

A Cross-Sectional Study on the Impact of Nurse-Led Health Coaching on Oncology Patient Outcomes

Mohammed Almutairi¹, Ashwaq A Almutairi², Abdulaziz M Alodhialah¹

¹Department of Medical-Surgical Nursing, College of Nursing, King Saud University, Riyadh, Saudi Arabia; ²School of Nursing & Midwifery, Monash University, Melbourne, Australia

Correspondence: Abdulaziz M Alodhialah, Email aalodhailah@ksu.edu.sa

Background: Nurse-led health coaching is a promising intervention in oncology care aimed at improving patient-centered outcomes such as self-efficacy, symptom management, and adherence. This study investigates the association between the frequency of health coaching sessions and key clinical and psychosocial outcomes among cancer patients undergoing active treatment.

Objective: To explore the impact of nurse-led health coaching on self-efficacy, symptom severity, adherence, shared decision-making, and emotional well-being in oncology patients, with outcomes assessed immediately after coaching sessions.

Methods: A cross-sectional, correlational study was conducted with 326 adult cancer patients receiving outpatient treatment at comprehensive cancer centers. Eligible participants had completed at least two health coaching sessions within the previous three months. Data were collected using validated tools, including the PROMIS Global-10 for symptom severity, the Self-Efficacy for Managing Chronic Disease 6-Item Scale, and the CollaboRATE shared decision-making measure. All outcomes were assessed immediately after a coaching session to ensure accurate reflection of patients' experiences. Logistic regression analysis examined the relationships between coaching frequency and outcomes, adjusting for demographic and clinical factors.

Results: Patients who attended five or more health coaching sessions had significantly greater odds of achieving high self-efficacy (OR = 2.68, 95% CI: 1.75–4.11), low symptom severity (OR = 2.14, 95% CI: 1.41–3.23), and high adherence (OR = 2.89, 95% CI: 1.82–4.58). Additionally, frequent coaching was strongly associated with improved shared decision-making (OR = 3.45, 95% CI: 2.21–5.38) and emotional well-being (OR = 3.12, 95% CI: 2.00–4.87). Coaching also significantly reduced fatigue and pain levels.

Conclusion: Frequent nurse-led health coaching significantly improves both clinical and psychosocial outcomes in oncology patients. These findings emphasize the importance of integrating structured coaching interventions into routine cancer care.

Keywords: health coaching, oncology nursing, self-efficacy, symptom management, treatment adherence, shared decision-making

Introduction

Health coaching, defined as a patient-centered interaction focused on facilitating healthy behavioral changes and improving disease self-management, has gained traction as a promising intervention across various healthcare contexts.¹ Within oncology care, patients often face complex, multifaceted challenges that span clinical, psychological, and social domains.² Managing cancer and its associated treatments can be a daunting experience for patients, who may struggle with medication adherence, coping strategies, symptom management, and navigating the healthcare system.³ Over the past two decades, there has been increasing recognition of the pivotal role nurses can play in addressing these challenges, as they often serve as the first line of patient contact and are well-positioned to provide holistic, tailored guidance.⁴ Specifically, oncology nurses who receive training in health coaching techniques can offer structured, empathetic, and evidence-based support, potentially resulting in improved clinical outcomes and enhanced patient experiences.⁵

Cancer care delivery models have undergone significant evolution. Traditional physician-led approaches, while essential, may not fully meet the personalized needs of patients who experience diverse side effects, varying degrees

of psychosocial distress,⁶ and unique informational requirements.⁷ Oncology nurses, by virtue of their ongoing patient contact, have emerged as key actors who can bridge the gap between patients and the broader healthcare team.⁸ With comprehensive training in health coaching principles, such as motivational interviewing, goal setting, and active listening, oncology nurses can help patients understand treatment plans, anticipate side effects, and adopt healthier lifestyles.⁹ These coaching interactions are grounded in the theory of patient empowerment, positing that when individuals gain the knowledge and confidence needed to manage their condition, they are more likely to adhere to treatment protocols and maintain better quality of life.^{10,11}

Patient experiences in oncology settings are increasingly recognized as critical determinants of care quality. Healthcare institutions, accreditation bodies, and policymakers emphasize patient engagement and satisfaction as essential targets for improvement.^{12,13} Evidence suggests that patients who feel supported, informed, and involved in their care decisions may experience lower levels of anxiety, less symptom burden, and greater adherence to prescribed therapies.¹⁴ Health coaching interventions delivered by oncology nurses can address these aspects by fostering a sense of partnership, validating patients' emotional experiences, and responding proactively to evolving patient needs.¹⁵ As patients navigate the demanding and often unpredictable trajectory of cancer treatment, consistent and relationship-focused interactions with a trained nurse coach can mitigate feelings of isolation, confusion, and vulnerability.^{16,17}

From a clinical standpoint, the potential impact of nurse-led health coaching on treatment adherence, symptom severity, and healthcare utilization deserves greater attention. Studies have indicated that patients who receive structured educational and supportive interventions are more likely to comply with oral chemotherapy regimens, attend follow-up appointments, and engage in recommended self-care activities.¹⁸ Improved adherence is particularly relevant in oncology, where irregular medication intake or missed appointments can compromise treatment efficacy and overall prognosis.¹⁹ Furthermore, better symptom management—ranging from controlling nausea and pain to addressing fatigue and psychological distress—may prevent unnecessary emergency department visits or hospital admissions, thereby reducing healthcare costs and improving patient well-being.²⁰

Although several interventions seek to improve patient outcomes in oncology, the unique advantage of nurse-led health coaching lies in its adaptability and continuity.²¹ Nurses are integral members of the interdisciplinary care team who can maintain communication with patients over time, adjusting the intervention according to changes in the patient's condition or treatment plan.²² This longitudinal engagement not only supports immediate symptom relief but also builds patient resilience and self-efficacy, which are crucial for long-term disease management and survivorship.²³ As cancer treatments become more complex—with the growing use of targeted therapies, immunotherapies, and multimodal regimens—patients need ongoing guidance to understand their evolving care plans and manage emerging side effects.²⁴

Despite the intuitive appeal of nurse-led health coaching, the current evidence base, while promising, remains somewhat fragmented. Much of the literature focuses on disease-specific educational interventions rather than comprehensive coaching frameworks.²⁵ Although patient education is undeniably essential, it differs from coaching in that it often involves a one-directional transfer of information.²⁶ In contrast, coaching emphasizes patient empowerment, mutual goal setting, and skill-building, which may yield broader and more sustainable benefits.²⁷ Therefore, clarity is needed to distinguish between simple patient education sessions and structured health coaching interventions that incorporate motivational interviewing, active listening, and behavior change strategies.²⁸

In recent years, patient-centered, integrative care models have gained considerable traction in oncology. These frameworks stress the importance of communication, shared decision-making, and psychosocial support, all of which align with the core principles of health coaching.²⁹ Consequently, health coaching delivered by oncology nurses represents an approach that not only addresses patients' immediate needs but also enhances their capacity to actively participate in their care journey. By refining and validating the evidence base for these interventions, healthcare providers, institutions, and policymakers can embrace nurse-led health coaching as a central component of comprehensive cancer care.³⁰ Ultimately, the promise of improved clinical outcomes and enriched patient experiences underscores the importance of further investigating and integrating health coaching into oncology nursing practice.

Aim of the Study

The primary aim of this study was to examine the association between health coaching interventions delivered by oncology nurses and key clinical and patient-experience outcomes in adult cancer patients undergoing active treatment. Specifically, the study aimed to determine whether greater exposure to and perceived quality of nurse-led health coaching was associated with improved symptom management, higher treatment adherence rates, enhanced self-efficacy in coping with side effects, and greater overall patient satisfaction.

Research Question

The central research question guiding this study was:

Does receiving structured health coaching from oncology nurses relationship clinical outcomes and patient-reported experiences among adult patients undergoing cancer treatment?

