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**Post-Positivism and Its Application in Health Research****Pradeep Kumar Mahato**

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**Corresponding Email:** mahatopradeep391@gmail.com**Abstract**

Post-positivism marks a significant shift in health research by recognizing the limitations of positivist approaches and embracing a more flexible, reflective and context-sensitive methodology. This approach acknowledges the interconnectedness of human health, influenced by various biological, psychological, social and environmental variables, which are beyond the scope of quantitative approaches alone. Post-positivism combines qualitative and quantitative methods, allowing scholars to probe the effects of health interventions, their occurrences and social contexts. The objective of this research is to explore the philosophical foundations of Post-positivism and its paradigms within health education research. This research methodology involves an extensive literature review of peer-reviewed academic articles and books to analyze the post-positivism paradigm within health education research, exploring its principles, applications and implications. The shift to post-positivism in health research has allowed for a more accurate and nuanced understanding of health issues by incorporating critical realism and reflexivity, helping minimize researcher bias. The integration of mixed-methods research and triangulation have strengthened the validity of studies, especially when the researcher examine the people experiences and the influence of social factors. Post-positivism has reshaped health research by blending qualitative and quantitative methods and

promoting reflexivity and ethical practices. This approach provides richer insights and more comprehensive and effective solutions that cater to both individuals and broader community needs.

**Keywords:** critical realism, health research, mixed methods, Post-positivism, reflexivity

## Introduction

Post-positivism marks a substantial shift in research paradigms, particularly in the health sciences, by recognizing the complexities and limitations of strictly objective inquiry (Scott et al., 2017). Post-positivism emerged as a response to the limits of positivism, recognizing the need for a more nuanced explanation of reality, particularly when dealing with human beings and health effects (Ryan, 2006; Muijs, 2004). Post-positivism maintains that it cannot be fully represented through merely empirical observation due to human subjectivity, context and methodology limitations (Creswell, 2014). This transition has resulted in fundamental changes in how health research is thought and carried out, moving away from rigid frameworks and toward more flexible and adaptive study approaches.

Positivism, first developed by Auguste Comte in the nineteenth century, emphasizes that scientific research should be based on observable, quantifiable, and experimentally verifiable facts (Comte 1975). In this paradigm, the world follows a set of natural laws that can be found by objective observation and experimentation. Positivism emphasizes hypothesis testing, quantifiable evidence and the application of procedures such as controlled experiments and statistical analysis (Mertens, 2010; Panhwar et al., 2017). The goal is to have perfect assurance of the results of the research.

However, detractors claim that positivism's emphasis on objective measurement is insufficient for human phenomena such as health, which involves complex biological, psychological, and social connections (Popper, 1972). Variables in health research, particularly in areas such as mental health, people experience and public health interventions are sometimes uncontrollable or difficult to quantify (Tracy, 2013). Social and environmental elements, patient narratives, and subjective

experiences all play important roles in creating health outcomes, which positivism struggles to understand (Creswell & Clark, 2017).

Post-positivism was developed in response to the limitations of positivism paradigm (Panhwar et al., 2017). It is still believed in objective reality but it recognizes that our understanding is imperfect due to researcher biases and complexities of human experience (Phillips & Burbules, 2000). While positivism looks for certainty, post-positivism accepts that knowledge is always evolving and findings can be changed with new evidence ( Philipand & Burbulees , 2000).

Post-positivism emerged in the mid-20th century as a response to positivism's rigid view. Philosophers like Karl Popper argued that scientific knowledge is temporary and can be disproven rather than confirmed (Popper, 1972). It is a philosophical change and we know that science is a constant cycle in which concepts are repeatedly put to the test, tweaked or discarded. Post-positivism, particularly the idea of critical realism, suggests that an objective reality exists outside of human perception. According to the philosophical school of critical realism, reality exists apart from human senses but can only be fully comprehended by means of socially constructed interpretations and scientific investigation (Bhaskar, 1975). But our perceptions of this reality are shaped by our individual experiences, prejudices and the limitations of our approaches (Bhaskar, 1978). This is especially essential in health research because it enables the investigation of complicated, multifunctional circumstances in which distinctions between biological, psychological and social components are fluid and interrelated (Clark, 2005).

