IMPLEMENTATION OF CALISTA ROY'S ADAPTATION IMPLEMENTATION MODEL IN HEALTH CARE SETTINGS: A SCOPING REVIEW

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ABSTRACT

Introduction: The Roy Adaptation Model (RAM) has been recognized as one of the effective approaches in nursing practice to improve nurse competence and the quality of patient care. With a focus on an individual's ability to adapt to changes in physical and psychological conditions, this model has been applied in various healthcare settings. However, despite its great potential in improving care outcomes, the application of this model faces significant challenges, particularly in terms of inconsistent implementation across different hospital contexts and care cultures, which hinders its effectiveness. The aim of the study was to identify the application of the Roy Adaptation Implementation Model in healthcare settings.

Methods: This study used a scoping review approach with the PRISMA-ScR approach to search for publications from four major databases (Scopus, Pubmed. BMC, and Google Scholar). Articles selected for analysis included quantitative, qualitative and mixed-methods studies conducted between 2015 and 2025. Inclusion and exclusion criteria were applied to ensure the relevance and quality of the articles analyzed.

Results: From the analysis of 13 articles, it was found that (1) The application of the Roy Adaptation Model (RAM) improves nurses' competence, especially in managing patients with complex conditions such as chronic diseases and post-surgery. (2) The model has also been shown to play a role in reducing anxiety, relieving pain, and improving patients' quality of life. (3) The implementation of RAM shows great flexibility in various healthcare settings, both in hospitals and in community care. (4) The main challenge faced in implementing this model is its feasibility and sustainability in clinical practice. (5) Further research is needed for cross-cultural validation, to ensure effective application of RAM across different cultural contexts and health systems.

Conclusion: The application of the Roy adaptation model (RAM) has been more in patient settings and less in the nurse context. Despite its great potential, challenges remain in its implementation, particularly its feasibility and sustainability in clinical practice. Further research is needed to evaluate the long-term effectiveness and applicability of this model in various global health settings.

Keywords: Roy's Adaptation Model, Nursing, Nurse Competence, Quality of Care, Scoping Review

Introduction

The adaptation model of Calista Roy has been widely recognized as a transformative framework in nursing practice, supporting nurses in responding to the evolving needs of patients and enhancing the overall quality of care. Rooted in the concept of adapting to both physical and psychological changes, Roy's model considers the biological, psychological, and social dimensions of the patient (Roy, 2017). Its application has proven especially beneficial in fostering stronger therapeutic relationships between nurses and patients, improving patient outcomes, and providing a holistic approach to care (Botes *et al.,* 2019). As the global healthcare system faces increasing challenges—such as rising patient case complexity, nursing shortages, and heightened expectations for care quality— the need for adaptable and integrated care models has become more urgent.

Roy's model stands out due to its emphasis on understanding individual needs and delivering flexible adaptation strategies that address the dynamic nature of patient care (Parker & Smith, 2021). This approach is essential in a time when healthcare systems are under pressure to not only provide high-quality care but also operate efficiently. Beyond improving patient outcomes, the model plays a crucial role in enhancing nursing competence and facilitating sustainable, coordinated care management (Fawcett, 2020). The rising complexity of healthcare and the demand for personalized care highlight the urgency of refining models like Roy's to optimize the nursing process and better meet patient needs.

Despite widespread implementation in various nursing contexts, the impact of Roy's model on the professional development of nurses, stress management, and patient care outcomes remains underexplored. Previous research has emphasized the model's potential to enhance holistic care, but significant variability in its application across different healthcare settings and cultures has not been adequately addressed (López *et al.,* 2022). This underscores the necessity for a more comprehensive study to assess the full scope of its implementation, highlighting both the challenges and opportunities for improvement.

A review of the literature reveals a lack of systematic or scoping reviews that comprehensively examine the application of Roy's adaptation model within nursing practice. Existing studies have typically focused on theoretical aspects, offering limited insights into the model's real-world application and broader impact on nursing practice and patient care (Duffy *et al.,* 2023). As a result, this scoping review aims to fill this critical gap by providing a more complete and global perspective on the model's implementation, offering valuable insights into its effects on healthcare delivery.