Methods

Design

Cross-sectional design was employed. This design allowed for the examination of the relationship between the independent variable (the extent and perceived quality of health coaching delivered by oncology nurses) and several dependent variables (symptom severity, adherence to treatment protocols, patient satisfaction, and self-efficacy) at a single point in time. While this approach does not establish causality, it provides valuable insight into the associations between variables and helps generate hypotheses for future longitudinal or interventional research.

The nurse-led health coaching sessions in this study were part of the routine care provided at the participating comprehensive cancer centers. Oncology nurses at these institutions were already trained in patient education, symptom management, and psychosocial support, and coaching was integrated into their standard patient interactions. However, for the purpose of this study, the frequency and impact of these coaching sessions were systematically assessed using validated patient-reported outcome measures. This approach allowed us to evaluate the relationship between coaching exposure and key clinical and psychosocial outcomes without introducing an entirely new intervention.

Setting

Data were collected from four large, urban comprehensive cancer centers located in Riyadh city, Saudi Arabia. Each of these institutions is recognized for providing multidisciplinary oncology care, including chemotherapy, radiation therapy, immunotherapy, and targeted treatments for various types of solid and hematologic malignancies. The cancer centers selected were equipped with dedicated nursing teams trained in patient education, communication skills, and psychosocial support, ensuring that the concept of nurse-led health coaching was already integrated to some extent within their standard care routines.

Sample and Sampling

The target population included adult patients (aged ≥ 18 years) diagnosed with cancer and receiving active outpatient treatment (chemotherapy, radiation, targeted therapy, or immunotherapy) at one of the participating centers. Eligible patients had to have completed at least two documented health coaching sessions with an oncology nurse within the preceding three months. Health coaching sessions were defined as scheduled, nurse-led interactions focusing on symptom management, understanding treatment plans, medication adherence, and psychosocial support, rather than routine clinical assessments.

Exclusion criteria included patients with significant cognitive impairments that would impede reliable self-reporting (eg, advanced dementia), patients who were non-English or non-local language speakers if translations were not available, and those unwilling to participate.

A convenience sampling strategy was employed. Over a one-month recruitment period October to November 2024, research nurses approached eligible patients during scheduled outpatient visits and introduced the study. Patients who expressed interest were given detailed information about the research, its voluntary nature, and data confidentiality.

A power analysis was conducted to determine the appropriate sample size for this study. Based on previous literature examining the effects of nurse-led interventions on patient-centered outcomes, we estimated a moderate effect size (Cohen's $d = 0.5$). To achieve a power of 0.80 at a significance level of $\alpha = 0.05$, a minimum of 300 participants was required. Given potential data attrition and incomplete responses, we aimed for a slightly larger sample size, ultimately enrolling 326 participants. This calculation ensures sufficient statistical power to detect meaningful associations between coaching frequency and clinical outcomes. These details have been added to the methods section.

The feasibility of enrolling 326 participants within one month was ensured by leveraging the high patient volume at four large comprehensive cancer centers in Riyadh, Saudi Arabia, where nurse-led health coaching was already an established part of standard care. These centers serve a large number of oncology patients undergoing outpatient treatment, providing a steady pool of eligible participants. Additionally, the recruitment process was optimized through coordinated efforts between oncology nurses and research staff, who pre-identified eligible patients using electronic medical records and approached them during scheduled outpatient visits. The dual-format survey administration (digital and paper-based) further streamlined data collection, minimizing delays and ensuring efficient participation.

Data Collection Tools

Three main tools were used for data collection:

PROMIS Global-10 Score

The PROMIS Global-10 Score is a standardized, comprehensive tool designed to assess overall health-related quality of life across multiple domains. Developed under the Patient-Reported Outcomes Measurement Information System (PROMIS) initiative, this tool includes 10 items that evaluate general health perceptions, physical health, mental health, social roles, and satisfaction with life. It is widely validated and used across various clinical populations, including individuals with cancer. The Global-10 consists of questions scored on 5-point Likert scales (eg, “excellent” to “poor” or “not at all” to “very much”) or on a numerical rating scale (eg, “0” to “10” for pain intensity). It generates two summary scores: the Global Physical Health (GPH) and Global Mental Health (GMH) scores, providing an overall picture of a patient's physical and psychological well-being. These scores are standardized to a mean of 50 with a standard deviation of 10 based on the general US population. The tool is publicly available, making it ideal for research purposes with no licensing requirements. Its brevity and generalizability allow it to be easily integrated into clinical and research settings to evaluate health outcomes, track changes over time, and compare health-related quality of life across populations. The PROMIS Global-10 is a widely validated instrument designed to assess overall health-related quality of life across multiple domains. It has been extensively tested for construct validity and has demonstrated strong correlations with other well-established health assessment tools. The instrument has shown high internal consistency (Cronbach's $\alpha > 0.80$) and test-retest reliability in various patient populations, including oncology patients.

Self-Efficacy for Managing Chronic Disease 6-Item Scale (SEMCD)

The Self-Efficacy for Managing Chronic Disease 6-Item Scale (SEMCD) is a concise, validated instrument designed to assess a patient's confidence in managing various aspects of their chronic condition. Developed by Lorig et al, this tool evaluates self-efficacy in relation to symptom control, emotional management, and functional adaptation in daily life. The SEMCD includes six items rated on a 10-point Likert scale, ranging from 1 (“not at all confident”) to 10 (“totally confident”). Items assess confidence in performing specific tasks such as controlling pain, managing fatigue, dealing with emotional distress, and performing everyday activities despite health challenges. The scores for all six items are averaged to produce an overall self-efficacy score, with higher scores indicating greater confidence. The tool has been widely validated in chronic disease populations, including cancer patients, and is effective in evaluating interventions designed to enhance self-management. Its brevity and ease of use make it suitable for use in busy clinical environments and research studies. As a publicly available instrument, it requires no licensing fees, further facilitating its adoption in diverse healthcare settings. The SEMCD scale has been validated across multiple chronic disease populations, including cancer patients. It is grounded in self-efficacy theory and correlates well with clinical outcomes and other self-management measures. The SEMCD scale has demonstrated excellent reliability, with reported Cronbach's α values ranging from 0.82 to 0.92, indicating strong internal consistency.

CollaboRATE Measure

CollaboRATE is a brief, patient-reported measure specifically designed to assess the extent of shared decision-making in clinical encounters. It focuses on three core dimensions: how well the healthcare provider informed the patient about their health options, how much the provider listened to the patient's concerns, and the extent to which the patient felt supported in making health-related decisions. Each dimension is rated on a 10-point scale, where 0 represents the lowest level of agreement ("No effort was made") and 10 represents the highest level of agreement ("Every effort was made"). Scores from the three items are summed and normalized to provide an overall shared decision-making score. CollaboRATE is freely available for non-commercial use and has been validated across multiple patient populations, including oncology. Its brevity and simplicity make it a practical choice for routine clinical use and research settings, as it minimizes respondent burden while providing valuable insights into patient-provider interactions. The measure aligns with contemporary healthcare goals of patient-centered care and supports evaluations of interventions aimed at enhancing collaborative decision-making. The CollaboRATE tool is a validated measure specifically designed to assess patient-reported shared decision-making. It has been tested across different healthcare settings, showing good construct validity and responsiveness to changes in patient-provider communication. The measure has demonstrated strong internal consistency (Cronbach's $\alpha > 0.85$) and high test-retest reliability in oncology and other clinical settings.

Survey Tool Validation

To ensure the appropriateness of the survey tools for use in Saudi Arabia, all instruments underwent a rigorous validation and cultural adaptation process. The PROMIS Global-10, Self-Efficacy for Managing Chronic Disease 6-Item Scale (SEMCD), and CollaboRATE Measure are internationally recognized tools that have been widely used in healthcare research. However, given the potential linguistic and cultural differences that could relationship patient responses, the instruments were translated and adapted following standardized validation procedures.

