



Exploring Stem Cell Therapy in the Healing of Degenerative Diseases: A Phenomenological Study on the Experiences of Patients and Medical Practitioners in Indonesia

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ABSTRACT

The use of digital media in health communication has gained significant attention, particularly in its role in enhancing interactions between healthcare practitioners and patients. While extensive research has focused on the adoption of digital tools such as telemedicine, limited attention has been given to understanding the subjective experiences of both practitioners and patients in utilizing these technologies. The current study addresses this gap by exploring how healthcare professionals and patients experience and interpret their interactions through digital platforms. We employed a phenomenological approach to investigate these experiences, aiming to capture the essence of their perceptions and interactions. Data was collected through in-depth interviews with 20 participants, including 10 healthcare professionals and 10 patients from diverse demographic backgrounds, revealing themes related to trust, accessibility, and the emotional impact of digital communication. Our findings suggest that digital platforms significantly alter the nature of healthcare communication, fostering a sense of connection yet presenting challenges in terms of emotional engagement. These insights contribute to a deeper understanding of digital health communication, providing implications for the development of more user-centered technologies and future research directions.



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INTRODUCTION

Stem cell therapy has become an intriguing topic in the treatment of degenerative diseases, where cells with the ability to differentiate into various types of body cells are used to repair or replace damaged tissues (Bhartiya dkk., 2023). This phenomenon encompasses a wide range of medical applications, from the treatment of joint diseases such as osteoarthritis, to previously hard-to-treat neurological and cardiovascular disorders (Poliwoda dkk., 2022). While stem cell therapy offers new hope, it faces significant challenges related to the understanding of its effectiveness, safety, and long-term sustainability among both the public and medical practitioners.

The technology underlying stem cell therapy continues to evolve, with significant advancements in biotechnology and tissue engineering (O'neill dkk., 2019). However, despite the therapeutic potential of stem cell therapy being widely discussed in medical literature, the understanding of how this therapy is accepted and perceived by patients and medical practitioners remains limited (Perez dkk., 2024). Existing studies often emphasize clinical outcomes and therapeutic effectiveness, with fewer addressing the subjective experiences of individuals involved in this therapy. The experiences of patients undergoing stem cell therapy, as well as the views of medical practitioners applying this technology, are crucial to enriching the understanding of the potential and challenges faced in its adoption. Quantitative studies that focus on clinical outcomes provide valuable insights into the physical effectiveness of stem cell therapy but often fail to capture

the emotional and psychological dimensions of patient and practitioner experiences (Huang dkk., 2020).

Various approaches have been used to understand this phenomenon, including quantitative studies that focus on clinical outcomes and therapeutic effectiveness. However, a phenomenological approach offers deeper insights by exploring how individuals make sense of their experiences related to stem cell therapy (Narzisi dkk., 2023). This approach allows for the exploration of the subjective meanings of patients' experiences, which may not be reflected in quantitative data. In this context, this study aims to explore the perceptions and experiences of patients undergoing stem cell therapy, as well as the perspectives of medical practitioners who apply it, in order to understand the social and psychological dynamics involved in the adoption of this therapy.

Research on the subjective experiences of individuals in the context of health phenomena, particularly in the field of innovative medical therapies such as stem cell therapy, has emerged as an important area within phenomenological studies. This approach allows for a deeper understanding of how patients and medical practitioners interpret their experiences, as well as how psychological, social, and emotional factors influence their perceptions of the therapy. Although stem cell therapy holds great potential in the treatment of degenerative diseases, the real-life experiences of individuals involved in this process have not been extensively explored (Al-Massri dkk., 2020). This is a key reason why the phenomenological approach is highly relevant in understanding the meaning behind the experiences of both patients and medical practitioners, which may not be captured through other methods.

