



Interpretative Phenomenological Exploration of Cancer Patients' Emotional Healing Experiences After Stem Cell Therapy

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ABSTRACT

Regenerative medicine, particularly stem cell therapy, has shown promise in treating degenerative diseases and injuries, yet the psychosocial experiences of patients undergoing such treatments remain underexplored. Although clinical research has focused on biological outcomes, the emotional and social dimensions of this treatment process are less understood, particularly in how patients perceive and adapt to their treatment journey. This study aims to address this gap by exploring the lived experiences of patients undergoing stem cell therapy, focusing on their emotional, psychological, and social adaptations. We employ a phenomenological approach, specifically Interpretative Phenomenological Analysis (IPA), to investigate how patients navigate hope, uncertainty, and social pressures throughout their treatment. Data were collected through in-depth interviews with 12 patients, revealing that hope and uncertainty coexist, and that patients' emotional experiences are deeply influenced by both medical expectations and social dynamics. Key findings include that patients experience a delicate balance between hope and uncertainty, and their emotional journeys are shaped by the dynamics of social interactions, which significantly influence their coping mechanisms. Findings suggest that psychosocial adaptation is key to understanding patient experiences, highlighting the need for integrated care that considers both medical and emotional well-being. These insights contribute to the development of more holistic patient-centered care models in regenerative medicine and call for future research into the long-term psychosocial impacts of stem cell therapy.



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INTRODUCTION

Stem cell therapy has emerged as a revolutionary medical advancement, offering promising regenerative potential for various diseases, including cancer, neurodegenerative disorders, and autoimmune conditions. As a therapeutic approach, stem cell transplantation aims to restore damaged tissues, modulate immune responses, and enhance physiological functions (Al-Massri dkk., 2020). Over the past two decades, its application in oncology has gained significant attention, particularly for its role in bone marrow transplants and immunotherapy (Anand dkk., 2019). However, while scientific research has largely focused on the biological efficacy, safety, and clinical outcomes of stem cell therapy, comparatively less attention has been given to how patients experience and internalize the concept of healing after undergoing such treatments.

Research has shown that healing in cancer patients is a multidimensional experience that goes beyond mere biological recovery (Dzobo dkk., 2021). Despite this, existing studies predominantly focus on clinical outcomes, neglecting the emotional, psychological, and social impacts of the healing process. This gap in the literature highlights the need for a more comprehensive exploration of the lived experiences of patients undergoing stem cell therapy.

Given the increasing application of stem cell therapy in oncology, this study addresses the following research question: How do cancer patients undergoing stem cell therapy perceive and navigate their healing process, particularly in terms of emotional, psychological, and social dimensions?

By focusing on patients' lived experiences, this study aims to bridge the gap between clinical advancements and humanistic understanding, emphasizing the significance of psychosocial adaptation and existential transformation. The findings will contribute to a more holistic approach to cancer treatment, recognizing that healing extends beyond biological recovery and is fundamentally intertwined with psychosocial adaptation and identity reconstruction.

The study of patient experiences in medical interventions has increasingly gained recognition as an essential area of research, particularly within the field of qualitative health sciences. In oncology, where treatments such as stem cell therapy have profound and life-altering consequences, understanding the subjective dimensions of healing is crucial (Hu & Pan, 2020). Patients do not experience treatment in isolation; rather, they construct meaning around their illness, therapy, and recovery through interactions with their bodies, emotions, and social environments (Lightner dkk., 2023). These lived experiences shape how individuals perceive their progress, redefine their sense of self, and navigate post-treatment life.

In line with this, a key aspect of the study is to explore how cancer patients balance hope and uncertainty, confront social pressures, and reconstruct their identities post-treatment. Despite the growing acknowledgment of the importance of patient-centered perspectives, significant methodological challenges remain in capturing the depth of human experiences within medical research..

RESEARCH METHODS

Study Design

This study employed an interpretative phenomenological approach (Heideggerian Phenomenology) to explore the subjective experiences of cancer patients who have undergone stem cell therapy and their perception of healing. Phenomenology was chosen as the methodological framework due to its ability to capture the lived experiences of individuals, allowing for an in-depth understanding of how they assign meaning to their healing journey. Unlike quantitative approaches, which focus on objective measurements, phenomenology emphasizes the rich, subjective, and deeply personal nature of human experiences.