Post-positivism promotes a flexible approach to research design. It allows researchers to use both quantitative and qualitative methods to study health outcomes. This approach also helps explore the processes and experiences that affect those outcomes (Guba & Lincoln, 1994). Using different methods is especially useful in health research, where people experiences, social factors and the surrounding context are important for fully understanding a health issue.

Post-positivism is a good way to study health and health education. It is because it recognizes

that human health is complicated and it may not be always possible to be explained in numbers. Post-positivism addresses these challenges by using a wider approach that combines different research methods and collects both objective and subjective data (Creswell & Clark, 2017; Neuman, 2008). Post-positivism makes it possible to use both qualitative and quantitative methods. Interviews, focus groups discussion and case studies give valuable information about how people feel and how social factors affect their health (Morse, 2003). This information might not be included in studies that only focus on numbers. By combining statistical methods with qualitative insights, researchers can produce results that are both robust in data analysis and enriched by individual perspectives. While statistical approaches provide rigor and generalizability, our mixed-methods approach addresses a typical research gap. They frequently lack the context and depth that come from firsthand experiences. Integrating qualitative perspectives fills this gap, offering a more comprehensive understanding of health phenomena that purely quantitative methods might overlook.

### **Research Methodology**

This research conducted a literature search for articles using keywords such as post-positivism, health research, positivism, critical realism, reflexivity and mixed methods within titles and abstracts in the PubMed and Google Scholar databases, covering publications up to December 2023. Additionally, we reviewed the reference lists of relevant articles to identify similar studies. Ultimately, 24 articles and books were selected for a comprehensive review which aim was to analyze the way of underpinning post-positivism in health and health education research. This review seeks to explore how post-positivist perspectives can enhance the understanding and application of research paradigms in health and health education.

### **Results and Discussion**

In the results and discussion section, the data are organized into three important themes that demonstrate the larger significance of the transition from Positivism to Post-positivism in health research. The topics are as follows: (1) the transition from Positivism to Post-positivism in Health

Research which reflect the evolving methodologies and perspectives in health research; (2) Critical Realism, Reflexivity, and Triangulation, capturing the philosophical underpinnings and methodological adaptations that Post-positivism introduces, with a focus on addressing the limitations of purely quantitative approaches; and (3) Ethical Considerations and Community Impact, which explores the deeper ethical commitment

### ***Shift from Positivism to Post-positivism in Health Research***

The change from Positivism to Post-positivism in health research represents a substantial shift in how researchers view health and disease. Traditional Positivist techniques, which rely on quantitative, quantifiable statistics, have struggled to capture the entire complexity of health phenomena, particularly in mental health, patient satisfaction and the impact of social determinants of health (Mertens, 2010). A Positivist study focus on how a disease works, but a Post-positivist approach look at how people, their experiences, and healthcare systems affect health outcomes (Thapaliya & Pathak, 2022). Mixed techniques are being used more often in health research. Mixed methods, which integrate quantitative and qualitative approaches, enable researchers to investigate not only “what” but also “why” and “how” things are happening (Creswell & Clark, 2017). This is especially valuable in health research, because interventions may have differing effects on different groups, and understanding patient experiences is frequently as important as examining clinical outcomes.

For instance, in studying the effectiveness of a new cancer treatment, a Positivist approach might focus solely on survival rates and tumor reduction. However, a Post-positivist researcher would also be interested in how patients experience the treatment, what side effects they report and how social support networks influence their recovery. Post-positivist health research offers a more thorough knowledge of treatment outcomes by combining qualitative information about patient experiences with quantitative measurements of clinical efficacy (Morse, 2003).

A key component of post-positivism is the idea of critical realism. It maintains that reality

exists apart from our senses and our understanding of it is always insufficient and influenced by our preconceptions and experiences (Bhaskar, 1978). This entails acknowledging that despite the fact that diseases and health outcomes have objective biological causes, social and cultural factors shape our understanding of them (Kuper et al. 2008). While pain is a biological phenomenon and its perception, communication and management are influenced by cultural norms, interactions provided by patient and healthcare regulations. Critical realism encourages health researchers to go beyond basic cause-and-effect models and investigate the intricate interplay of biological, psychological, and social elements that influence health outcomes (Guillemin & Gillam, 2004). It also highlights the relevance of context, acknowledging that health interventions that work in one setting may not function in another due to changes in social, cultural, and economic contexts (Morse, 2003).