However, research on subjective experiences in the context of stem cell therapy faces several methodological challenges. One of the challenges is the limited available data, as many existing studies focus more on the technical and quantitative aspects of this therapy, such as success rates and side effects, rather than on how individuals personally experience it. Furthermore, the dominant quantitative approach in many studies is less capable of capturing the emotional and psychological dimensions inherent in the experiences of patients and medical practitioners (Huang dkk., 2020). This approach fails to explore the nuances of individual meanings surrounding the therapy, such as hopes, anxieties, or feelings of satisfaction or disappointment that patients may experience.

These limitations suggest that many previous research methods have been less effective in providing a comprehensive and holistic picture of this phenomenon. Therefore, the phenomenological approach is seen as a more appropriate method for exploring the essence of experiences involved in stem cell therapy, offering space for the authentic voices of the individuals involved and uncovering the deeper meaning of those experiences (Aghmiuni dkk., 2023). Through this approach, it is hoped that new, more comprehensive insights will emerge regarding how stem cell therapy is received and perceived by both patients and medical practitioners.

In the effort to understand stem cell therapy for degenerative diseases, many studies rely on practical and quantitative approaches to measure the effectiveness of the therapy, such as success rates or clinical improvements (He dkk., 2021). While these approaches provide valuable information on the physical and objective outcomes of the therapy, they often overlook the deeper subjective experiences of patients and medical practitioners. The understanding gained is frequently limited to measurable dimensions, thus failing to explore how individuals feel or interpret the therapy within the context of their lives. This can result in an incomplete understanding that does not fully reflect the complexity of the experiences involved.

This limitation indicates that the existing quantitative and practical approaches have not been able to uncover the essence of the stem cell therapy experience. Emotional experiences, hopes, anxieties, and perceptions of success or failure are often neglected in these studies. Therefore, to address this gap, this research proposes the use of phenomenology as a more effective alternative. The phenomenological approach allows for a deeper exploration of how individuals understand their experiences related to this therapy, providing richer insights into the psychological and social dynamics that cannot be revealed through other methods. By delving into the subjective meanings of the experiences of both patients and medical practitioners, this study aims to enrich our understanding of stem cell therapy and its impact on the treatment of degenerative diseases.

Previous research has largely focused on stem cell therapy in the treatment of degenerative diseases from a quantitative perspective, such as clinical success and patient improvement rates. However, few studies have explored the subjective dimensions of the experiences of patients and medical practitioners involved in this therapy. Studies on patient experiences with innovative treatments suggest that psychological, emotional, and social factors play a crucial role in the healing process and acceptance of therapy (Johnson, 2018; Smith & Jones, 2020). Moreover, the adoption of medical technologies by practitioners is often influenced by their perceptions of effectiveness and the challenges encountered in implementing new technologies. Therefore, this study fills this gap by focusing on the subjective experiences and the meaning perceived by patients, as well as the perspectives of medical practitioners regarding stem cell therapy.

The phenomenological approach was chosen due to its ability to deeply explore individuals' life experiences, focusing on the meaning embedded in specific phenomena. Through this approach, it is hoped that the perceptions and feelings of patients undergoing stem cell therapy, as well as the views of medical practitioners on the potential and challenges of this therapy, will be revealed. Phenomenology provides space for the authentic voices of participants to express their experiences in a more personal and profound context, something that is difficult to achieve with a quantitative approach. Thus, this method addresses the limitations of previous research that relied solely on objective and quantitative data. The primary goal is to understand the essence of the experience in the context of stem cell therapy and to explore the meanings brought by the individuals involved in this therapeutic process.

This article is structured clearly to systematically outline the context and methodology of the research. Beginning with an introduction that discusses the background of the phenomenon under study, the article will describe the phenomenological methodology used to explore the subjects' experiences. Subsequently, the data collection process and data analysis conducted with a thematic approach will be explained in detail. The discussion section will explore the main findings and link them to relevant theories, while the conclusion will summarize the research results and provide recommendations for further studies.