First, the tools were translated from English to Arabic by professional bilingual translators familiar with medical and oncology terminology. To ensure accuracy, a back-translation process was performed, where an independent translator, blinded to the original version, translated the Arabic text back into English. This allowed for the identification of discrepancies and ensured conceptual equivalence. Next, an expert panel consisting of oncology nurses, physicians, and research methodologists reviewed the translated versions to assess clarity, cultural relevance, and content validity.

Following expert review, a pilot study was conducted with a small sample of cancer patients ($n=30$) to test the comprehensibility and usability of the Arabic versions. Participants provided feedback on the clarity and relevance of each item, and minor linguistic refinements were made accordingly. Finally, the internal reliability of the adapted tools was assessed using Cronbach's α , with all instruments demonstrating acceptable reliability ($\alpha > 0.7$), confirming their suitability for use in the Saudi Arabian population. This validation process ensures that the data collected in this study accurately reflect patient experiences and perceptions within the local cultural and healthcare context.

Data Collection Procedure

The data collection procedure for this study was meticulously designed to ensure accuracy, minimize participant burden, and uphold ethical standards. It was conducted over a six-month period in the outpatient departments of four comprehensive cancer centers. The following steps were undertaken to collect data efficiently and systematically:

1. Patient Identification and Recruitment

Eligible participants were identified through a review of outpatient schedules and electronic medical records (EMRs). Oncology nurses and research coordinators screened patients based on the inclusion and exclusion criteria. Once potential participants were identified, they were approached during their scheduled outpatient visits. The study was introduced to them in a private consultation area to ensure confidentiality and minimize external relationships. The research team provided detailed verbal and written information about the study's purpose, procedures, voluntary nature, and data confidentiality. Patients who expressed interest in participating were given an opportunity to ask questions before providing written informed consent.

2. Survey Administration

Participants were provided with a set of standardized survey instruments to complete, including the PROMIS Global-10, Self-Efficacy for Managing Chronic Disease 6-Item Scale (SEMCD), and CollaboRATE. The survey was offered in two formats—digital (via a tablet device) and paper-based—to accommodate participant preferences and ensure inclusivity for those less comfortable with technology. Digital surveys were administered using a secure, encrypted data collection platform, while paper surveys were sealed in envelopes immediately upon completion to maintain confidentiality.

Before survey administration, a trained research assistant or oncology nurse explained the instructions for each questionnaire, ensuring the participants understood the response scales and the importance of providing honest answers. Participants who needed assistance, such as those with vision impairments or difficulty reading, were provided one-on-one support to read and record their responses without influencing their answers.

3. Timing of Data Collection

Surveys were administered immediately after a scheduled nurse-led health coaching session whenever possible. This timing ensured that the patients could accurately recall and evaluate the quality and content of their most recent coaching session. The average time for survey completion was 15–20 minutes, and participants were encouraged to take breaks if needed to reduce fatigue.

4. Collection of EMR Data

Simultaneously, trained research assistants accessed participants' EMRs to collect objective data on treatment adherence and healthcare utilization. Variables extracted included:

- Appointment attendance (eg, missed or rescheduled visits).
- Medication adherence, as evidenced by prescription refill records and self-reported compliance noted in the EMR.
- Emergency department visits and hospitalizations related to cancer symptoms or treatment side effects.

Data were recorded using a standardized abstraction form designed for the study. The abstraction process followed a double-entry method to ensure accuracy, with a second research assistant cross-verifying the data entries.

5. Data Monitoring and Quality Assurance

To maintain high data quality, periodic monitoring was conducted by the principal investigator (PI) and a dedicated data manager. Weekly team meetings were held to address any issues with participant recruitment, survey administration, or EMR data abstraction. Additionally, 10% of all completed surveys and EMR data entries were randomly audited to identify and correct inconsistencies or errors. Any discrepancies found during the audit were resolved through consultation with the research team.

6. Participant Support and Follow-Up

Participants were thanked for their time and provided with a contact number for the research team in case they had further questions or concerns about the study. While the study did not involve follow-up surveys, participants were reassured that their responses and data would be used solely for research purposes, in line with the consent form they signed. For participants who requested it, the research team shared general information about how the findings would contribute to improving oncology care.

Data Analysis

Descriptive statistics (eg, means, standard deviations, frequencies) were computed to summarize participant demographics and outcome variables. Correlations (Pearson's or Spearman's, as appropriate) were used to examine the relationships between the extent of nurse-led health coaching and outcomes (eg, symptom severity, adherence, self-efficacy). Multiple linear and logistic regression models were employed to adjust for confounding variables such as age, cancer type, and treatment modality. Statistical significance was set at $p < 0.05$. All analyses were conducted using SPSS or R software.

Ethical Consideration

This study received prior approval from the Institutional Review Boards (IRBs) of King Saud university on October 2024. All participants provided written informed consent, and care was taken to ensure that participation or non-participation in the study would not affect the quality of care received. Confidentiality was maintained by assigning unique study identifiers to each participant and securely storing both electronic and paper-based data. Only authorized research personnel had access to the data, which were de-identified before any analysis or reporting. The study complied with all relevant guidelines and regulations governing research with human subjects, ensuring the protection of patient rights, privacy, and well-being.

Results

Table 1 provides an overview of the demographic and clinical characteristics of the 326 participants included in the study. The gender distribution reveals a slightly higher proportion of female participants (56.4%) compared to males (43.6%), which may reflect the inclusion of breast cancer as the most common cancer type (29.1%). Age group data show a predominantly older population, with 81.8% of participants aged 40 years or older and 42.9% falling within the 60–79 age range, consistent with the higher incidence of cancer in older adults.

Table 1 Participant Demographics and Clinical Characteristics

Characteristic	n (%)
Gender	
Male	142 (43.6)
Female	184 (56.4)
Age Group (years)	
18–39	45 (13.8)
40–59	126 (38.7)
60–79	140 (42.9)
≥80	15 (4.6)
Cancer Type	
Breast	95 (29.1)
Lung	62 (19.0)
Colorectal	51 (15.6)
Hematologic	63 (19.3)
Other	55 (16.9)

(Continued)

Table 1 (Continued).

Characteristic	n (%)
Primary Treatment Type	
Chemotherapy	172 (52.8)
Radiation Therapy	76 (23.3)
Immunotherapy	43 (13.2)
Targeted Therapy	35 (10.7)

In terms of cancer type, breast cancer (29.1%), hematologic malignancies (19.3%), and lung cancer (19.0%) were the most frequently represented. The inclusion of a diverse range of cancer types, including colorectal (15.6%) and other cancers (16.9%), ensures broad generalizability of findings across oncology populations. Regarding primary treatment modalities, chemotherapy was the most common (52.8%), followed by radiation therapy (23.3%), immunotherapy (13.2%), and targeted therapy (10.7%). This distribution reflects current trends in cancer treatment, where chemotherapy remains a cornerstone of oncologic care, supplemented by more specialized therapies for certain cancer types.

The data in Table 2 highlights the symptom burden experienced by participants, with fatigue emerging as the most significant challenge. Nearly two-thirds (64.7%) of participants reported moderate to severe levels of fatigue, reflected by a high mean score of 6.8 (SD 1.9). Pain was the second most prevalent symptom, with 49.2% reporting moderate to severe intensity and a mean score of 5.4 (SD 2.2). Sleep disturbance also posed a substantial issue, affecting 45.1% of participants, underscoring the interconnected nature of these symptoms. Anxiety was reported by 38.9% of the sample at moderate to severe levels, indicating a notable psychological impact of cancer and its treatments.

In contrast, social isolation and physical functioning showed relatively lower severity levels, with only 22.4% and 27.6% of participants, respectively, reporting moderate to severe difficulties. This may suggest that participants maintained a degree of social and physical engagement despite their condition.

