Why is Qualitative Research Necessary in Medicine and Some Prejudices Against It?

Figen Ünal Çolak, PhD;[1] Sarper Yılmaz, MD[2]

1. Department of Communication Design and Management, Faculty of Communication Sciences, Anadolu University, Eskisehir, Turkey
2. University of Health Sciences, Dept. of Emergency Medicine, Kartal Dr. Lutfi Kirdar City Hospital, Istanbul, TURKEY; Chair of the Disaster Commission of the Turkish Emergency Medicine Association, Ankara, TURKEY

Correspondence:
Sarper Yılmaz, MD
Department of Emergency Medicine
University of Health Sciences
Kartal Dr. Lutfi Kirdar City Hospital
Kartal, Istanbul, TURKEY
Chair, Disaster Commission of the Turkish Emergency Medicine Association
Ankara, TURKEY
E-mail: sarperyilmaz08@gmail.com

Conflicts of interest: The authors declare that there is no conflict of interest regarding the publication of this article.

Keywords: medicine; purposeful sampling; qualitative research; quantitative paradigm

Received: May 16, 2024
Accepted: June 2, 2024

Editor's Note: This manuscript was peer-reviewed and accepted under the Emeritus Editor-in-Chief (EIC) of the journal, Dr. Sam Stratton. The current EIC, Dr. Jeffrey Franc, acknowledges Dr. Stratton's contributions in relation to the acceptance and publication of this article.

doi:10.1017/S1049023X24000591

Ünal Çolak F, Yılmaz S. Why is qualitative research necessary in medicine and some prejudices against it? *Prehosp Disaster Med.* **2024;00(00):1–2.**

Dear Editor,

We have recently read with interest the editorial monograph titled "Purposeful Sampling: Advantages and Pitfalls" authored by you.[1] In your monograph, the scientific suggestions and comments regarding purposive sampling particularly hold promise for medical research employing qualitative research methods, emphasizing the significance of such studies in the scientific literature. As researchers engaged in this field, we also wanted to address the importance of qualitative research in medicine and confront certain biases against such research based on our experiences and observations.

Positivism, based on the notion that reality is independent of and singular to human perception, has notably formed the conceptual basis of research in the natural sciences, particularly. The positivist research paradigm, aiming to formulate and test hypotheses, is grounded in the assumption that researchers can uncover reality through systematic observation from an external standpoint. The researcher needs to initially establish the hypothesis of the research based on existing theories, then collect objective information concerning the research problem, and subsequently interpret the findings according to the hypotheses guiding the research. In essence, the researcher conducts their investigation based on the deductive method and strives to reach some generalizable conclusions within the limitations initially outlined.[2]

The quantitative paradigm, characterized by research based on numerical data, has a significant impact on the field of medicine, generating valuable results. However, in some cases, it may prove insufficient. In the field of medicine, many subjects, especially complex phenomena such as the causes, symptoms, and treatment of diseases, cannot be fully understood solely through quantitative research based on numerical data. Due to the influence of social, psychological, cultural, and environmental factors, such phenomena may necessitate qualitative research methods that provide in-depth understanding.[3] Subjects such as patient experiences, treatment processes, symptom management, and quality of life cannot be fully addressed solely through research based on numerical data.[4] Quantitative data may not sufficiently capture patients' emotional, social, and psychological experiences, which can leave out essential information necessary for improving treatment and care. However, cultural and social contexts, often overlooked in medical research, have a significant impact on issues such as disease transmission, health behaviors, and medical decisions.