Roy's adaptation model focuses on the ability of individuals to manage the challenges of life through structured adaptive systems, which, in nursing, enhances nurse-patient interactions, builds resilience against stress, and facilitates better disease management (Roy, 2022). Although numerous studies have explored the theory, fewer have investigated its practical implications in patient care

management (McEwen & Wills, 2017; Manthey, 2019).

Therefore, this scoping review seeks to evaluate how the Roy Adaptation Implementation Model has been applied in various healthcare settings, contributing to a deeper understanding of its impact on nursing practice.

Review Question: "How is the application of the Roy Adaptation Implementation Model in healthcare settings?"

Methods

This scoping review was conducted following the Joanna Briggs Institute (JBI) methodology, as outlined in the JBI Manual for Evidence Synthesis (Peters et al., 2020), to assess the scope, characteristics, and breadth of the available literature on the application of the Roy Adaptation Model (RAM) in nursing practice. The review includes systematic steps, such as identifying the review question, conducting a comprehensive literature search,

screening studies based on inclusion criteria, and extracting and analyzing data using a matrix format. Articles will be assessed through a two-stage selection process (title/abstract review and full-text review) by two independent reviewers. The findings will be presented narratively and tabularly to identify trends, gaps, and theoretical contributions. This review aims to provide a comprehensive understanding of RAM's application across diverse healthcare contexts and contribute to the development of new instruments, clinical training interventions, and policy recommendations in psychosocial competency-based nursing practice (Tricco et al., 2018).

Inclusion criteria

The article search method applies the Population, Concept, Context (PCC) framework as follows:

Table 1. PCC Framework

Component	Description
Population	**Nurses**
	Nurses working in healthcare settings that implement Roy's adaptation implementation model, including novice nurses and experienced professionals.
	Patients receiving care based on Roy's adaptation model, spanning a wide range of demographics, including patients in acute, chronic, and community care.
Concept	**Roy's Adaptation Implementation Model**
	The effect of implementing the Roy adaptation model on nursing outcomes, with a focus on:
	Quality of patient care: Improvements in continuity, safety, and holistic care according to Roy's adaptation theory.
	Nurse competence: Development of professional skills, clinical decision-making, and nurse adaptability in the face of changing patient conditions.
	Patient satisfaction: Perceptions of care, trust in nurses, and overall level of satisfaction with the adaptation-based care process.

Context	Various Healthcare Settings
	Hospital settings, including inpatient rooms, intensive care units, and surgical units, that implement the Roy adaptation model.
	Community-based healthcare facilities, outpatient clinics, and long-term care centers that implement Roy's adaptation approach.
	Global health systems, including high- and low-resource settings, to explore variations in the application and outcomes of the Roy adaptation model across different contexts.

Types of sources

This scoping review will include a range of literature sources to provide a comprehensive understanding of the application of Calista Roy's adaptation implementation model in nursing practice. Study types considered include experimental and quasi-experimental research (e.g., randomized controlled trials and pre-post designs), observational studies (e.g., cross-sectional, cohort, and case-control studies), and qualitative studies (e.g., phenomenological, grounded theory, and descriptive qualitative approaches). This inclusive approach aligns with the scoping review methodology, which allows for the exploration of various study designs to map the application of the Roy adaptation model, assess its impact on nursing outcomes, and identify gaps in the existing literature (Peters et al., 2020; Tricco et al., 2018).

Eligibility Criteria

The eligibility criteria for this scoping review were designed to ensure relevance and quality of the included articles. The inclusion criteria were: 1) Articles reporting on the application and effectiveness of Calista Roy's adapted implementation model in improving patient care, nurse competence, and patient satisfaction; 2) Studies using quantitative, qualitative, mixed-methods, or scoping review designs; 3) Populations must include nurses or patients involved in the implementation of Roy's model; 4) Articles must be available in full-text; 5) Articles must be published between January 2015 and April 2025; 6) Articles must be in English. Exclusion criteria included: 1) Literature reviews, systematic reviews, or scoping reviews; 2) Multiple publications in different journals to preserve the uniqueness of findings.

