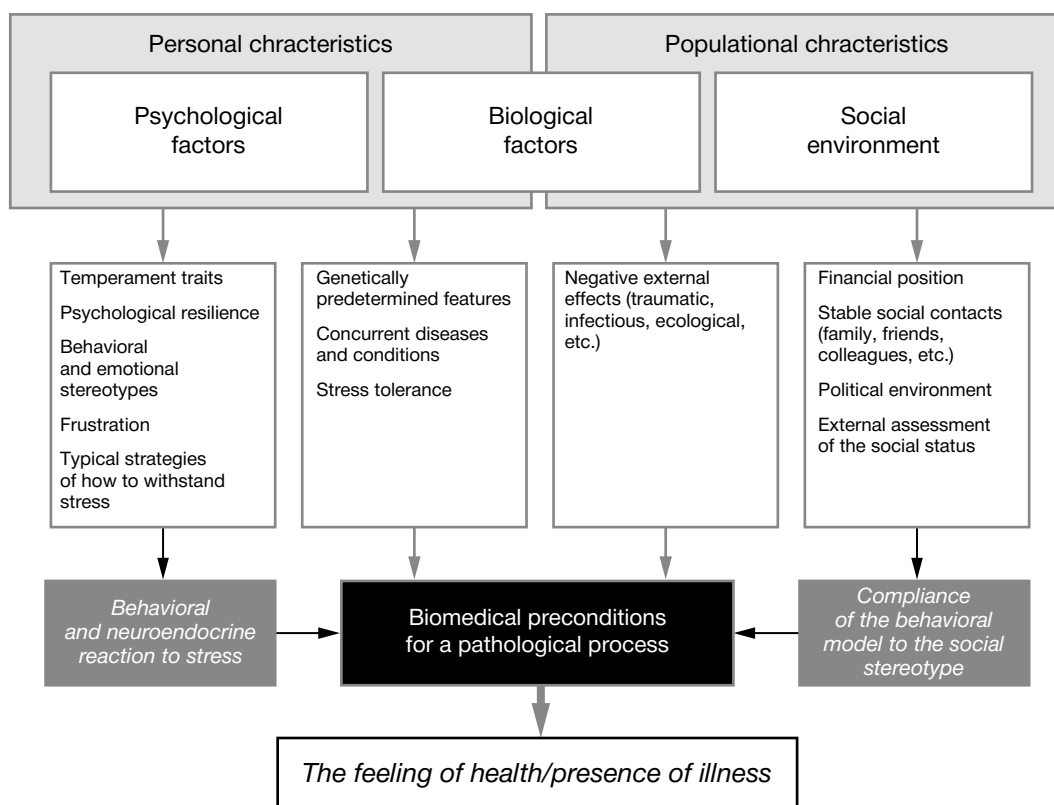


Fig. Modern interpretation of the biopsychosocial model of human health and diseases [6]

systematized psychological characteristic of patients, whereas the social constituent of the disease is largely overlooked [1,3]. Similar tendencies have been observed in foreign publications until several theories have been formed by the middle of the 20th century that included the component of a personal emotional and behavioral reaction of the patient to the structure of the disease. This involves behavioral medicine with the main branch of behavioral psychotherapy developed in the 1950–1960s (Thorndike E, Bekhterev VM, Skinner B, etc.), Selye H theory of general adaptation syndrome (1940s), and biopsychosocial model by Engel G (1970–1990).

These concepts and some other ones implied direct inclusion of personal characteristics of a patient, their ability to react and influence of the sociocultural environment on the onset of the disease and recovery. The biopsychosocial model that declares a compulsory presence of three groups of factors — biological, psychological and social ones — within the mechanism of the disease seems the most representative [3–5]. The evolution of this model resulted in a broader understanding of the interrelations among the mentioned factors (fig.). Thus, it was clear that the modern paradigm includes not static, but dynamic model components and interacting formations, that make a person feel healthy or sick [6].

