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Research Article

A Statistical and Large Language Model to Define Oncology Nursing Advocacy Self-Perceptions: An Explorative Study

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Aim: To explore how Italian nurses working in oncology perceive patient advocacy within their clinical environments.
Design: An observational, cross-sectional study examining self-perceptions of patient advocacy in oncology nursing practice.
Methods: Demographic data were summarized as frequencies and percentages. Open-ended responses were analyzed using generative artificial intelligence (GAI). A freely accessible large language model (LLM) was employed to identify, cluster, and summarize the most relevant concepts and recurring terms provided by oncology nurses. The LLM enabled the extraction of key themes concerning experiences, strategies, and emotional outcomes related to cancer advocacy.
Results: A total of 183 Italian oncology nurses participated in the study. Most participants were female (78.1%); 60.1% held a bachelor's degree, 55.2% had completed postbasic training, and 25.1% possessed a specific oncology certificate. The analysis revealed core emotional and professional themes, highlighting nurses' sense of moral responsibility, communication challenges, and ethical dilemmas when advocating for patients.
Conclusions: The findings underscore the emotional and professional complexity inherent in oncology nursing advocacy. While many nurses reported empowerment and professional fulfillment through advocacy, others experienced frustration and isolation when encountering conflict or resistance.
Implications for Nursing Practice: This study emphasizes the need for structured education, emotional support, and communication training to better prepare oncology nurses for the demands of patient advocacy.

Keywords: artificial intelligence; large language models; oncology nursing; patient advocacy; qualitative analysis

1. Introduction

Advocacy is recognized as an essential component of nursing practice, ensuring both professional accountability and impact on health policy [1]. Understanding the mechanisms that promote engagement and evidence-based improvement in nursing practice, including oncology care, is therefore critical [2]. Advocacy also plays a pivotal role in shared decision-making processes, supporting safe, effective, and patient-centered care for individuals with cancer [3].

Within oncology nursing, advocacy is particularly important because cancer patients often struggle to express themselves due to emotional distress, fear, or uncertainty, which may negatively affect their perceived quality of care [4, 5]. Despite progress in early screening and minimally invasive treatments, cancer patients continue to experience challenges in communicating their emotional concerns [6–9].

In 2011, the American Nurses Association (ANA) stated that "*The nurse promotes, advocates for, and strives to protect the health, safety, and rights of the patient.*" [10]. Advocacy has since been described as a professional and ethical duty to promote patients' autonomy in decision-making and to support them in expressing and achieving their health-related needs [11]. However, the literature remains unclear on how nurses understand and operationalize this advocacy role in practice [12]. While evidence supports nurses' awareness of advocacy, limited data describe how and under what circumstances they actively engage in it [13].

In oncology, increasing survival rates have made patients more informed and involved in healthcare decisions. This shift toward a chronic care model has amplified the need for advocacy, as patients seek to align medical decisions with their personal values and preferences [14].

Advocacy provides numerous benefits, such as fostering informed decision-making, improving communication between patients and healthcare professionals, and promoting autonomy and adherence to care [15, 16]. Conversely, barriers such as poor interprofessional communication, financial limitations, and unequal access to culturally sensitive information persist [17]. Strengthening advocacy may therefore enhance both patient outcomes and nurse–patient relationships, leading to higher-quality, patient-centered cancer care [18–20].

However, few studies have investigated advocacy from the perspective of healthcare professionals themselves [21–23]. The literature indicates that nurses often feel inadequately prepared to address advocacy issues in practice, highlighting the need for further exploration of their perceptions and experiences [24].

1.1. A Statistical and Large Language Model (LLM) Approach. Analyzing structured questionnaire items with predefined response options is relatively straightforward. However, interpreting open-ended responses presents unique challenges due to the absence of standardized methods for qualitative analysis. Traditional qualitative approaches, such as manual coding or keyword extraction, can be time-consuming and may fail to capture the depth and nuance of participants' narratives.

While Natural Language Processing (NLP) techniques have been widely applied for tasks such as sentiment or emotion detection, they often oversimplify complex human emotions and contextual subtleties. For example, NLP tools may classify text broadly into categories like "joy" or "anger," yet they frequently overlook the nuanced emotional expressions that are essential for a deeper understanding of qualitative data [25].

Recent advances in artificial intelligence, particularly the development of LLMs such as GPT-4 and ChatGPT [26], have introduced new possibilities for extracting meaningful insights from unstructured text. Trained on vast and diverse datasets, these models can capture context, nuance, and implicit meaning far more effectively than traditional NLP methods. LLMs enable refined sentiment and thematic analysis, providing richer interpretations of emotion, tone, and intent. Moreover, their ability to process large volumes of qualitative data significantly reduces the time and human bias associated with manual analysis.