Databases

The databases used in this study included Scopus, PubMed, BMC, Google Scholar. The researchers accessed all these databases on Sunday, April 27, 2025. The following is a list of database links:

Table 2. Database Links

No.	Database Name	Link
1	Scopus	https://www.scopus.com/
2	Pubmed	https://pubmed.ncbi.nlm.nih.gov
3	BMC	https://www.biomedcentral.com/

4	Google Scholar	https://scholar.google.com/

Search Strategy

The search strategy for this scoping review used keywords such as "Roy's Adaptation Implementation Model," "Nurses," "Stress," "Nurse Competence," and "Patient Satisfaction," combined with Boolean operators (AND, OR) to cover various aspects of the model's implementation and its impact on nurses and patients. A sample search syntax included: ("Roy Adaptation Model") AND ("nurse" OR "healthcare professional") AND ("adaptation") AND ("care" OR "clinical practice"). The search focused on articles published between 2015 and 2025, in English, and full-text. The initial search retrieved 6,147 articles, distributed across Scopus (147), PubMed (77), BMC (13), and Google Scholar (5,910). After removing duplicates in Mendeley, 13 articles were selected for inclusion based on the inclusion and exclusion criteria.

Article Screening

The article screening process in this scoping review followed the PRISMA-ScR guidelines, involving systematic stages of identification, screening, eligibility, and inclusion based on predefined criteria. An initial search of four databases (Scopus, PubMed, BMC, and Google Scholar) retrieved 6,147 articles, which were reduced to 3,070 unique articles after excluding those based on publication year. The titles and abstracts of 3,070 articles were reviewed, resulting in the elimination of 2,697 articles due to irrelevance, lack of empirical data, or conceptual nature. A total

of 373 articles passed to the full-text review, where 209 were excluded for failing to meet eligibility criteria. Ultimately, 13 articles were included for analysis. The screening process was performed by two independent researchers, with discrepancies resolved through discussion or a third reviewer, and documented in a PRISMA flow chart.

Data Extraction

Data extraction was performed using a pre-designed template to capture key information from each selected article, including study design, population, measured concepts (nurse competence, quality of care, patient satisfaction), context of Roy's adaptation model application, and key outcomes. Two independent reviewers conducted the extraction to minimize bias, with discrepancies resolved through discussion or a third reviewer. The data were analyzed descriptively and presented in tabular form to map key findings and identify gaps in the literature regarding the application of the Roy adaptation model in nursing.

Results and Discussion
Results

In this study, we used four main databases for literature search, namely Scopus, Google Scholar, BMC, and PubMed. In the initial identification stage, a total of 6,147 articles were found from all databases, consisting of: 147 articles from Scopus, 5,910 articles from Google Scholar, 13 articles from BMC, and 77 articles from PubMed. These articles were then screened based on the inclusion

criteria of publications published between 2014 and 2024, available in full-text format, and written in English. Prior to the screening stage, 3,077 articles were excluded as they were flagged as ineligible by automation tools within the last 10 years. After the initial screening, 3,070 articles remained for the next stage.

An advanced screening process was conducted based on an assessment of the article titles and abstracts to ensure relevance to the topic of applying the Calista Roy adaptation implementation model to nurses. At this stage, 2,697 articles were excluded because they did not meet the criteria or were not relevant to the focus of the study. Of the remaining articles, 373 articles were selected for retrieval for full text review. This process ensured that only articles relevant to Roy's adaptation model and its impact on nurses and patients proceeded to the next stage.

After assessment of the full text of the articles, 209 articles that did not meet the relevant keywords (RAM and Nursing) were either not retrieved or not retrieved successfully. Of the 373 articles evaluated, 164 articles were examined for further eligibility. At this stage, some articles were excluded based on more specific criteria, viz: 70 articles that were not scientific articles, 3 articles written in languages other than English or Indonesian, 17 articles that did not have open access, 25 articles that did not include an abstract, and 36 articles that could not be downloaded. After this stage, 13 articles were deemed to meet all eligibility criteria and were included in the final synthesis. These articles covered the application of Roy's adaptation model in various nursing settings and its impact on care competency and quality of patient satisfaction.