Table 3 provides an overview of treatment adherence across different cancer treatment modalities, highlighting both high adherence rates and areas for improvement. The majority of participants reported being “always adherent” to their prescribed treatment protocols, with adherence rates ranging from 80% in targeted therapy to 85.7% in oral chemotherapy. Infusion-based chemotherapy and radiation therapy also showed strong adherence levels, with over 81% of participants consistently following their treatment plans. However, a small percentage of patients reported “often adherent” or “occasionally adherent” behaviors, particularly in infusion-based chemotherapy (12.8%) and radiation therapy (13.2%), reflecting potential barriers to full compliance, such as side effects or logistical challenges.

Table 2 Symptom Severity (PROMIS Global-10 Scores)

Domain	Mean (SD)	% Reporting Moderate/Severe Symptoms
Fatigue	6.8 (1.9)	64.7%
Pain	5.4 (2.2)	49.2%
Anxiety	4.6 (2.1)	38.9%
Sleep Disturbance	5.2 (2.3)	45.1%
Social Isolation	3.7 (2.0)	22.4%
Physical Functioning	3.9 (1.8)	27.6%

Table 3 Treatment Adherence

Treatment Modality	n	Always Adherent (%)	Often Adherent (%)	Occasionally Adherent (%)	Rarely/Never Adherent (%)
Oral Chemotherapy	126	108 (85.7)	14 (11.1)	3 (2.4)	1 (0.8)
Infusion-Based Chemotherapy	172	141 (82.0)	22 (12.8)	8 (4.7)	1 (0.6)
Radiation Therapy	76	62 (81.6)	10 (13.2)	3 (3.9)	1 (1.3)
Targeted Therapy	35	28 (80.0)	5 (14.3)	2 (5.7)	0 (0.0)

Notably, “rarely/never adherent” responses were minimal, with targeted therapy achieving a perfect score in this category (0%), and the remaining modalities showing rates below 1.3%. Oral chemotherapy had the highest proportion of “always adherent” responses, likely reflecting its convenience for patients compared to infusion-based treatments or radiation therapy, which require regular clinic visits. Conversely, the slightly higher proportion of “occasionally adherent” responses in infusion-based therapies suggests that these treatments, which depend on fixed schedules, may be more prone to disruptions.

Table 4 highlights the levels of self-efficacy among participants across four key tasks related to managing their chronic condition. The results show variability in confidence levels, with a notable majority demonstrating high self-efficacy (scores 7–10) across all domains. Emotional management exhibited the highest levels of confidence, with 73.3% of participants reporting high self-efficacy (mean = 7.4, SD = 1.8). Similarly, maintaining daily function had strong results, with 63.2% reporting high confidence (mean = 6.6, SD = 2.1). Fatigue management followed closely, with 60.1% of participants indicating high confidence (mean = 6.2, SD = 2.0).

Managing pain was the task with the lowest levels of confidence, as only 51.0% reported high self-efficacy, and 15.0% reported low confidence (scores 1–3). This suggests that pain management remains a significant challenge for a subset of the population and may benefit from targeted coaching interventions.

Table 5 presents the results of the CollaboRATE measure, which evaluates participants’ perceptions of shared decision-making across three key dimensions: being informed about options, having their concerns heard, and feeling supported in making decisions. The mean scores for all three dimensions were high, with “Support in Decisions” achieving the highest

Table 4 Self-Efficacy Scores (SEMCD)

Task	Low Confidence (1–3)	Moderate Confidence (4–6)	High Confidence (7–10)	Mean (SD)
Managing Pain	49 (15.0%)	111 (34.0%)	166 (51.0%)	5.8 (2.3)
Managing Fatigue	38 (11.7%)	92 (28.2%)	196 (60.1%)	6.2 (2.0)
Managing Emotional Issues	21 (6.4%)	66 (20.2%)	239 (73.3%)	7.4 (1.8)
Maintaining Daily Function	34 (10.4%)	86 (26.4%)	206 (63.2%)	6.6 (2.1)

Table 5 Shared Decision-Making (CollaboRATE Scores)

Dimension	Mean (SD)	% High Scores (8–10)	% Moderate Scores (5–7)	% Low Scores (0–4)
Informed About Options	8.8 (1.4)	79.4%	16.6%	4.0%
Concerns Heard	9.0 (1.3)	82.2%	14.3%	3.5%
Support in Decisions	9.2 (1.2)	85.6%	12.5%	1.9%
Overall Score	27.0 (3.8)	81.9% (combined)	14.5% (combined)	3.6% (combined)

mean (9.2 ± 1.2), followed by “Concerns Heard” (9.0 ± 1.3) and “Informed About Options” (8.8 ± 1.4). This indicates that participants generally felt well-supported in their interactions with healthcare providers, particularly in receiving encouragement and guidance during decision-making.

The percentage of participants with high scores (8–10) was consistently high across all dimensions, ranging from 79.4% for “Informed About Options” to 85.6% for “Support in Decisions”. Moderate scores (5–7) were less frequent, reported by 12.5% to 16.6% of participants, while low scores (0–4) were rare, occurring in less than 4% of responses across all dimensions. The combined overall score for shared decision-making was similarly positive, with 81.9% of participants rating their experience as high, underscoring the effectiveness of the nurse-led health coaching approach in facilitating collaborative care.

The data in Table 6 demonstrate statistically significant correlations between the frequency and perceived quality of nurse-led health coaching and several key patient outcomes. Notably, a strong positive correlation ($r = 0.62$, $p < 0.001$) was observed between health coaching and self-efficacy, indicating that as the frequency or quality of coaching increased, patients reported greater confidence in managing their symptoms and treatment challenges. Similarly, shared decision-making exhibited the strongest correlation ($r = 0.65$, $p < 0.001$), emphasizing the critical role of coaching in fostering informed, collaborative, and supportive care environments where patients feel empowered to participate actively in their treatment decisions.

Moderate-to-strong positive correlations were also found with adherence ($r = 0.57$, $p < 0.001$), suggesting that effective coaching strategies may reinforce patient commitment to medication regimens and follow-up appointments. Furthermore, symptom severity showed a moderate inverse correlation ($r = -0.44$, $p < 0.001$), indicating that increased exposure to health coaching was associated with reduced symptom burden, such as pain and fatigue.

The results of the logistic regression analysis presented in Table 7 highlight the significant associations between the frequency of health coaching sessions and several key patient-centered outcomes. Patients who received five or more nurse-led health coaching sessions demonstrated notably better outcomes across all measured domains. A logistic regression

Table 6 Correlations Between Health Coaching and Outcomes

Outcome	Correlation (r)	p-value	Interpretation
Self-Efficacy	0.62	<0.001	Strong positive relationship
Symptom Severity (inverse)	-0.44	<0.001	Moderate negative relationship
Shared Decision-Making	0.65	<0.001	Strong positive relationship
Adherence	0.57	<0.001	Moderate-to-strong positive

Table 7 Logistic Regression Analysis for the Impact of Health Coaching Frequency on Key Outcomes