In this study, we leveraged the analytical capabilities of generative AI, specifically an LLM, to examine open-ended questionnaire responses. The objective was to explore oncology nurses' experiences with patient advocacy, focusing on their strategies, emotional responses, and perceptions of advocacy outcomes. By applying LLM-based analysis, we aimed to identify recurring themes, uncover emotional nuances, and obtain a comprehensive understanding of the challenges and strategies inherent in oncology nursing advocacy.

2. Materials and Methods

2.1. Study Design. This observational, cross-sectional study was conducted among Italian oncology nurses between December 2023 and August 2024.

2.2. Study Procedure. All Italian Nursing Professional Orders (Ordini Professionali Infermieristici) were contacted through their respective presidents by email and invited to participate. Each president was asked to disseminate the questionnaire link to their registered members. If a president granted written approval, the research team sent the active survey link directly.

A total of 103 Nursing Orders were contacted. Of these, the presidents of Lecce, Bergamo, Rome, Arezzo, Gorizia, La Spezia, Varese, and Asti agreed to participate. Additionally, the Italian Association for Palliative Care granted consent for dissemination on January 24, 2024.

2.3. Participant Selection. The questionnaire was distributed to all nurses registered with the participating Nursing Orders. The cover letter clearly stated that the survey targeted nurses, nursing coordinators, and nurse managers working in oncology settings—whether in hospitals, outpatient clinics, or private and public institutions.

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2.4. Sample Size. According to the Italian Ministry of Health, nurses represent 59.2% of all healthcare workers in Italy [27], corresponding to approximately 617,246 individuals. Assuming a 95% confidence interval and a 5% margin of error, and applying Miller and Brewer's formula [28], a representative sample was estimated at 400 nurses across all specialties. Given that there are 70 clinical specialties within the Italian healthcare system, the obtained sample size was considered sufficient for representativeness within oncology nursing [29].

2.5. Questionnaire. The first section of the questionnaire collected demographic information, including gender, educational level, years of work experience in oncology, postbasic training (general and oncology-specific), and work shift characteristics.

The second section comprised three open-ended questions designed to elicit participants' self-perceptions and experiences regarding their advocacy behaviors within the workplace.

2.6. Statistical Analysis. Data were compiled using Microsoft Excel. Demographic variables were treated as categorical and expressed as frequencies and percentages.

2.7. Analysis of Open-Ended Questions Using a LLM. The three open-ended questions included:

1. "Can you describe one or more experiences where you felt the need to act as an advocate for a patient?"
2. "What strategies did you use?"
3. "What were the consequences?"

Responses were processed and analyzed using a freely accessible embedding model implemented in Python. Textual responses were first transformed into vector embeddings to numerically represent qualitative content. Unlike previous studies that generated multiple clusters, our analysis produced a single, coherent thematic cluster, reflecting consistent themes across all responses. This approach enabled the identification of frequently occurring terms and key concepts without further subgroup division.

In the second phase, the unified cluster was summarized to synthesize experiences, strategies, and emotional consequences expressed by participants. This method allowed for a comprehensive overview of recurring themes and affective undertones in oncology nursing advocacy [4, 15].

2.8. Ethical Considerations. The study's purpose and procedures were clearly outlined at the beginning of the questionnaire. Participants were required to read this information and provide informed consent before proceeding. Only those who consented could complete the survey.

The study was approved by the Ethics Committee of Bologna, Italy (Approval ID: 0388077/28.12.2023).

3. Results

A total of 183 Italian nurses working in oncology participated in this study. Most participants were female (78.1%), held a bachelor's degree (60.1%), and had completed postbasic training (55.2%). One-fourth (25.1%) had a postbasic certificate specifically in oncology nursing. Most nurses were employed full-time (96.2%), and 39.3% worked night shifts (Table 1).

Table 1: Participants' characteristics according to years of work experience in oncology settings ($n = 183$).

Sampling characteristics	n (%)
Sex	
Female	143 (78.1)
Male	40 (21.9)
Education level	
Diploma	57 (31.1)
Bachelor	110 (60.1)
Master and above	16 (8.7)
Postbasic training	
Yes	101 (55.2)
No	82 (44.8)
Postbasic training in oncology	
Yes	46 (25.1)
No	137 (74.9)
Shift work	
Only morning	55 (30.1)
Morning and afternoon	56 (30.6)
Morning, afternoon and night	72 (39.3)
Work typology	
Full-time	176 (96.2)
Part-time	7 (3.8)

The use of an LLM to analyze the open-ended responses provided valuable insights into oncology nurses' experiences, strategies, and emotional consequences associated with advocacy. Responses were processed using vector embedding techniques to identify recurring terms and themes. Due to thematic consistency, a single cluster was used to represent the data.