The interpretative phenomenological analysis (IPA) was applied to analyze the complex and multidimensional perceptions of healing among participants. IPA is particularly suited for exploring how individuals make sense of their experiences, acknowledging the interplay between subjective interpretation and the broader social and cultural contexts. This approach facilitates a deeper examination of the cognitive, emotional, and existential dimensions of healing, ensuring that the findings reflect the participants' authentic narratives.

Participants

Participants in this study consisted of adult cancer patients who had undergone stem cell therapy within the past two years. The selection was conducted using purposive sampling, ensuring that participants had direct experience with the phenomenon under investigation. Inclusion criteria required individuals to be at least 18 years old, have received a formal medical diagnosis of cancer, and have undergone stem cell therapy as part of their treatment. Participants also needed to possess the cognitive and emotional capacity to articulate their experiences meaningfully.

Exclusion criteria included individuals who were undergoing active cancer treatment during the data collection phase, those with severe cognitive impairment, or individuals unwilling to participate in in-depth interviews. A total of 12 participants were included, comprising both male and female individuals aged between 35 and 67 years. The diversity in demographics allowed for a broad

spectrum of experiences to be captured, ensuring the richness and depth of data necessary for phenomenological inquiry.

Data Collection

Data were collected through semi-structured in-depth interviews, conducted in a private and comfortable setting to facilitate open and honest sharing of experiences. An interview guide was developed by reviewing relevant literature and consulting with experts in the field, ensuring that the questions were relevant and appropriately aligned with the research objectives. The guide included open-ended questions such as: "Can you describe your experience of healing after stem cell therapy?" and "How have your emotional and psychological states changed throughout your treatment?"

Interviews were conducted face-to-face or via secure video conferencing, depending on participants' preferences and accessibility. Each session lasted approximately 60 to 90 minutes, allowing for deep engagement with each participant's personal account. To ensure data accuracy and authenticity, interviews were audio-recorded with participants' consent and subsequently transcribed verbatim for analysis. Additional field notes were taken to capture non-verbal cues and contextual elements that enriched data interpretation.

Data Analysis

The collected data were analyzed using Interpretative Phenomenological Analysis (IPA), a well-established method for exploring lived experiences through systematic thematic interpretation. Analysis followed the six-step approach of IPA, ensuring that each participant's narrative was carefully examined for emerging patterns of meaning.

1. Familiarization with Data – Transcriptions were read multiple times to gain a comprehensive understanding of participants' accounts.
2. Identification of Meaning Units – Significant statements and phrases were extracted and coded according to their relevance to the research question.
3. Development of Emergent Themes – Codes were grouped into broader themes that encapsulated participants' experiences and reflections on healing.
4. Refinement and Thematic Clustering – Themes were refined, merged, or expanded to ensure conceptual clarity and coherence.
5. Interpretation and Contextualization – Themes were examined in relation to existing literature and contextual influences, ensuring that findings were both grounded in data and theoretically informed.
6. Validation and Member Checking – Selected participants were invited to review preliminary interpretations to ensure authenticity and accuracy in representing their lived experiences.

NVivo software was used to facilitate the organization and coding of qualitative data, allowing for a structured and systematic identification of themes while preserving the integrity of participants' narratives.

Ethical Considerations

Ethical approval was obtained from the relevant institutional review board (IRB), ensuring that the study adhered to established ethical guidelines for research involving human participants. Informed consent was obtained in writing from all participants, outlining their rights, confidentiality, and the voluntary nature of their participation.

To protect anonymity, all personal identifiers were removed or pseudonymized, and transcripts were stored in secure, encrypted databases. Participants were informed that they could withdraw from the study at any time without any consequences. The study complied with international ethical research standards, including those set forth by the Declaration of Helsinki (2013) and relevant national research ethics policies.

