



Integrating Mixed Method Research in Palliative Care of Cancer Patients: Enhancing Holistic Understanding and Patient-Centered Care

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Introduction

Palliative care involves a holistic strategy aimed at improving the well-being of individuals facing life-limiting illness, requiring a thorough grasp of patient experiences, preferences, and necessities. Built upon the tenets of comprehensive care, palliative care demands a profound grasp of not just the medical components but also the emotional, spiritual, and psychosocial facets of patients' existence.¹ Mixed method research (MMR) integrates both qualitative and quantitative research methodologies to offer a holistic comprehension of a research question or phenomenon,² and the intricacy of palliative care experiences can be captured creatively through the use of MMR, to investigate complicated phenomena.³

Benefits and Application of MMR in Palliative Care

MMR enables *triangulation*, where results from one approach can validate or corroborate those from the other, by incorporating both qualitative and quantitative data.² As a result, study findings are more credible and reliable, as the strengths of each method compensate for the weaknesses of the other, leading to a more robust interpretation of findings. *Complementarity* is the use of data from one approach to illustrate the outcomes of another,² where the breadth and statistical rigor of quantitative data are used to complement the depth and richness of qualitative insights. MMR excels in

palliative care, where patient experiences are central, by capturing both the quantifiable outcomes of interventions and qualitative narratives of patients' experiences. The emotional, psychological, and social aspects of patient journeys are illuminated by this dual approach, which also assesses how well therapies improve quality of life and symptom control. Palliative care involves not only patients but also their families and caregivers. Support for the patient's family also should increase along with comfort measures.¹ MMR enables the incorporation of these diverse perspectives ensuring the holistic perspective of caregiving experience and its impact on patient outcomes, which also enables for the contribution of more patient centered care strategies.

MMR offers a plethora of potential applications within palliative care enabling multifaceted exploration of caregivers' dynamics, treatment efficacy, end-of-life decisions, effectiveness of support programs in addition to patient experiences. MMR employed in investigating the *experiences of caregiver* with terminal disease showed both complementary information and discrepancies in the questionnaires and interviews.⁴ While qualitative interviews could delve into the emotional challenges and coping mechanisms used by carer, a quantitative survey could measure the level stress and burden. MMR can be effectively employed in *assessment of treatment efficacy and patients' outcomes*. Palliative and end-of-life care frequently involves complex interventions. The multiphase model of developing and evaluating complex interventions very well

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accommodates mixed method approaches.⁵ Researcher could combine the quantitative measures such as medication dosages, pain, or symptom severity with qualitative focus group discussions or interviews to explore how they perceive the effectiveness of various interventions. This could provide insight into not only the level of physical comfort but also the quality of life and emotional well-being. MMR holds significant promise in exploring *end-of-life decision-making*. It allows to compare decision outcome and process in unique ways⁶ that requires repeated and iterative assessments benefiting from multidisciplinary approach.⁷ Quantitative data analysis of decision-making toward the end of life, including decisions on resuscitation or life-prolonging treatments, may be used to examine the frequency and types of decisions made. Additionally, qualitative data could be gathered by conducting interviews with patients, families, and medical professionals to comprehend the ethical, psychological, and cultural influences on these choices. This method might assist reveal the complex and emotive aspects of end-of-life decisions.

The majority of patients still die in hospitals despite mounting evidence of the advantages of early beginning of palliative treatment.⁸ Therefore, *integrating patient and family preferences* and *evaluating the supportive programs* are essential. Oncology providers can incorporate a standardized strategy for the early introduction of palliative care for cancer patients into their everyday practices. This integration can be accomplished through suitable instruction, incorporation into current clinical workflows, and administrative assistance.⁹ Understanding the congruence/or lack thereof between patient desires for care and the perspectives of their families can be addressed by MMR. Patients' preferences for in-home care versus hospice care may be quantified by surveys, whereas qualitative data may show how families interact and communicate. This integrated strategy might guide treatments that improve patient-centered care.

Design Considerations and Methodological Challenges

While MMR offers significant benefits, it comes with certain design considerations and challenges. Palliative care researchers, along with their counterparts in the field of health research, encounter significant challenges while presenting findings from studies that employ mixed methods. These challenges encompass restrictions imposed by journal space constraints, the limited acquaintance of practitioners with MMR, the intricacies of conveying integration within reports, and authors' inadequate awareness of reporting guidelines. Hence, researchers must strive to condense their writing to effectively capture the complex nature of the MMR process and results, ensuring ample clarity despite the restricted space imposed by journal length limitations. Given that methodological integration requires specialized skills, researchers ought to undergo dedicated training in this methodology. Alternatively, they can collaborate with authors and researchers well-versed in these aspects of research to ensure a proficient execution.³

Ethical Considerations

Health researchers utilizing mixed methods frequently noted the occurrence of ethical concerns, albeit with differing degrees of complexity, and the effectiveness of strategies employed to alleviate these ethical issues varied as well. In MMR, the ethical dilemmas that posed the greatest challenges revolved around addressing participant burden, communication, and dissemination.¹⁰ Hence, emphasis to be placed on the necessity to ensure the well-being of participants, uphold privacy and confidentiality, and approach sensitive subjects with empathy and respect.

Conclusion

Through the embrace of an encompassing methodology that harmoniously integrates qualitative and quantitative viewpoints, researchers and practitioners can delve more deeply into understanding patient experiences, preferences, and necessities. This holistic approach empowers them to develop interventions that are not only more efficacious but also aligned with the patient's perspective, fostering a genuinely patient-centered approach to palliative care.

Conflict of Interest

None declared.

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