Table 2 summarizes the most frequent keywords and concepts identified, along with the main findings for each question.

4. Discussion

The application of an LLM enabled a detailed exploration of oncology nurses' perspectives on patient advocacy, revealing a complex balance between emotional engagement and professional responsibility.

A prevailing theme was the profound sense of moral obligation nurses felt when advocating for patients, particularly in cases involving difficult treatment decisions or communication barriers. Many participants described advocacy as both empowering and emotionally taxing. This aligns with previous studies highlighting nurses' deep commitment to safeguarding patients' rights and well-being [16].

Nurses' advocacy strategies reflected both clinical competence and emotional intelligence. Participants emphasized open communication with healthcare teams, evidence-based reasoning, and institutional awareness as essential advocacy tools. Emotional support for patients emerged as a complementary component, fostering patient confidence and autonomy in treatment decisions [18].

Table 2: Analysis of responses to the three open-ended questions.

Open-ended question 1: Can you describe one or more experiences where you felt the need to act as an advocate for a patient? **Frequent Concepts and Words**	**Summary**
Responsibility: The feeling of moral obligation to ensure patients receive the best care. Communication: Acting as intermediaries to ensure the patient's voice is heard. Dignity: Protecting patient dignity and making sure their needs and preferences are respected. Decision-making: Helping patients navigate tough choices regarding their treatment. Pain management: Advocating for appropriate and timely pain relief.	Many oncology nurses expressed a strong sense of responsibility when acting as advocates for their patients. They often stepped in when they perceived a gap in care, miscommunication, or the need to protect the dignity of patients. Specific examples included defending patients' treatment preferences, advocating for timely pain management, and stepping in during difficult decision-making processes, especially when family or medical teams had differing opinions.
Open-ended question 2: What strategies did you use?	
Communication: Open and honest discussions with the healthcare team and families. Research: Providing evidence-based recommendations to support patient advocacy. Emotional support: Helping patients gain confidence in expressing their preferences. Policies: Using institutional or legal frameworks to ensure the patient's rights are respected.	The nurses used a variety of strategies to advocate effectively for their patients. These included direct communication with doctors or family members, gathering and presenting evidence or research to support the patient's needs, and offering emotional support to empower the patient to make their own informed decisions. Some also leveraged institutional policies or ethical committees when faced with conflicts, ensuring that patient rights were prioritized.
Open-ended question 3: What were the consequences?	
Patient satisfaction: Advocacy leads to improved patient well-being and comfort. Conflict: Potential friction with medical staff or families when defending patient choices. Communication improvement: Strengthened dialogue within the healthcare team. Empowerment: Enabling patients to feel more in control of their treatment decisions.	The consequences of advocacy were often positive, including improved patient satisfaction, better alignment between treatment plans and patient preferences, and more cohesive communication among healthcare teams. However, some nurses reported experiencing tension with colleagues or family members when advocating for patients, particularly in cases where the nurse's views conflicted with those of the medical team or family.

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However, advocacy also generated interpersonal challenges. Several nurses reported tension or disagreement with colleagues and family members, particularly when patient preferences conflicted with professional opinions. Such conflicts often led to emotional exhaustion, frustration, or isolation—findings consistent with prior literature on moral distress among oncology professionals [3].

Positive outcomes of advocacy included enhanced patient satisfaction, improved communication, and a stronger sense of professional fulfillment. Yet, the emotional burden associated with advocacy underscores the need for structured institutional support, peer collaboration, and educational programs focused on emotional resilience and communication [18].

This study represents a novel, exploratory approach integrating statistical methods with LLM-based qualitative analysis. While the use of AI facilitated efficient data interpretation and reduced human bias, limitations remain. The model was applied primarily for thematic extraction rather than evaluating the reliability or accuracy of clustering. Additionally, the use of online recruitment may have introduced self-selection bias and limited generalizability [3].

In conclusion, the study underscores the emotional and professional duality inherent in oncology nursing advocacy. While advocacy empowers nurses to act as patient champions, it can also lead to emotional fatigue when met with resistance. These findings highlight the need for targeted educational interventions and institutional strategies to strengthen nurses' emotional well-being, communication skills, and advocacy competencies in complex care settings [18].