RESULTS

The Transition from Hope to Acceptance

One of the most prominent themes that emerged from the data was the emotional and psychological transition from hope to acceptance. Many participants entered stem cell therapy with high expectations of a complete cure, viewing it as a last resort after exhausting conventional treatments. However, post-therapy experiences varied significantly, leading to a redefinition of what "healing" meant to them.

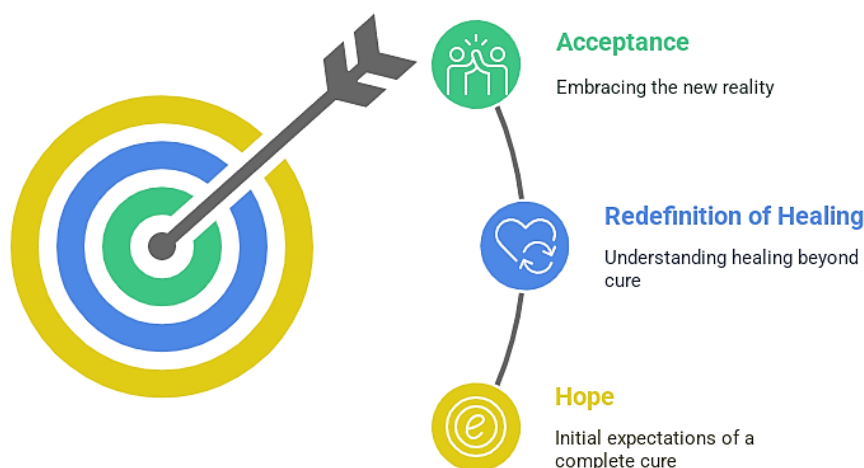
A participant, a 52-year-old breast cancer survivor, described her experience:

"At first, I thought healing meant being completely free from cancer. But after the therapy, I realized that healing is not just about eliminating the disease—it is about reclaiming my life, even with the uncertainties that remain." Similarly, another participant, a 60-year-old leukemia patient, expressed:

"I struggled to accept that my health would never be as it was before. But over time, I found peace in knowing that I had done everything I could. Healing, to me, became about accepting my new reality rather than resisting it."

These accounts highlight the psychological shift in patients' perspectives, moving away from the binary notion of "sick vs. cured" toward a broader, more holistic understanding of healing.

Figure 1. Emotional Transition in Healing



The Role of Spirituality in the Healing Process

For many participants, spirituality played a crucial role in shaping their perception of healing. Spiritual beliefs were found to influence their resilience, ability to cope with uncertainty, and acceptance of their condition.

One participant reflected:

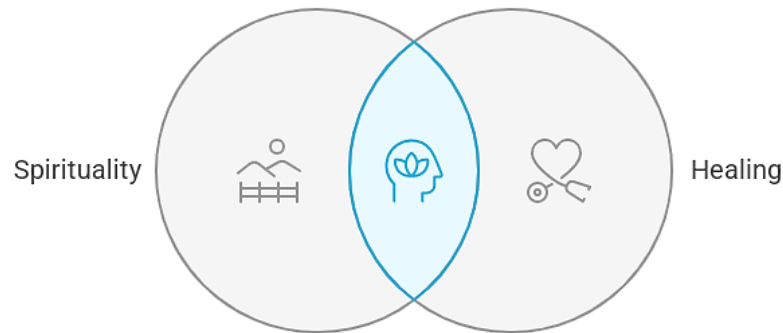
"My faith has been my strongest support. Even when doctors couldn't give me guarantees, I found comfort in believing that this journey, whether it leads to recovery or not, has a deeper purpose."

Another participant shared how prayer and religious practices provided emotional relief:

"I was overwhelmed with anxiety after the therapy, but praying helped me stay grounded. Healing for me became more about inner peace than just physical recovery."

These narratives suggest that, beyond medical interventions, spiritual coping mechanisms significantly contribute to patients' emotional and psychological well-being.

Figure 2. The Intersection of Spirituality and Healing



Social Reintegration and the Challenge of Identity

Post-therapy, participants often faced challenges reintegrating into their social environments. Some struggled with their new identity as cancer survivors, while others felt pressure to appear "normal" despite ongoing health concerns.