According to the scheme, it is important for an individual to understand the condition which complies with the definition of health accepted by the WHO that states as follows: “health is a condition of total physical, mental and social well-being, and not just the lack of diseases and physical defects.

The biopsychosocial approach to the development of diseases, that was formed more than 50 years ago, generated certain interest in medical science and practice. A special status was acquired in psychiatry where the correlation between a personality and a disease was the strongest [3]. However, in

somatic medicine, the concept was used while treating acute and chronic pain, as well as psychosomatic diseases.

In spite of obvious advantages of the biopsychosocial paradigm over the biological one, its universal application was hampered due to the extremely personalized approach to a patient. On the one hand, it was necessary to consider an excessive number of factors, many of which might have a negligible impact on how the disease develops in a specific patient. On the other hand, the inability to objectively evaluate every component of the model allowed room for subjective interpretations based solely on the clinician’s personal judgment. Meanwhile, simplifying and formalizing the model meant replacing thorough psychological diagnostics with standard quality-of-life questionnaires, which ultimately made the interaction less effective.

A major hurdle in widely using the biopsychosocial approach is its poor fit for various medical fields, such as emergency care, trauma treatment, and acute infections [5]. Consequently, this approach has mostly been confined to managing chronic conditions and geriatric care. Even within these fields, its actual implementation remains limited.

However, a more significant reason is currently driving the shift in medical methodology back toward biomedical approaches. Medicine in the 20th century relied heavily on a clinician’s personal experience and unique perception of a patient. In contrast, the 21st century is defined by the rise of evidence-based medicine. This term was offered by Sackett DL and then introduced into practice by a group of scientists from McMaster University (Toronto) in 1996. Evidence-based medicine is a medical practice founded on verified proof of safety and effectiveness, established through testing on large groups of patients. This concept was the cornerstone of medical research, clinical guidelines, and textbooks during the first two decades of the 21st century.

The widespread adoption of evidence-based medicine has shifted clinical practice from individual patient care to population-based medicine. It means that each case is now evaluated based on aggregated data from similar observations. Additionally, a clear advantage is the ability to apply proven clinical data from a studied group to an individual patient, where the safety of treatment and likelihood of success are already established.

At the same time, this raises the question of whether a real patient truly matches a statistical average. A standardized approach overlooks some individual traits, with psychological and social factors being the most neglected. Experts often point out that by strictly following evidence-based medicine and viewing the patient merely as a representative of a research group, clinicians risk adopting a mechanical approach that damages the doctor-patient relationship. Eypasch E believes that the problem is rooted in the inappropriate integration of the principles of evidence-based medicine into daily practice. On the other hand, Ioannidis J, Fava G or Horwitz R contend that the reason for destructing the interrelations lies within the principle of data extrapolation, when the minimal attention is focused on the patient's personal characteristics. Conversely, Borrel-Carrió F, et al. argue that while the emotional doctor-patient bond created through holistic care is beneficial, it must not become the primary focus. They emphasize that psychological and social factors should not be given more attention than the core biomedical aspects of an illness. It should be noted that it is impossible to equate the concepts of "biopsychosocial medicine" and "individualized medicine", just as it is impossible to contrast them with evidence-based medicine, although such a contradiction is explicitly stated in the works of Kent D, Miles A or Beckmann J.

Contemporary healthcare should be personalized taking into account the biopsychosocial traits of the patient while remaining firmly grounded in evidence-based medicine. To achieve this, current research advocates for an integrated framework that successfully combines the strengths of both methods [4]. Additionally, Ahmadvand et al. suggest updating and broadening the biopsychosocial model into a biopsychosocial-digital model, driven by the integration of telehealth services and remote patient monitoring. While we cannot stop using statistical probabilities for individual patients, we can still fully integrate their unique personal characteristics. Sotomayor C, et al. introduce a hybrid care model where a multidisciplinary medical team manages the patient. Within this team, a clinical psychologist utilizes evidence-based data to tailor the treatment plan according to the patient's unique psychological profile. Horwitz R, et al. suggest an alternative approach: creating a database of patient profiles that details individual psychosocial traits to complement the existing evidence base for specific diseases. Additionally, medical professionals can base their treatment decisions on solid clinical evidence while comparing individual cases to similar patient profiles to anticipate unexpected reactions caused by unique personal traits.