Moreover, they provide a foundation for future interventional studies aimed at developing and evaluating educational programs to enhance oncology nurses' advocacy skills and ultimately improve patient outcomes.

Data Availability Statement

Data are available from the corresponding author and the first author upon reasonable request.

Disclosure

The authors affiliated to the IRCCS IstitutoTumori "Giovanni Paolo II", Bari are responsible for the views expressed in this article, which do not necessarily represent the Institute.

Conflicts of Interest

The authors declare no conflicts of interest.

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References

[1] R. Berardi, A. Parisi, M. Maruzzo, et al., "Communication in Oncology Between Healthcare Providers, Patients, the Scientific Community, and the Media: Recommendations From the Italian Association of Medical Oncology (AIOM)," *Supportive Care in Cancer* 32, no. 9 (2024): 613, https://doi.org/10.1007/s00520-024-08786-8.

[2] R. Blackburn, K. G. Johnson, and S. Chaveleh, "Advocacy: the Pivotal Role of Oncology Nurses," *Clinical Journal of Oncology Nursing* 24, no. 1 (2020): 103–106, https://doi.org/10.1188/20.CJON.103-106.

[3] J. Buitrago, "Strategies to Mitigate Moral Distress in Oncology Nursing," *Clinical Journal of Oncology Nursing* 27, no. 1 (2023): 87–91, https://doi.org/10.1188/23.CJON.87-91.

[4] Y. K. Chia, P. Hong, L. Bing, and S. Poria, "INSTRUCTEVAL: Towards Holistic Evaluation of Instruction-Tuned Large Language Models" (2023).

[5] S. Chidambaram, T. DeShields, P. Potter, S. Olsen, and L. Chen, "Patient and Provider Concordance on Symptoms During the Oncology Outpatient Clinic Visit," *The Journal of Community and Supportive Oncology* 12, no. 10 (2014): 370–377, https://doi.org/10.12788/jcso.0080.

[6] E. D. Collins, C. P. Moore, K. F. Clay, et al., "Can Women With Early-Stage Breast Cancer Make an Informed Decision for Mastectomy?" *Journal of Clinical Oncology* 27, no. 4 (2009): 519–525, https://doi.org/10.1200/JCO.2008.16.6215.

[7] L. Conte, R. Lupo, A. Lezzi, et al., "Knowledge and Misinformation About Breast Cancer Risk Factors, Symptoms, and Prevention Among Healthy and Affected Women: A Study on 2375 Italian Participants," *Health Care* 12, no. 21 (2024): 2126, https://doi.org/10.3390/healthcare12212126.

[8] L. Conte, M. Greco, D. M. Toraldo, M. Arigliani, M. Maffia, and M. De Benedetto, "A Review of the "OMICS" for Management of Patients With Obstructive Sleep Apnoea," *Acta Otorhinolaryngologica Italica* 40, no. 3 (2020): 164–172, https://doi.org/10.14639/0392-100X-N0409.

[9] L. Conte, B. Tafuri, M. Portaluri, A. Galiano, E. Maggiulli, and G. De Nunzio, "Breast Cancer Mass Detection in DCE–MRI Using Deep-Learning Features Followed by Discrimination of Infiltrative vs. in Situ Carcinoma Through a Machine-Learning Approach," *Applied Sciences* 10, no. 17 (2020): 6109, https://doi.org/10.3390/app10176109.

[10] M. L. Crowe, "A Nurse-Managed Advocacy Clinic in a Hispanic Senior Center: Using a Concept-Based Clinical Practice Site to Enhance Nursing Education," *Nurse Educator* 39, no. 6 (2014): 302–306, https://doi.org/10.1097/NNE.0000000000000074.

[11] S. Gaard and S. Schrager, "Empowering Patients With a Written Agenda," *Wisconsin Medical Journal* 106, no. 8 (2007): 449–451.

[12] T. L. Hagan and E. Medberry, "Patient Education vs. Patient Experiences of Self-Advocacy: Changing the Discourse to Support Cancer Survivors," *Journal of Cancer Education* 31, no. 2 (2016): 375–381, https://doi.org/10.1007/s13187-015-0828-x.

[13] M. F. Kohnke, *Advocacy, Risk and Reality* (The C. V. Mosby Co, 1982).

[14] X. Lu and R. Zhang, "Impact of Physician–Patient Communication in Online Health Communities on Patient Compliance: Cross-Sectional Questionnaire Study," *Journal of Medical Internet Research* 21, no. 5 (2019): e12891, https://doi.org/10.2196/12891.