### ***Critical Realism, Reflexivity, and Triangulation***

Reflexivity is another important aspect of Post-positivist study. Reflexivity is the process by which researchers critically examine their own beliefs, values and prejudices and how they may influence their findings (Finlay, 2002). In health research, reflexivity is especially relevant since researchers frequently work in settings where their own experiences and viewpoints influence how they gather and interpret data.

For example, a researcher investigating mental health outcomes in marginalized populations may need to assess how their social background and experiences influence their knowledge of mental health and the beliefs that they bring to their research (Guillemin & Gillam, 2004). By being reflexive, researchers can find and eliminate biases, which produce the result more objective and precise understanding of the health issues they are studying.

Reflexivity is especially important in qualitative health research, as researchers frequently interact with participants and analyze their subjective experiences (Guillemin & Gillam, 2004). Post-positivism encourages researchers to be open about their role in the research process and actively engage in bias-reduction strategies such as member checking (where participants review

and validate the interpretations of researcher) and triangulation (where multiple data sources are used to validate findings) (Mertens, 2010).

Mixed-methods research is widely used in the health sciences research as a result of tolerance of post-positivism to a variety of thoughts and methodologies. By combining quantitative and qualitative research methodologies, mixed methods research enables researchers to examine not just “what” but also “why” and “how” things happen. This is especially useful in health research in which interventions might have varying effects on diverse groups and understanding people experiences is very important.

A mixed-methods study on the impact of a new health intervention, for example, might use quantitative methods to assess the intervention’s efficacy in reducing disease symptoms and qualitative methods to investigate patients’ experiences with the intervention and identify barriers to its adoption (Morse 2003). By combining these various types of data, Post-positivist health research provide a more complete picture of health related research.

Triangulation, or the use of multiple sources of data to validate findings, is another key feature of Post-positivist health research. Triangulation helps to address the limitations of individual methods and data sources and makes research findings more valid (Ryan, 2006). For instance, a study about health disparities might use information from medical records, surveys of patients, and interviews to understand how social and economic factors affect health outcomes (Kuper et al., 2008).

Post-positivism’s emphasis on reflexivity and context is ethically problematic for health research. Post-positivist researchers often use participatory research, which involves including people’s opinions and ideas in the study process. This is especially important in health research with vulnerable communities because standard research methods may reinforce power imbalances while failing to meet participants’ needs and concerns (Finlay, 2002).

### *Ethical Considerations and Community Impact*

In Post-positivist health research, it is important to think about ethics beyond getting permission and keeping information of participants in private (Morrow & Richards, 2020). Researchers must also think about how their research affects the communities what they want to study, how they can use their findings at communities and how they can make sure that their research leads to positive health outcomes for participants and communities (Morse, 2003). From the perspective of a researcher, it is considered the impact of health research in communities. It mainly focuses on the deep commitment to ethical responsibility and social accountability. It is not enough only to simply gather data from communities, but also researchers must think critically about the potential consequences of their research in communities. This includes asking how their findings influence on the public health policy, patient care or community well-being and addressing potential harm or misunderstandings that could arise from the results.

For instance, when conducting research in a marginalized community, it's essential to think about how the findings can be used to address health disparities and to consider ways to ensure that the community benefits directly. Researchers have a role in advocating for changes that the research supports, whether by sharing results with local health authorities or collaborating with community leaders to develop accessible interventions.

### **Conclusion**

The shift from Positivism to Post-positivism in health research has transformed the field by expanding focus from solely quantitative metrics to a more holistic understanding of health phenomena. Post-positivist researchers integrate quantitative and qualitative methods, moving beyond cause-and-effect models to explore the complex interplay of biological, psychological, and social factors. For instance, while a Positivist study may only assess treatment efficacy through survival rates, a Post-positivist approach also values people experiences, side effects, and social support, offering a richer view of health outcomes. Mixed methods enable researchers to explore not just



“what” but “why” and “how” phenomena occur, which is especially relevant for diverse populations and complex issues like mental health. Critical realism underpins this approach, recognizing that while health conditions have biological bases, understanding is shaped by social and cultural influences. Reflexivity and ethical responsibility also guide Post-positivist research, urging researchers to reflect on their biases and consider the broader impact of their work on participants and communities. Ethical responsibilities in research go beyond getting consent; they include actively involving the community and advocating for their needs. This approach helps make sure that the research leads to positive health outcomes and reduces inequalities in health.

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