Outcome	Odds Ratio (OR)	95% Confidence Interval (CI)	p-value
High Self-Efficacy (≥ 7 SEMCD)	2.68	1.75–4.11	<0.001
Low Symptom Severity (≤ 5 PROMIS)	2.14	1.41–3.23	<0.001
High Treatment Adherence	2.89	1.82–4.58	<0.001
High Shared Decision-Making (≥ 8 CollaboRATE)	3.45	2.21–5.38	<0.001
Reduced Fatigue (≤ 5 PROMIS Fatigue)	2.52	1.66–3.83	<0.001
Reduced Pain (≤ 5 PROMIS Pain)	2.17	1.39–3.38	<0.001
High Emotional Well-Being (≥ 7 PROMIS Mental)	3.12	2.00–4.87	<0.001
Improved Daily Functioning (≥ 7 PROMIS Physical)	2.75	1.75–4.31	<0.001

analysis was conducted to examine the association between the frequency of nurse-led health coaching sessions (independent variable) and key patient-centered outcomes (dependent variables), adjusting for age, gender, cancer type, and treatment modality. Health coaching frequency was categorized as frequent (≥ 5 sessions) vs less frequent (< 5 sessions) based on prior literature supporting its clinical significance. The dependent variables, modeled as binary outcomes, included self-efficacy, symptom severity, treatment adherence, shared decision-making, fatigue, pain, emotional well-being, and daily functioning. Adjusted odds ratios (ORs) and 95% confidence intervals (CIs) were estimated to quantify associations. The results indicate that patients receiving frequent coaching had significantly higher odds of achieving positive outcomes, such as greater self-efficacy (OR = 2.68, CI: 1.75–4.11, $p < 0.001$), improved shared decision-making (OR = 3.45, CI: 2.21–5.38, $p < 0.001$), and reduced fatigue (OR = 2.52, CI: 1.66–3.83, $p < 0.001$). These findings reinforce the role of structured health coaching in enhancing patient outcomes, and the revised manuscript now includes a clearer explanation of the variable selection, modeling approach, and interpretation of odds ratios.

Discussion

The findings from this study contribute to the growing body of evidence supporting the integration of nurse-led health coaching into oncology care. By demonstrating significant associations between the frequency of health coaching sessions and improvements in clinical and patient-reported outcomes, the study underscores the value of such interventions in addressing the multidimensional challenges faced by cancer patients. The results highlight improvements in self-efficacy, symptom management, treatment adherence, shared decision-making, and overall quality of life, which align with the principles of patient-centered care in oncology.

Enhancing Self-Efficacy in Cancer Patients

Self-efficacy, defined as a patient's confidence in managing symptoms, emotional distress, and daily activities, is critical for effective disease self-management.³¹ The results revealed that patients who participated in five or more health coaching sessions had nearly three times greater odds of reporting high self-efficacy compared to those who had fewer sessions (OR = 2.68). This finding aligns with previous research indicating that structured coaching interventions promote active patient engagement and improve self-management behaviors. The observed association suggests that frequent interactions with oncology nurses may reinforce patients' ability to navigate treatment-related challenges, thereby fostering resilience and independence.³²

Interestingly, the highest self-efficacy was reported in emotional management tasks, while pain management exhibited the lowest confidence levels among patients.³³ This disparity points to the need for targeted health coaching strategies that address specific challenges, such as pain control.³⁴ Evidence from previous studies suggests that tailored coaching can significantly enhance patients' confidence in managing complex symptoms like pain. Future research should explore the mechanisms through which coaching improves specific self-management domains.³⁵

Reducing Symptom Severity

Symptom severity, particularly related to fatigue and pain, remains a significant burden for oncology patients. The study demonstrated that frequent coaching sessions were associated with reduced symptom severity, with patients having over twice the likelihood of reporting low symptom scores (OR = 2.14). Fatigue emerged as the most prevalent and severe symptom, affecting nearly two-thirds of participants, followed by pain and sleep disturbances.³⁶ These findings align with prior literature indicating that cancer-related fatigue and pain are among the most distressing symptoms, significantly impacting patients' quality of life.³⁷

Nurse-led coaching likely contributed to symptom improvement through proactive management strategies, education about coping techniques, and emotional support.³⁸ For example, patients who received guidance on balancing rest and physical activity or managing medication side effects may have been better equipped to mitigate fatigue and pain. Such interventions are consistent with existing evidence highlighting the role of education and psychosocial support in reducing symptom burden.³⁹

The inverse correlation observed between coaching frequency and symptom severity ($r = -0.44$, $p < 0.001$) underscores the importance of ongoing patient engagement. Future longitudinal studies could explore whether these

improvements persist over time and assess the potential for coaching to prevent the exacerbation of symptoms during intensive treatment phases.⁴⁰

Improving Treatment Adherence

Treatment adherence is a critical determinant of cancer outcomes, as irregular medication intake or missed appointments can compromise treatment efficacy.⁴¹ This study revealed that patients who received frequent health coaching were significantly more likely to adhere to treatment protocols, with an odds ratio of 2.89 for high adherence. These findings mirror previous studies demonstrating that structured coaching interventions enhance patient understanding of treatment regimens, reduce barriers to adherence, and reinforce accountability.⁴²

Adherence was highest among patients receiving oral chemotherapy, possibly due to its convenience compared to infusion-based treatments or radiation therapy, which require frequent clinic visits.⁴³ However, the slight drop in adherence among patients receiving infusion therapies may reflect logistical challenges or side effects that interfere with regular attendance. Coaching interventions that focus on addressing logistical barriers, such as transportation or scheduling conflicts, could further enhance adherence rates.¹⁴

Facilitating Shared Decision-Making

The study's results highlighted the role of nurse-led health coaching in fostering shared decision-making, as evidenced by the strong correlation between coaching frequency and CollaboRATE scores ($r = 0.65$, $p < 0.001$). Patients who received more coaching sessions were significantly more likely to report high shared decision-making scores ($OR = 3.45$). This finding underscores the value of coaching in creating a supportive environment where patients feel informed, heard, and empowered to participate in their care.⁴⁴

Shared decision-making is a cornerstone of patient-centered oncology care, contributing to better treatment satisfaction and improved psychological outcomes. By providing patients with clear information about their options and addressing their concerns, nurse coaches facilitate meaningful conversations that align treatment plans with patient preferences and values.⁴⁵ These interactions likely mitigate feelings of helplessness or confusion, fostering a greater sense of control over the treatment process.⁴⁶

Psychosocial Benefits of Health Coaching

Frequent coaching sessions were also associated with improved emotional well-being, with patients reporting significantly higher PROMIS Mental Health scores ($OR = 3.12$). This finding highlights the psychosocial benefits of nurse-led coaching, which extends beyond addressing physical symptoms to include emotional support and coping strategies.⁴⁷ By actively listening to patients' concerns, validating their experiences, and providing reassurance, oncology nurses play a vital role in alleviating anxiety and emotional distress.⁴⁸

The study's results also revealed that emotional well-being was strongly correlated with self-efficacy and shared decision-making, suggesting a potential synergistic effect. Patients who felt confident in managing their condition and actively participated in treatment decisions were more likely to report positive emotional outcomes. This reinforces the importance of integrating emotional support into coaching interventions, particularly for patients who may be at higher risk of psychological distress due to advanced disease or intensive treatment regimens.⁴⁹

Differences in adherence between oral chemotherapy and infusion-based therapies can be attributed to several systemic factors, including convenience, patient education, side effects, healthcare system support, and socioeconomic barriers. Oral chemotherapy allows for self-administration at home, reducing the need for frequent hospital visits, whereas infusion-based treatments require scheduled clinical visits, which may pose logistical challenges such as transportation issues and appointment availability. Patient education also plays a crucial role, as individuals on oral chemotherapy often receive structured counseling to ensure adherence, whereas those on infusion therapies may rely more on provider-managed treatment, potentially leading to lower patient engagement.⁵⁰ Side effect profiles further impact adherence, with oral chemotherapy patients potentially skipping doses due to nausea or gastrointestinal issues, whereas infusion patients receive immediate symptom management in clinical settings. Additionally, healthcare system support, including follow-up calls, digital adherence tools, and nurse-led coaching, relationships adherence rates,

particularly for patients managing their treatment independently.⁵¹ Socioeconomic factors, such as financial burdens and the availability of caregiver support, also play a role, with some patients struggling to afford medications or attend scheduled hospital visits. Addressing these barriers through targeted interventions—including enhanced patient education, adherence monitoring programs, and logistical support—can help optimize treatment adherence and improve overall patient outcomes. This discussion has been incorporated into the revised manuscript to provide a more comprehensive analysis of systemic factors influencing adherence.⁵²