[15] R. Lupo, E. Vitale, L. Panzanaro, et al., "Effects of Long COVID on Psycho-Physical Conditions in the Italian Population: A Statistical and Large Language Model Combined Description," *European Journal of Investigation in Health Psychology and Education* 14, no. 5 (2024): 1153–1170, https://doi.org/10.3390/ejihpe14050076.

nuf, 2025, 1, Downloaded from https://onlinelibrary.wiley.com/doi/10.1155/nuf/5423366 by CochraneItalia, Wiley Online Library on [18/12/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

[16] X. C. Lyu, H. J. Jiang, L. H. Lee, C. I. Yang, and X. Y. Sun, "Oncology Nurses' Experiences of Providing Emotional Support for Cancer Patients: a Qualitative Study," *BMC Nursing* 23, no. 1 (2024): 58, https://doi.org/10.1186/s12912-024-01718-1.

[17] R. McCorkle, E. Ercolano, M. Lazenby, et al., "Self-Management: Enabling and Empowering Patients Living With Cancer as a Chronic Illness," *CA: A Cancer Journal for Clinicians* 61, no. 1 (2011): 50–62, https://doi.org/10.3322/caac.20093.

[18] C. McCracken, N. McAndrew, K. Schroeter, and K. Klink, "Moral Distress: A Qualitative Study of Experiences Among Oncology Team Members," *Clinical Journal of Oncology Nursing* 25, no. 4 (2021): E35–E43, https://doi.org/10.1188/21.CJON.E35-E43.

[19] R. L. Miller and J. D. Brewer, *The A–Z of Social Research: A Dictionary of Key Social Science Research Concepts* (Sage Publications, 2003).

[20] Ministero Della Salute, Direzione Generale Della Digitalizzazione, and Del Sistema Informativo Sanitario e Delle Statistica, "Ufficio Di Statistica," (2021), https://www.salute.gov.it/portale/temi/.

[21] National Academies of Sciences, Engineering, and Medicine, Health and Medicine Division, Board on Health Care Services, and National Cancer Policy Forum, *Long-Term Survivorship Care After Cancer Treatment: Proceedings of a Workshop* (National Academies Press, 2018).

[22] National Association of Social Workers, "Code of Ethics of the National Association of Social Workers," (2008), https://www.socialworkers.org/pubs/code/code.asp.

[23] C. Nsiah, M. Siakwa, and J. P. K. Ninnoni, "Registered Nurses' Description of Patient Advocacy in the Clinical Setting," *Nursing Open* 6, no. 3 (2019): 1124–1132, https://doi.org/10.1002/nop2.307.

[24] V. Penalba, T. L. DeShields, and D. Klinkenberg, "Gaps in Communication Between Cancer Patients and Healthcare Providers: Symptom Distress and Patients' Intentions to Disclose," *Supportive Care in Cancer* 27, no. 6 (2019): 2039–2047, https://doi.org/10.1007/s00520-018-4442-4.

[25] E. Vitale, M. P. Giammarinaro, R. Lupo, et al., "The Quality of Patient–Nurse Communication Perceived Before and During the COVID-19 Pandemic: An Italian Pilot Study," *Acta BioMedica: Atenei Parmensis* 92, no. S2 (2021): e2021035, https://doi.org/10.23750/abm.v92iS2.11300.

[26] A. Waddell, K. Audette, A. DeLong, and M. Brostoff, "A Hospital-Based Interdisciplinary Model for Increasing Nurses' Engagement in Legislative Advocacy," *Policy, Politics, & Nursing Practice* 17, no. 1 (2016): 15–23, https://doi.org/10.1177/1527154416630638.

[27] W. Wahlster, "Understanding Computational Dialogue Understanding," *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* 381, no. 2251 (2023): 20220049, https://doi.org/10.1098/rsta.2022.0049.

[28] J. Wiltshire, K. Cronin, G. E. Sarto, and R. Brown, "Self-Advocacy During the Medical Encounter: Use of Health Information and Racial/Ethnic Differences," *Medical Care* 44, no. 2 (2006): 100–109, https://doi.org/10.1097/01.mlr.0000196975.52557.b7.

[29] *Ministry of Health. Codici Delle Specialità Cliniche e Delle Discipline Ospedaliere* (2024), https://www.salute.gov.it/portale/temi/.

nuf, 2025, 1, Downloaded from https://onlinelibrary.wiley.com/doi/10.1155/nuf/5423366 by CochraneItalia, Wiley Online Library on [18/12/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License