A biopsychosocial approach to the patient, as a holistic perception of his personality and disease, should be an integral part of medical culture and clinical thinking [1]. Given the many variables involved, we must isolate the most critical psychosocial factors of the illness. The concept of the internal picture of the disease (illness perception) offers a comprehensive framework that aligns perfectly with modern paradigms. It blends the biological, psychological, and social dimensions of an illness, displaying them from the patient's own perspective.

References

1. Sukiasyan SG. Psikhosomaticheskiye kontseptsii kak predposylki kontseptsii «nepsikhiatricheskoy psikhiatrii»: psikhologicheskiye i psikhobiologicheskiye kontseptsii. Sciences of Europe. 2021; 1: 70–2. Russian.
2. Sukiasyan SG. Psikhosomaticheskiye kontseptsii kak predposylki kontseptsii «nepsikhiatricheskoy psikhiatrii»: klinicheski oriyentirovannyye kontseptsii. Sciences of Europe. 2021; 2: 70–2. Russian.
3. Cohen SP, Vase L, Hooten WM. Chronic pain: an update on burden, best practices, and new advances. Lancet. 2021 May 29; 397(10289): 2082–2097. DOI: 10.1016/S0140-6736(21)00393-7. PMID: 34062143.
4. Smith RC. Making the biopsychosocial model more scientific-its general and specific models. Soc Sci Med. 2021 Mar; 272: 113568. DOI: 10.1016/j.socscimed.2020.113568. Epub 2020 Dec 2. PMID: 33423810.
5. Cormack B, Stilwell P, Coninx S, Gibson J. The biopsychosocial model is lost in translation: from misrepresentation to an enactive modernization. Physiother Theory Pract. 2022 May 28; 1–16. DOI: 10.1080/09593985.2022.2080130. Epub ahead of print. PMID: 35645164.
6. Sukiasyan SG. Mozhg i psikhika v kontekste psikhosomaticheskoy problemy: kliniko-psikhologicheskiye korrelyatsii. Sciences of Europe. 2022; 101. Russian.

Литература

1. Сукиасян С. Г. Психосоматические концепции как предпосылки концепции «непсихиатрической психиатрии»: психологические и психобиологические концепции. Sciences of Europe. 2021; 1: 70–2.
2. Сукиасян С. Г. Психосоматические концепции как предпосылки концепции «непсихиатрической психиатрии»: клинически ориентированные концепции. Sciences of Europe. 2021; 2: 70–2.
3. Cohen SP, Vase L, Hooten WM. Chronic pain: an update on burden, best practices, and new advances. Lancet. 2021 May 29; 397(10289): 2082–2097. DOI: 10.1016/S0140-6736(21)00393-7. PMID: 34062143.
4. Smith RC. Making the biopsychosocial model more scientific-its general and specific models. Soc Sci Med. 2021 Mar; 272: 113568. DOI: 10.1016/j.socscimed.2020.113568. Epub 2020 Dec 2. PMID: 33423810.
5. Cormack B, Stilwell P, Coninx S, Gibson J. The biopsychosocial model is lost in translation: from misrepresentation to an enactive modernization. Physiother Theory Pract. 2022 May 28; 1–16. DOI: 10.1080/09593985.2022.2080130. Epub ahead of print. PMID: 35645164.
6. Сукиасян С. Г. Мозг и психика в контексте психосоматической проблемы: клинико-психологические корреляции. Sciences of Europe. 2022; 101.