RESEARCH METHODS

Study Design

A phenomenological approach was employed in this study to explore the subjective experiences of patients and medical practitioners involved in stem cell therapy for degenerative diseases. Phenomenology was chosen because it enables the researcher to understand and uncover the meanings generated by individuals through their direct experiences. The primary focus of phenomenology is on a deep understanding of the subjective experiences and perceptions of those who undergo a particular phenomenon, in this case, stem cell therapy (Kim dkk., 2021). This approach is highly relevant to address the research questions centered on how patients perceive the impact of stem cell therapy on their health, as well as how medical practitioners assess the challenges and effectiveness of this therapy in clinical practice. Descriptive phenomenology was applied in this study to depict direct experiences without excessive interpretation, aiming to provide an authentic understanding of the phenomenon under investigation.

Participants

The participants in this study consisted of 10 patients who had undergone stem cell therapy for degenerative diseases, such as osteoarthritis, heart disease, and neurological disorders, and 5 medical practitioners with more than three years of experience in administering stem cell therapy. The patients were selected using purposive sampling, with inclusion criteria including ages between 30 and 65 years, a diagnosis of a degenerative disease, and having undergone stem cell therapy for at least six months. Patients with severe mental disorders or other medical conditions that could affect their ability to participate in interviews were excluded from the study. The medical practitioners involved were physicians or specialists directly engaged in the application of stem cell therapy. The

inclusion criteria for medical practitioners were practical experience in stem cell therapy for more than three years.

Data Collection

Data was collected through in-depth interviews with patients and medical practitioners, conducted in person at a comfortable and private location to ensure openness and participant comfort. The interviews were guided by a semi-structured interview protocol, designed to explore the subjective experiences and perceptions of stem cell therapy (Zhao dkk., 2021). Each interview lasted between 45 to 60 minutes. The location of the interviews was adjusted according to participant preferences, either in medical clinics, hospitals, or other places considered comfortable by the participants. In addition to the interviews, observations were conducted at the clinic where stem cell therapy was administered, to identify patterns of interaction between patients and medical practitioners, as well as any hopes or anxieties that arose during treatment sessions. All interview sessions were conducted with participant consent and in accordance with the ethical standards of research.

Data Analysis

The data collected from interviews and observations was analyzed using a thematic analysis approach, allowing for the identification of key themes and patterns of experience relevant to the phenomenon under investigation. The analysis process began with transcribing the interviews and observations, followed by data coding to identify categories and main themes. Data was systematically analyzed to uncover the deeper meaning of participants' experiences. The findings were then organized into themes reflecting the main experiences and perceptions of patients and medical practitioners regarding stem cell therapy. NVivo software was used to support the coding and data analysis process, although the primary focus remained on deep thematic interpretation.

To ensure trustworthiness, the credibility of the analysis was enhanced through member checking, where participants reviewed and validated the findings. Additionally, triangulation of data from interviews and observations was performed to strengthen the reliability of the results. Peer debriefing was conducted with other researchers to minimize bias and confirm the accuracy of the thematic interpretations.

Ethics

This study adhered to international and local ethical research standards. Written consent was obtained from all participants before interviews were conducted. The research procedures were approved by the relevant research ethics committee, which ensured the protection of participants' rights and confidentiality throughout the study. Participants' identities were kept confidential, and the collected data was securely stored to prevent unauthorized access. All information collected from interviews and observations was presented anonymously to ensure participant anonymity.

RESULTS

Patient Perceptions of Health Progress Post Stem Cell Therapy

The results of interviews with patients who have undergone stem cell therapy for degenerative diseases reveal a range of perceptions regarding their health progress after the therapy. The majority of patients reported improvements in their symptoms, although the perceived degree of progress varied. For example, a patient undergoing therapy for osteoarthritis stated, "After this therapy, I feel lighter, especially in my knees. I used to have difficulty walking, but now I can walk long distances." However, not all patients experienced significant improvement. Another patient shared, "I feel some changes, but not as I had hoped. Sometimes the pain comes back, so I'm still unsure about its effectiveness."

It is important to note that while some patients experienced benefits, many also expressed anxiety and uncertainty regarding the long-term outcomes of this therapy. Some patients voiced doubts about its potential. For instance, a patient with a neurological disorder said, "I don't know if

this will last long. The therapy is expensive, and I worry I won't get permanent results." This ambivalence suggests that, while patients feel improvements, they remain overshadowed by doubts and uncertainty about the sustainability of the therapy's results.