A 45-year-old lymphoma survivor explained:

"People expected me to go back to my old life as if nothing happened. But I felt different—I wasn't the same person before the therapy. It took time to adjust and help others understand that healing is not just physical; it's emotional too."

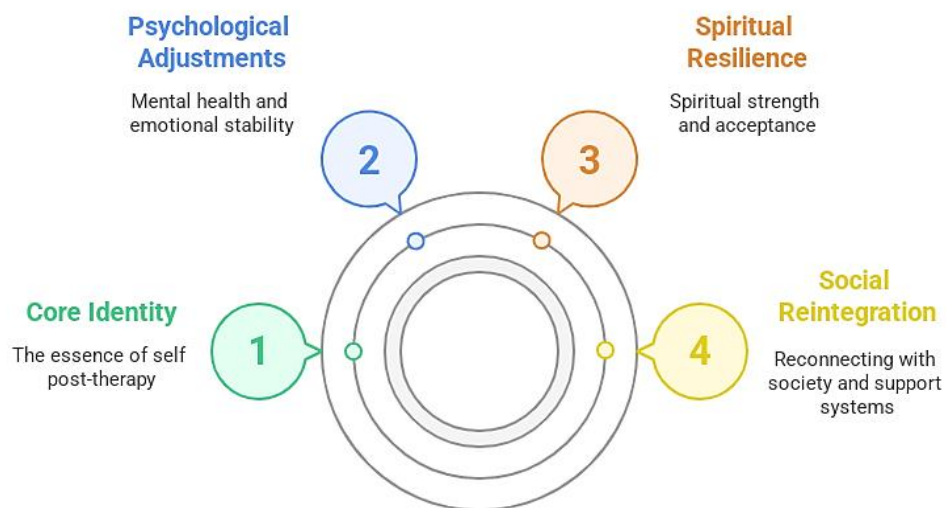
Another participant noted the stigma attached to ongoing health issues:

"Even after treatment, I felt like I had to prove that I was 'okay.' Some people treated me like I was fragile, while others assumed I was fully cured. There was no in-between."

These findings illustrate the social dimension of healing, highlighting the importance of support systems and societal awareness in helping patients navigate their post-therapy realities.

The participants' experiences reveal that healing is a multidimensional process encompassing psychological, spiritual, and social adjustments rather than merely a medical outcome. The narratives suggest that healing is perceived as an evolving journey—one that includes acceptance, spiritual resilience, and social reintegration.

Figure 3. Multidimensional Healing Journey



DISCUSSION

Summary of Key Findings

This study revealed that cancer patients who have undergone stem cell therapy perceive healing not as a binary process of “cured vs. sick,” but as a multidimensional journey involving psychological, emotional, and social transformations. The findings highlight that healing is deeply connected to acceptance, spirituality, and social reintegration, with patients redefining their sense of self and reclaiming control over their lives after treatment. These insights provide a more comprehensive understanding of the subjective experience of healing, thus addressing the research question raised in the introduction: How do cancer patients perceive healing after undergoing stem cell therapy?

Contribution of Findings to the Research Question

The findings contribute significantly to the understanding of healing as a complex and evolving process rather than merely a clinical outcome. By focusing on the subjective experience of cancer patients, this research shows that healing encompasses psychosocial and spiritual dimensions that are often overlooked in traditional clinical assessments. For instance, the emotional shift from hope to acceptance is central to patients’ healing journeys, as they reconcile their expectations with the reality of post-treatment life. Moreover, spiritual beliefs emerge as a key factor influencing emotional resilience, providing patients with a sense of peace and purpose beyond the physical aspects of recovery. These findings challenge the narrow view of healing as a strictly biomedical phenomenon and highlight the need for a holistic approach to patient care, one that incorporates psychological and existential elements in understanding the full scope of healing.

