

Letter

The Evolution of Personalized Psychiatry

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Citation: Ashurov, Z.S. The Evolution of Personalized Psychiatry.
Personalized Psychiatry and Neurology
2023, 3 (2): 1-2.

Chief Editor: Nikolaj G. Neznanov,
D Med Sci, Professor

Publisher's Note: V. M. Bekhterev
NMRC PN stays neutral with regard
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The practice of medicine has always been principally underpinned by a science of individual care. Every consultation, every diagnosis, every treatment strategy is — or should be — rooted in the individuality of the patient's condition. This philosophy expands the boundaries of medical disciplines and is as relevant to psychiatry as it is to neurology or any other medical specialty. Developing treatment tactics and strategies that take into account the unique characteristics of each patient's condition is the first step towards personalizing treatment. This shift from a disease-centered approach to a patient-centered approach signals a significant transformation in healthcare. Yet, we must confront and address the limitations inherent in our current medical examination practices. These practices often lack the depth of understanding required to fully appreciate the individual patient's condition — a shortcoming all too evident in clinical guidelines and therapeutic outcomes.

The last two decades, however, have brought about a qualitative shift that has infused fresh optimism into the healthcare community. The rapid growth of computational capabilities allows us to now analyze vast data sets with a depth and precision that were previously unimaginable. Simultaneously, initiatives such as the Research Domain Criteria (RDoC) have inspired an integrative approach to studying the many facets of psychopathological manifestations, encouraging research into genetic, molecular, and cellular mechanisms and the intricate interplay of functional connections contributing to pathophysiological changes and clinical phenomena observed in mental disorders.

This research paradigm offers a transformative perspective — homogenous phenotypic manifestations of mental disorders can result from diverse underlying mechanisms. This revelation implies that even a seemingly homogeneous clinical population, categorized under a single diagnosis, may actually be a heterogeneous mix, necessitating differentiated therapeutic approaches.

The advent of the 21st century has given birth to an era of precision medicine and precision psychiatry. These new scientific paradigms focus on enhancing diagnostic accuracy and defining the key mechanisms of disorders. They facilitate the identification of

biomarkers and biosignatures, enabling more effective stratification of conditions and guiding practitioners towards the most viable treatment modalities — be they pharmacotherapy, psychosocial interventions, or preventative measures. The most notable outcomes to date have emerged from pharmacogenetic research, which elucidates drug pharmacokinetics and predicts individual responses to medication based on genetic features of molecular targets and elimination pathways.

As these novel approaches continue to be embraced and adopted, we contribute to an ever-expanding knowledge base on mental disorders. The ongoing analysis of this wealth of data will pave the way for the personalized psychiatry of the future. In this envisioned future, diagnostic processes will reveal individual key disorder mechanisms, and treatments will be tailored to the specific targets of each patient, optimizing effectiveness and improving patient outcomes.

However, this trajectory is not without its challenges. The complexity and diversity of mental disorders necessitate continuous research to uncover the myriad of biological, psychological, and social factors contributing to their onset and progression. Furthermore, the implementation of personalized psychiatry requires comprehensive changes in our healthcare systems, including training of medical professionals, development of new diagnostic tools, and modification of health policies to accommodate these advanced approaches.

Thus, as we continue in our pursuit of personalized medicine and psychiatry, it is crucial to remain cognizant of these challenges and strive relentlessly to surmount them. The promise of delivering truly personalized care to every patient is compelling and drives us towards a future where every individual receives tailored therapy that respects their unique condition and promotes their mental wellbeing.

Guest Editor

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