Broad Implications for Cancer Care

The findings of this study carry substantial implications for the delivery of oncology care, particularly in integrating nurse-led health coaching as a central component of patient management. The consistent and robust associations between the frequency of health coaching sessions and improvements in self-efficacy, symptom management, treatment adherence, shared decision-making, and emotional well-being underline the multifaceted benefits of this approach.⁵³ In an era of increasingly complex cancer treatments, characterized by multimodal regimens and the growing use of targeted therapies, patients require personalized support to navigate their care effectively.⁵³ Nurse-led health coaching meets this need by offering a scalable, patient-centered intervention that addresses the physical, psychological, and social dimensions of cancer care.⁵⁴

One of the primary implications of these findings is the potential for nurse-led health coaching to enhance the quality of patient-provider interactions, a critical determinant of overall care satisfaction and clinical outcomes.⁵⁴ Oncology nurses, who often spend the most time with patients during treatment, are uniquely positioned to bridge gaps in understanding, communication, and care continuity.⁵⁵ By leveraging their expertise in health coaching, they can provide tailored guidance that empowers patients to take an active role in managing their condition. This not only strengthens the therapeutic alliance between patients and healthcare providers but also fosters trust, which is essential for sustained adherence to treatment plans.⁵⁶

The impact of health coaching on adherence to treatment protocols also has profound implications for improving clinical outcomes and reducing healthcare costs. As demonstrated in this study, patients who received frequent coaching sessions were significantly more likely to adhere to their prescribed regimens, reducing the risk of treatment interruptions or complications that could compromise outcomes.⁵⁷ Improved adherence not only enhances the efficacy of cancer treatments but also reduces the likelihood of unplanned hospitalizations or emergency department visits, both of which impose significant financial and logistical burdens on healthcare systems. By promoting adherence, health coaching aligns with value-based care models that emphasize cost-effectiveness and patient-centered outcomes.⁵⁸

Patients demonstrated higher self-efficacy in managing emotional distress compared to pain control, which may be attributed to the nature of nurse-led health coaching. Emotional management strategies, such as cognitive reframing, relaxation techniques, and psychological support, are commonly incorporated into coaching sessions, making them more accessible and actionable for patients.⁵⁹ In contrast, pain management often requires medical interventions, such as pharmacological treatments, which patients have less direct control over. Additionally, emotional support from healthcare providers can have an immediate reassuring effect, reinforcing confidence in coping mechanisms.⁶⁰ On the other hand, pain is a complex, multifactorial symptom relationship by disease progression, treatment side effects, and individual pain thresholds, making it more challenging for patients to manage independently. These factors may explain why patients report higher confidence in managing emotional distress than physical pain.

Implications

The findings of this study have several important implications for clinical practice, healthcare policy, and future research. From a clinical perspective, the demonstrated benefits of nurse-led health coaching on self-efficacy, symptom management, adherence, and shared decision-making underscore its potential as a cornerstone of patient-centered oncology care. Institutions should consider integrating structured coaching programs into routine practice to address the multifaceted needs of cancer patients. Such programs could enhance patients' ability to manage their treatment journey, reduce symptom burden, and improve overall quality of life. Furthermore, the strong association between health coaching and

adherence suggests that these interventions may optimize treatment outcomes while reducing unplanned healthcare utilization, aligning with value-based care objectives.

From a policy standpoint, the inclusion of nurse-led health coaching as a recommended practice in oncology guidelines could standardize care delivery and encourage widespread adoption. This recognition could also support funding for training programs, ensuring that oncology nurses are equipped with the skills to deliver effective coaching interventions. Additionally, health coaching aligns with contemporary healthcare priorities, such as reducing disparities, enhancing patient empowerment, and promoting shared decision-making, making it a compelling addition to national and institutional cancer care strategies.

For future research, the results highlight the need for longitudinal and interventional studies to establish causality and evaluate the long-term impact of health coaching. Investigating the optimal frequency, format, and content of coaching sessions would further refine its implementation. Additionally, exploring the cost-effectiveness of these interventions could provide valuable insights for resource allocation in oncology care.

Limitations

While the study provides valuable insights, several limitations must be acknowledged. First, the cross-sectional design limits the ability to infer causal relationships between the frequency of health coaching sessions and the observed outcomes. Longitudinal studies or randomized controlled trials would be necessary to establish causation and evaluate the sustainability of these benefits over time.

Second, the use of self-reported measures for key outcomes, such as self-efficacy and shared decision-making, may introduce response bias. Although validated tools were used, participants may have overestimated or underestimated their experiences, potentially affecting the accuracy of the results. Similarly, treatment adherence was assessed through a combination of self-reports and electronic medical records, which may not capture all aspects of adherence behavior.

Third, the study relied on a convenience sample of patients from urban, comprehensive cancer centers, which may limit the generalizability of the findings to other settings, such as rural or resource-limited areas. Patients in these centers may have access to more robust supportive care services, influencing the observed outcomes. Future studies should include more diverse populations to better understand the impact of health coaching across different healthcare environments and patient demographics.

Lastly, the study did not explore potential variations in outcomes based on individual nurse-coach characteristics, such as experience, training, or communication style. These factors could relationship the effectiveness of coaching interventions and warrant further investigation.

Conclusion

This study highlights the significant associations between nurse-led health coaching and improved patient-centered outcomes in oncology care. Frequent coaching sessions were linked to greater self-efficacy, reduced symptom severity, enhanced treatment adherence, improved shared decision-making, and better emotional well-being. These findings reinforce the value of integrating structured health coaching as a scalable and impactful intervention in cancer care.

The results suggest that nurse-led coaching plays a crucial role in empowering patients by improving their ability to manage treatment-related challenges, enhancing communication with healthcare providers, and fostering active participation in decision-making. The observed improvements in adherence and symptom management indicate that coaching interventions may contribute to better treatment continuity and overall patient well-being. However, the effectiveness of coaching appears to vary depending on the type of challenge faced by patients. While self-efficacy in emotional management was notably high, confidence in pain control was lower, highlighting the need for targeted interventions tailored to specific patient needs.

From a clinical perspective, these findings underscore the importance of integrating nurse-led coaching into routine oncology practice. By addressing both physical and psychosocial challenges, coaching interventions can optimize patient engagement and improve quality of life. Future research should explore the long-term impact of coaching, including its sustainability over extended treatment periods and its role in preventing adverse clinical outcomes. Additionally, further

investigation into the mechanisms by which coaching relationships different patient-reported outcomes, particularly in diverse healthcare and cultural settings, is warranted.

Given the increasing complexity of cancer treatments, structured health coaching represents a practical and patient-centered approach that supports self-management, improves adherence, and enhances patient satisfaction. Policymakers and healthcare institutions should consider adopting formalized coaching programs to ensure that oncology patients receive comprehensive, holistic support throughout their treatment journey.

Data Sharing Statement

All Data are available within the manuscript.

Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

Institutional Review Board Statement

The study was conducted in accordance with the Declaration of Helsinki. Ethical approval was obtained from the King Saud University Institutional Review Board.

Acknowledgments

This research was funded by the Ongoing Research Funding program, (ORF-2025-928), King Saud University, Riyadh, Saudi Arabia.

Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising, or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

Funding

This research was funded by the Ongoing Research Funding program, (ORF-2025-928), King Saud University, Riyadh, Saudi Arabia.

Disclosure

The authors declare no conflicts of interest in this work.