Understanding these contexts can influence the behaviors of patients and health care providers and determine treatment outcomes. In certain medical research, particularly in complex and variable situations, the reproducibility and generalizability of results based on quantitative data can be challenging. These situations may vary depending on researchers' ability to control various factors in data analysis and isolate external variables. Medical decisions rely not only on scientific evidence, but also on the emotional and social needs of patients and health care providers. Therefore, research solely based on quantitative data may prove insufficient for encompassing the entirety of medical decisions. Qualitative research is an approach that emphasizes understanding and investigating social phenomena within their respective environments, focusing on theory creation. In this context, "theory creation" refers to a modeling effort that explains certain previously unknown outcomes in relation to each other based on collected information. This necessitates the researcher being flexible, reshaping the research process based on the gathered information, and adopting an inductive approach in both forming the research design and analyzing the collected data.[5]

In medicine, qualitative research is necessary for various reasons. Qualitative research allows researchers to explore the lived experiences, perspectives, and beliefs of patients and

health care providers. This deep understanding of the human aspects of illness and health care services can provide insights into patient-centered care approaches, enhance communication between patients and providers, and ultimately increase patient satisfaction. Qualitative research can provide valuable insights into factors influencing health behaviors, attitudes toward health interventions, and barriers to accessing health care services. Qualitative research is valuable not only for informing treatment decisions, but also for assessing the implementation process and outcomes of interventions and treatments within the social context in which the patient is situated. Indeed, qualitative research is particularly suited for exploring the social, cultural, and structural factors contributing to health inequalities. By deeply understanding the situations of under-served or vulnerable communities, qualitative research can shed light on the root causes of health inequalities and provide a foundation for policymaking. Furthermore, the use of qualitative data alongside quantitative data, known as mixed-methods research, allows for a more comprehensive understanding of complex health issues and facilitates the development of a more holistic perspective on the phenomenon under study.

Considering all these factors, it is evident that qualitative research is necessary and valuable in the field of medicine. However, it is possible to acknowledge some biases against qualitative research in medicine. One of the main criticisms of qualitative research is its perceived subjectivity and lack of objectivity compared to quantitative research methods. Since qualitative findings are not expressed in numbers, they are often seen not as representing objective truths about the phenomenon under study but rather as reflections of the researcher's interpretations. However, the reliability and reproducibility of qualitative research findings are often questioned because qualitative research typically involves small sample groups and in-depth exploration of complex phenomena compared to quantitative research. Since qualitative research does not usually involve numerical data, researchers, reviewers, and medical journal editors who prioritize quantitative research in the hierarchy of evidence may argue that qualitative studies lack statistical rigor and therefore cannot generate generalizable results. There is a prevalent bias in medical research towards the evidence-based medicine tradition and an emphasis on numerical data and statistical analyses. As a result, qualitative data may be under-estimated, and its value may be overlooked by some researchers and clinicians. Due to all these reasons, qualitative research studies encounter difficulties in obtaining funding and getting published in high-impact medical journals. Research funding bodies and journal editors may prioritize quantitative or clinical research over qualitative studies, resulting in fewer opportunities for qualitative researchers to disseminate their findings. This could be due to resistance to change in the medical field. Challenging traditional research paradigms, qualitative research requires researchers and practitioners to change their perspectives and methodologies. Resistance to the qualitative paradigm may lead to skepticism or rejection of qualitative research findings.

In summary, qualitative research is a paradigm with methodological integrity, encompassing careful attention to research design, sample selection, validity and reliability measures, systematic data collection, analysis, and interpretation, as well as reflection and transparency in reporting. In addition to the biases against qualitative research in the medical field discussed for these reasons, we believe that these biases stem from a lack of understanding about qualitative research methods.

References

1. Stratton SJ. Purposeful sampling: advantages and pitfalls. *Prehosp Disaster Med.* 2024;39(2):121–122.
2. Guba EG, Lincoln YAS. Competing Paradigms in Qualitative Research. In: Denzin NK, Lincoln YS, (eds). *Handbook of Qualitative Research*. Thousand Oaks, California USA: Sage Publications, Inc; 1994:p105–117.
3. Tenny S, Brannan JM, Brannan GD. *Qualitative Study*. Treasure Island, Florida USA: StatPearls Publishing; 2024.
4. Engle RL, Mohr DC, Holmes SK, et al. Evidence-based practice and patient-centered care: doing both well. *Health Care Manage Rev.* 2021;46(3):174–184.
5. Cummings P, Rivara F. Car occupant death according to the restraint use of other occupants: a matched cohort study. *JAMA.* 2004;291(3):343–349.

https://doi.org/10.1017/S1049023X24000591 Published online by Cambridge University Press