Challenges and Medical Practitioners' Perceptions of Stem Cell Therapy

From the perspective of medical practitioners, interviews with doctors experienced in administering stem cell therapy reveal a more pragmatic view of the potential and challenges associated with this therapy. Most medical practitioners agree that stem cell therapy holds significant promise for tissue regeneration and healing. One practitioner treating patients with osteoarthritis said, "We have seen many patients who experience improved mobility after this therapy, especially in cases that have not responded to conventional treatments." However, the primary challenge highlighted by medical practitioners is the lack of clear regulations regarding the use of this therapy, as well as uncertainty about its long-term effectiveness.

Another practitioner shared their viewpoint, saying, "Although we believe in the potential of stem cell therapy, the biggest challenge is dealing with the existing uncertainty, both scientifically and in terms of regulation. In Indonesia, we do not have clear guidelines for using this therapy, so we must be cautious." Additionally, practitioners noted challenges related to the high cost of therapy and limited access to the medical technologies required to administer stem cell therapy.

This underscores the importance of developing healthcare policies that regulate and standardize stem cell therapy practices, ensure its safety and efficacy, and address the economic barriers faced by both providers and patients. Subsidies, insurance coverage, or public-private partnerships could be explored to make this therapy more accessible to a broader population.

Patient Expectations for the Future of Stem Cell Therapy

One significant theme that emerged in interviews with patients is their hopes for the future potential of stem cell therapy. Despite the uncertainty, many patients remain optimistic and hope that this therapy can offer a long-term solution for their degenerative diseases. A patient with heart disease stated, "I hope this therapy can be the solution for me. If there is a way to prevent my condition from worsening, I am willing to try it again." This strong hope reflects confidence in the therapy's potential to address the limitations of current conventional treatments.

However, these hopes are accompanied by concerns about the cost and limited availability of the therapy. Another patient with a neurological disorder added, "I want this therapy to be accessible to more people because I believe it can be a way out for many people with conditions like mine. But the cost is very high, and I'm not sure if I can continue this therapy in the long term."

The main findings of this study suggest that both patients and medical practitioners have complex and varied views of stem cell therapy. Patients experience varying levels of health progress, with some feeling optimistic, while others remain doubtful about the therapy's effectiveness and sustainability. Medical practitioners recognize the potential of stem cell therapy but also identify significant challenges related to regulation, cost, and the need for further research. Patients' hopes for the future of this therapy reflect a high level of optimism, though they face uncertainty regarding access and the cost of the therapy.

DISCUSSION

This study found that the subjective experiences of patients undergoing stem cell therapy for degenerative diseases are significantly influenced by their expectations, anxieties, and perceptions of the therapy's effectiveness (Olufsen dkk., 2022). The findings also reveal that while medical practitioners acknowledge the great potential of this therapy, they face significant challenges related to regulation, costs, and the need for further research. These results directly address the research questions posed, specifically regarding how patients perceive the therapy process and how medical practitioners view the challenges and potential of implementing stem cell therapy in their clinical practices.

These findings contribute significantly to understanding the subjective dimensions of stem cell therapy, which have often been overlooked in previous quantitative studies. Most prior research focused on clinical outcomes or the effectiveness of therapy based on objective medical indicators. However, this study highlights how the emotional and psychological experiences of patients play a crucial role in the acceptance and success of therapy, which cannot be measured through quantitative methods. Optimistic patients tend to have a more positive perception of the therapy's progress, while skeptical or anxious patients often display dissatisfaction and non-compliance with the treatment (Scopetti dkk., 2020). From the perspective of medical practitioners, challenges related to regulation and costs frequently hinder the broader implementation of this therapy. Therefore, this study enriches our understanding of stem cell therapy, not only from a medical standpoint but also from the perspectives of patients and practitioners.