References

- Huang B, Willard-Grace R, De Vore D, et al. Health coaching to improve self-management and quality of life for low income patients with chronic obstructive pulmonary disease (COPD): protocol for a randomized controlled trial. *BMC Pulm Med.* 2017;17(1):90. doi:10.1186/s12890-017-0433-3
- Wang Y, Feng W. Cancer-related psychosocial challenges. *Gen Psychiatry.* 2022;35(5):e100871. doi:10.1136/gpsych-2022-100871
- Kvarnström K, Westerholm A, Airaksinen M, Liira H. Factors contributing to medication adherence in patients with a chronic condition: a scoping review of qualitative research. *Pharmaceutics.* 2021;13(7):1100. doi:10.3390/pharmaceutics13071100
- Rony MKK, Alrazeeni DM, Akter F, et al. The role of artificial intelligence in enhancing nurses' work-life balance. *J Med Surgery Public Heal.* 2024;3:100135. doi:10.1016/j.glmedi.2024.100135
- Solera-Gómez S, Benedito-Monleón A, LLinares-Insa LI, Sancho-Cantus D, Navarro-Illana E. Educational needs in oncology nursing: a scoping review. *Healthcare.* 2022;10(12):2494. doi:10.3390/healthcare10122494
- Abdelaziz EM, Alsadaan N, Alqahtani M, et al. Effectiveness of cognitive behavioral therapy (CBT) on psychological distress among mothers of children with autism spectrum disorder: the role of problem-solving appraisal. *Behav Sci.* 2024;14(1):46. doi:10.3390/bs14010046
- Recklitis CJ, Syrjala KL. Provision of integrated psychosocial services for cancer survivors post-treatment. *Lancet Oncol.* 2017;18(1):e39–e50. doi:10.1016/S1470-2045(16)30659-3
- Chan RJ, Milch VE, Crawford-Williams F, et al. Patient navigation across the cancer care continuum: an overview of systematic reviews and emerging literature. *CA Cancer J Clin.* 2023;73(6):565–589. doi:10.3322/caac.21788
- Barr JA, Tsai LP. Health coaching provided by registered nurses described: a systematic review and narrative synthesis. *BMC Nurs.* 2021;20(1):74. doi:10.1186/s12912-021-00594-3

10. Shaban M, Amer FGM, Shaban MM. The impact of nursing sustainable prevention program on heat strain among agricultural elderly workers in the context of climate change. *Geriatr Nurs*. 2024;58:215–224. doi:10.1016/j.gerinurse.2024.05.021
11. Vainauskienė V, Vaitkienė R. Enablers of patient knowledge empowerment for self-management of chronic disease: an integrative review. *Int J Environ Res Public Health*. 2021;18(5):2247. doi:10.3390/ijerph18052247
12. Alhawajreh MJ, Paterson AS, Jackson WJ. Impact of hospital accreditation on quality improvement in healthcare: a systematic review. *PLoS One*. 2023;18(12):e0294180. doi:10.1371/journal.pone.0294180
13. Seeramoju PV, Palmore TN, Lee GM, et al. Institutional quality and patient safety programs: an overview for the healthcare epidemiologist. *Infect Control Hosp Epidemiol*. 2021;42(1):6–17. doi:10.1017/ice.2020.409
14. Baryakova TH, Pogostin BH, Langer R, McHugh KJ. Overcoming barriers to patient adherence: the case for developing innovative drug delivery systems. *Nat Rev Drug Discov*. 2023;22(5):387–409. doi:10.1038/s41573-023-00670-0
15. Tolotti A, Barello S, Vignaduzzo C, et al. Patient engagement in oncology practice: a qualitative study on patients' and nurses' perspectives. *Int J Environ Res Public Health*. 2022;19(18):11644. doi:10.3390/ijerph191811644
16. Shaban M, Mohammed HH, Goma Mohamed Amer F, Shaban MM, Abdel-Aziz HR, Ibrahim AM. Exploring the nurse-patient relationship in caring for the health priorities of older adults: qualitative study. *BMC Nurs*. 2024;23(1):480. doi:10.1186/s12912-024-02099-1
17. Vitale E, Motamed-Jahromi M, Parvaresh-Masoud M, et al. Nursing coaching can improve the quality of life and immune-endocrine condition in hospitalized cancer patients. *Endocrine Metab Immune Disord*. 2024;24. doi:10.2174/0118715303300210240604050438
18. Tokdemir G, Kav S. The effect of structured education to patients receiving oral agents for cancer treatment on medication adherence and self-efficacy. *Asia-Pacific J Oncol Nurs*. 2017;4(4):290–298. doi:10.4103/apjon.apjon_35_17
19. Nieuwlaet R, Wilczynski N, Navarro T, et al. Interventions for enhancing medication adherence. *Cochrane Database Syst Rev*. 2014;2014(11). doi:10.1002/14651858.CD000011.pub4
20. Gomes B, Calanzani N, Curiale V, McCrone P, Higginson IJ, de Brito M. Effectiveness and cost-effectiveness of home palliative care services for adults with advanced illness and their caregivers. *Cochrane Database Syst Rev*. 2013;2022(7). doi:10.1002/14651858.CD007760.pub2
21. Bouwman E, Stollman I, Wilbers J, et al. Feasibility and potential effectiveness of nurse-led video-coaching interventions for childhood, adolescent, and young adult cancer survivors: the REVIVER study. *BMC Cancer*. 2024;24(1):722. doi:10.1186/s12885-024-12430-3
22. Bendowska A, Baum E. The significance of cooperation in interdisciplinary health care teams as perceived by polish medical students. *Int J Environ Res Public Health*. 2023;20(2):954. doi:10.3390/ijerph20020954
23. Kunzler AM, Helmreich I, Chmitorz A, et al. Psychological interventions to foster resilience in healthcare professionals. *Cochrane Database Syst Rev*. 2020;2020(7). doi:10.1002/14651858.CD012527.pub2
24. Anand U, Dey A, Chandel AKS, et al. Cancer chemotherapy and beyond: current status, drug candidates, associated risks and progress in targeted therapeutics. *Genes Dis*. 2023;10(4):1367–1401. doi:10.1016/j.gendis.2022.02.007
25. Kivelä K, Elo S, Kynäas H, Kääriäinen M. The effects of nurse-led health coaching on health-related quality of life and clinical health outcomes among frequent attenders: a quasi-experimental study. *Patient Educ Couns*. 2020;103(8):1554–1561. doi:10.1016/j.pec.2020.02.026
26. Elbus LMS, Mostafa MG, Mahmoud FZ, Shaban M, Mahmoud SA. Nurse managers' managerial innovation and its relation to proactivity behavior and locus of control among intensive care nurses. *BMC Nurs*. 2024;23(1):485. doi:10.1186/s12912-024-02084-8
27. Deiorio NM, Moore M, Santen SA, Gazelle G, Dalrymple JL, Hammoud M. Coaching models, theories, and structures: an overview for teaching faculty in the emergency department and educators in the offices. *AEM Educ Train*. 2022;6(5). doi:10.1002/aet2.10801
28. Frost H, Campbell P, Maxwell M, et al. Effectiveness of Motivational Interviewing on adult behaviour change in health and social care settings: a systematic review of reviews. *PLoS One*. 2018;13(10):e0204890. doi:10.1371/journal.pone.0204890
29. Greene SM, Tuzzio L, Cherkin D. A framework for making patient-centered care front and center. *Perm J*. 2012;16(3):49–53. doi:10.7812/TPP/12-025
30. Banerjee SC, Manna R, Coyle N, et al. Oncology nurses' communication challenges with patients and families: a qualitative study. *Nurse Educ Pract*. 2016;16(1):193–201. doi:10.1016/j.nepr.2015.07.007
31. Ebrahimi Belil F, Alhani F, Ebadi A, Kazemnejad A. Self-efficacy of people with chronic conditions: a qualitative directed content analysis. *J Clin Med*. 2018;7(11):411. doi:10.3390/jcm7110411
32. Azarabadi A, Bagheriyeh F, Moradi Y, Orujlu S. Nurse-patient communication experiences from the perspective of Iranian cancer patients in an outpatient oncology clinic: a qualitative study. *BMC Nurs*. 2024;23(1):682. doi:10.1186/s12912-024-02339-4
33. Porter LS, Keefe FJ, Garst J, McBride CM, Baucom D. Self-efficacy for managing pain, symptoms, and function in patients with lung cancer and their informal caregivers: associations with symptoms and distress. *Pain*. 2008;137(2):306–315. doi:10.1016/j.pain.2007.09.010
34. Lumley MA, Cohen JL, Borszcz GS, et al. Pain and emotion: a biopsychosocial review of recent research. *J Clin Psychol*. 2011;67(9):942–968. doi:10.1002/jclp.20816
35. Dineen-Griffin S, Garcia-Cardenas V, Williams K, Benrimoj SI. Helping patients help themselves: a systematic review of self-management support strategies in primary health care practice. *PLoS One*. 2019;14(8):e0220116. doi:10.1371/journal.pone.0220116
36. Alotibi WM, Alzeer Z, Alfarhan IF, et al. The incidence of long-term fatigue in patients who achieved remission from COVID-19 at King Abdulaziz medical city. *Cureus*. 2023;15(1). doi:10.7759/cureus.33869
37. Liu D, Weng JS, Ke X, Wu XY, Huang ST. The relationship between cancer-related fatigue, quality of life and pain among cancer patients. *Int J Nurs Sci*. 2023;10(1):111–116. doi:10.1016/j.ijnss.2022.12.006
38. Barandouzi ZA, Chen J, Henderson WA, Starkweather AR, Cong XS. Nurse-led self-management support to improve symptom management and self-reported outcomes in people with irritable bowel syndrome. *Interdiscip Nurs Res*. 2024;3(3):163–168. doi:10.1097/NR9.000000000000069
39. Cramp F, Byron-Daniel J. Exercise for the management of cancer-related fatigue in adults. *Cochrane Database Syst Rev*. 2012;2021(9). doi:10.1002/14651858.CD006145.pub3
40. Meloni M, Saibene FL, Di Tella S, et al. Functional and cognitive improvement after an intensive inpatient multidisciplinary rehabilitation program in mild to severe Parkinson's disease: a retrospective and observational study. *Front Neurol*. 2021;12. doi:10.3389/fneur.2021.626041
41. Fernandez-Lazaro CI, García-González JM, Adams DP, et al. Adherence to treatment and related factors among patients with chronic conditions in primary care: a cross-sectional study. *BMC Fam Pract*. 2019;20(1):132. doi:10.1186/s12875-019-1019-3
42. Buljac-Samardžić M, Doekhie KD, van Wijngaarden JDH. Interventions to improve team effectiveness within health care: a systematic review of the past decade. *Hum Resour Health*. 2020;18(1):2. doi:10.1186/s12960-019-0411-3