Relation to Literature and Previous Theories

The results align with and extend existing literature on post-cancer recovery and the role of spirituality and social support in the healing process. Previous studies have found that cancer survivors often experience a shift in their sense of self, where recovery is seen not just in terms of physical remission but as a process of identity reconstruction (Mammana dkk., 2019). This study’s emphasis on spirituality as a coping mechanism further supports research that underscores the psychosocial resilience of patients during and after treatment (Anand dkk., 2019). Additionally, while much of the literature on stem cell therapy has focused on clinical outcomes, this research provides a nuanced understanding of healing as experienced by patients, a dimension largely underexplored in previous studies. For example, while Hartheimer dkk. (2019) emphasize the biological and functional recovery post-therapy, this study argues that healing cannot be fully understood without considering the psychological and existential aspects of the patients’ experiences. These findings challenge existing models of healing that focus solely on physical outcomes and highlight the need for incorporating a more integrated, patient-centered approach to care. Thus, this research adds to the growing body of work that calls for a more integrated approach to healing that includes the emotional, social, and spiritual journeys of patients alongside traditional clinical outcomes.

Implications of Findings

The findings from this study carry significant scientific and practical implications for both healthcare practitioners and policymakers. First, the multidimensional nature of healing uncovered in this study emphasizes the need for a holistic approach to patient care, particularly for cancer patients undergoing stem cell therapy. Recognizing that healing encompasses not only physical recovery but also emotional, social, and spiritual dimensions can lead to more patient-centered care practices, where healthcare providers not only address clinical symptoms but also offer support for psychosocial reintegration and spiritual well-being. This has profound implications for how care teams approach post-treatment counseling, support groups, and rehabilitation. Moreover, spiritual support, as identified in the findings, could become a more integrated aspect of post-cancer care programs, fostering an environment where patients feel empowered to navigate their emotional and existential challenges. These insights are not only relevant to cancer care but can also be generalized to other chronic illnesses or conditions where patients undergo significant medical interventions.

Study Limitations

While this study provides valuable insights into the subjective experiences of cancer patients undergoing stem cell therapy, there are several limitations that must be acknowledged. Firstly, the

sample size of 12 participants, while appropriate for phenomenological studies, limits the generalizability of the findings to a broader population. Furthermore, the cultural and social context of the participants may also shape their experiences, meaning the results may be particularly relevant to the group studied but not necessarily transferable to patients in different geographical or cultural settings. The study was also limited to adult cancer patients who were at least 18 years old, excluding younger populations who may have different experiences with treatment and recovery. Additionally, the study's reliance on self-reported data through interviews may introduce subjectivity and bias, as participants may filter or modify their narratives based on social desirability or personal reflections. These limitations suggest that future studies could expand the sample size, explore different populations, and incorporate more diverse data collection methods to validate and extend the findings.

Prospects for Future Research

The findings from this research open several avenues for future studies, particularly in the realm of holistic care in oncology. Future research could explore the long-term effects of stem cell therapy on patients' identity reconstruction and life satisfaction, particularly through longitudinal studies that track changes over time. Additionally, cultural differences in how healing is perceived and experienced could be an important area for investigation, particularly in non-Western contexts where spirituality and community support play a central role in the recovery process. Another promising direction is the exploration of interventions that specifically address the emotional, spiritual, and social dimensions of healing, potentially leading to evidence-based programs for patients undergoing stem cell therapy. These future studies could enrich our understanding of how healthcare systems can better support patients through comprehensive care models that extend beyond physical health to include emotional and existential well-being.

CONCLUSION

This study aimed to explore how cancer patients undergoing stem cell therapy perceive healing, addressing the gap in understanding the subjective and multidimensional aspects of recovery. The findings revealed that healing for these patients is not merely a physical process but involves significant psychological, social, and spiritual transformations. The emotional journey from hope to acceptance, the role of spirituality in fostering resilience, and the challenges of social reintegration emerged as key themes in the patients' healing experiences. These insights fill a critical gap in the existing literature, which has predominantly focused on clinical outcomes without considering the broader, lived experiences of patients. This research highlights the need for a more holistic approach to cancer care that incorporates the emotional and existential dimensions of recovery. To ensure these findings are effectively translated into clinical practice, healthcare providers should integrate psychosocial support and spiritual care into post-treatment plans, fostering a more comprehensive model of patient care. Future studies could expand on these findings by examining the long-term impact of stem cell therapy and exploring cultural variations in healing experiences.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest regarding the publication of this article. No financial or personal relationships that could influence the research have been disclosed.

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