In the context of existing literature, these findings align with previous studies that show how patient expectations and anxieties affect the success of medical therapies (Smith & Jones, 2020). Other studies also emphasize the importance of the emotional relationship between patients and medical practitioners in influencing therapeutic outcomes (Johnson, 2018). However, unlike previous research that focused more on quantitative data, this study employed a phenomenological approach to reveal how the subjective meanings of patients influence their experiences with the therapy (Shahin dkk., 2023). This complements existing literature by providing a more holistic view of the interaction between patients, medical practitioners, and stem cell therapy. Overall, these findings support the notion that subjective experiences are crucial in understanding medical therapy phenomena and can offer richer insights for the development of more effective medical therapies.

Explanation of the Implications of the Findings

The findings of this study have significant implications in the context of understanding the experiences of patients undergoing stem cell therapy for degenerative diseases (Yoo dkk., 2021). Scientifically, the results emphasize the importance of integrating emotional and psychological dimensions into the design of medical therapies, especially those based on new technologies such as stem cell therapy. The patient experiences dominated by expectations, anxieties, and perceptions about the effectiveness of the therapy demonstrate how non-medical factors can influence treatment outcomes. This is particularly important in a social and cultural context, where trust in new medical technologies is often influenced by social norms and cultural values related to health.

The practical implications highlight the importance of providing education and psychological support to patients in order to foster positive expectations and reduce anxiety related to the therapy. Additionally, for medical practitioners, the results of this study suggest the need for clearer policies regarding the regulation and costs of stem cell therapy, so that this therapy can be made accessible to more patients.

Limitations of the Study

While this study provides valuable insights into the experiences of patients and medical practitioners regarding stem cell therapy, there are several limitations that should be considered. First, the limited number of participants and their specific conditions (such as osteoarthritis, heart disease, or neurological disorders) may affect the ability to generalize these findings to a broader population. Additionally, the phenomenological approach used in this study is subjective, meaning that the results heavily rely on the perceptions of the individuals involved, and therefore cannot be considered representative of the entire patient experience with stem cell therapy. This limitation underscores the need for further research with a larger and more diverse sample to strengthen the findings of this study.

Prospective Statement for Future Research

This study opens avenues for further research on patient experiences in the context of stem cell therapy and the application of other innovative medical technologies. The findings highlighting the importance of emotional and psychological factors in the success of therapy can serve as a foundation for further exploration into how psychological support and management of patient expectations can enhance therapeutic outcomes. Additionally, future research could develop a more

comprehensive model of the interaction between patients, medical practitioners, and technology-based therapies, considering broader social, cultural, and economic factors. This research could also be expanded to include the perspectives of other medical practitioners, such as specialists or healthcare professionals involved in the application of stem cell therapy, to provide a more holistic view of the challenges and potential of this therapy in the field.

CONCLUSION

This study focused on the experiences of patients undergoing stem cell therapy for degenerative diseases, with the aim of exploring the meaning and subjective impact faced by patients during treatment. The key findings indicate that expectations, anxieties, and perceptions of the therapy's effectiveness significantly influence the patients' experiences, with a substantial impact on treatment outcomes. This research fills a gap in the existing literature, which has primarily emphasized the technical and medical aspects of the therapy, by highlighting the emotional and psychological factors that affect the patient experience. To address these factors, practitioners are recommended to implement structured psychological support programs tailored to stem cell therapy patients. This could include counseling sessions to manage patient expectations and address anxieties, as well as post-therapy follow-ups to ensure emotional well-being.

For policymakers, it is crucial to establish guidelines that mandate the inclusion of psychological support as part of standard care for stem cell therapy. Additionally, efforts should be made to integrate stem cell therapy into national health insurance schemes, ensuring financial accessibility for a broader population. This will help reduce economic disparities in accessing the therapy and enhance public trust in healthcare systems.

Furthermore, this research opens up opportunities for further exploration of the influence of social, cultural, and economic factors on the success of technology-based therapies. Future studies could expand on these findings with a more diverse sample and a more holistic approach to the interaction between patients, medical practitioners, and innovative therapies.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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