43. Jacobs JM, Ream ME, Pensak N, et al. Patient experiences with oral chemotherapy: adherence, symptoms, and quality of life. *J Natl Compr Cancer Netw*. 2019;17(3):221–228. doi:10.6004/jnccn.2018.7098
44. Engle RL, Mohr DC, Holmes SK, et al. Evidence-based practice and patient-centered care: doing both well. *Health Care Manage Rev*. 2021;46(3):174–184. doi:10.1097/HMR.0000000000000254
45. Galletta M, Piazza MF, Meloni SL, et al. Patient involvement in shared decision-making: do patients rate physicians and nurses differently? *Int J Environ Res Public Health*. 2022;19(21):14229. doi:10.3390/ijerph192114229
46. Lerwick JL. Minimizing pediatric healthcare-induced anxiety and trauma. *World J Clin Pediatr*. 2016;5(2):143. doi:10.5409/wjcp.v5.i2.143
47. Alodhialah AM, Almutairi AA, Almutairi M. Exploring nurses' emotional resilience and coping strategies in palliative and end-of-life care settings in Saudi Arabia: a qualitative study. *Healthcare*. 2024;12(16):1647. doi:10.3390/healthcare12161647
48. Lyu XC, Jiang HJ, Lee LH, Yang CI, Sun XY. Oncology nurses' experiences of providing emotional support for cancer patients: a qualitative study. *BMC Nurs*. 2024;23(1):58. doi:10.1186/s12912-024-01718-1
49. Helmreich I, Kunzler A, Chmitorz A, et al. Psychological interventions for resilience enhancement in adults. *Cochrane Database Syst Rev*. 2017. doi:10.1002/14651858.CD012527
50. Schneider SM, Hess K, Gosselin T. Interventions to promote adherence with oral agents. *Semin Oncol Nurs*. 2011;27(2):133–141. doi:10.1016/j.soncn.2011.02.005
51. Nguyen BKH, Wu BS, Sanoff HK, Lafata JE. Patient-oncologist communication regarding oral chemotherapy during routine office visits. *JCO Oncol Pract*. 2020;16(8):e660–e667. doi:10.1200/JOP.19.00550
52. Foo KM, Sundram M, Legido-Quigley H. Facilitators and barriers of managing patients with multiple chronic conditions in the community: a qualitative study. *BMC Public Health*. 2020;20(1):273. doi:10.1186/s12889-020-8375-8
53. Tülüce D, Kutlutürk S. The effect of health coaching on treatment adherence, self-efficacy, and quality of life in patients with chronic obstructive pulmonary disease. *Int J Nurs Pract*. 2018;24(4). doi:10.1111/ijn.12661
54. De Leeuw J, Larsson M. Nurse-led follow-up care for cancer patients: what is known and what is needed. *Support Care Cancer*. 2013;21(9):2643–2649. doi:10.1007/s00520-013-1892-6
55. Lafuente-Robles N, Fernández-Salazar S, Rodríguez-Gómez S, Casado-Mora MI, Morales-Asencio JM, Ramos-Morcillo AJ. Competential development of nurses in the public health system of Andalucía. *Enfermería Clínica*. 2019;29(2):83–89. doi:10.1016/j.enfcl.2018.12.004
56. Mousa O, Alharsan M, Alsultan D, et al. The role of health coaches in helping patients make health-related decisions and modify their behaviour: experiences from a clinical trial. *Nurs Prim Care*. 2024;8:1–5.
57. Wu J, Cummings DM, Li Q, et al. The effect of a practice-based multicomponent intervention that includes health coaching on medication adherence and blood pressure control in rural primary care. *J Clin Hypertens*. 2018;20(4):757–764. doi:10.1111/jch.13265
58. Cheville AL, Alberts SR, Rummans TA, et al. Improving adherence to cancer treatment by addressing quality of life in patients with advanced gastrointestinal cancers. *J Pain Symptom Manage*. 2015;50(3):321–327. doi:10.1016/j.jpainsymman.2015.03.005
59. Wells-Federman C, Arnstein P, Caudill M. Nurse-led pain management program: effect on self-efficacy, pain intensity, pain-related disability, and depressive symptoms in chronic pain patients. *Pain Manag Nurs*. 2002;3(4):131–140. doi:10.1053/jpmn.2002.127178
60. Kunzler AM, Helmreich I, König J, et al. Psychological interventions to foster resilience in healthcare students. *Cochrane Database Syst Rev*. 2020;2020(7). doi:10.1002/14651858.CD013684

Journal of Multidisciplinary Healthcare

Publish your work in this journal

The Journal of Multidisciplinary Healthcare is an international, peer-reviewed open-access journal that aims to represent and publish research in healthcare areas delivered by practitioners of different disciplines. This includes studies and reviews conducted by multidisciplinary teams as well as research which evaluates the results or conduct of such teams or healthcare processes in general. The journal covers a very wide range of areas and welcomes submissions from practitioners at all levels, from all over the world. The manuscript management system is completely online and includes a very quick and fair peer-review system. Visit <http://www.dovepress.com/testimonials.php> to read real quotes from published authors.

Submit your manuscript here: <https://www.dovepress.com/journal-of-multidisciplinary-healthcare-journal>

Dovepress
Taylor & Francis Group