The full procedure of the article screening and selection process is shown in the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) flow chart below.
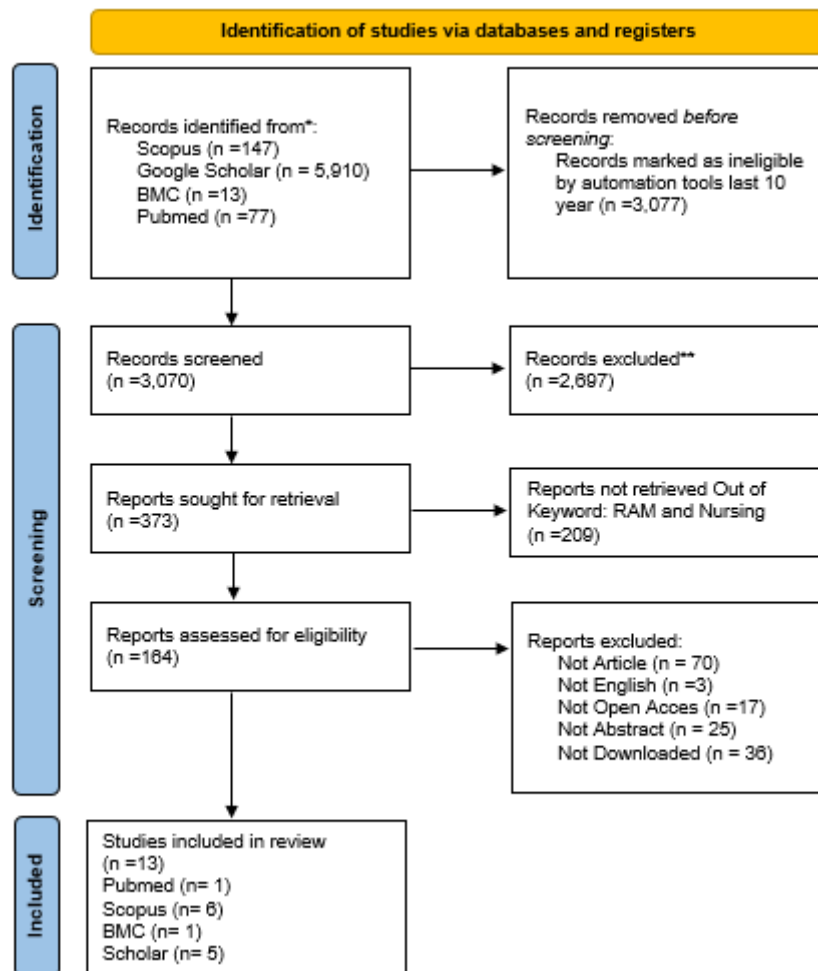
Figure 1. PRISMA Flowchart

Table 3. Analysis of Literature Results

ID	Author and Journal Identity	Article Title (English)	Research Objectives	Population and Sample	Method	Summary of Results
ID 1	Author: E Wang & Ling Li. Jurnal: American Journal of Translational Research (2021)	The effect of community nursing based on the Roy adaptation model on postpartum depression and sleep	Exploring the effect of community nursing based on Roy's Adaptation Model on postpartum depression and sleep quality of	96 postpartum mothers divided into two groups	Experimental study, comparative design between two groups: Intervention and regular	Postpartum patients who received Roy's Adaptation Model-based care showed improved sleep quality and

		quality of parturients	postpartum mothers.			reduced depression.
ID 2	Author: Ayse Kacaroglu Vicdan & Bilgi Gulseven Karabacak. Jurnal: Clinical Nurse Specialist (2016)	Effect of Treatment Education Based on the Roy Adaptation Model on Adjustment of Hemodialysis Patients	Determine the effect of nursing education based on the Roy Adaptation Model on physiological, psychological, and social adjustment in patients undergoing hemodialysis therapy.	82 patients undergoing hemodialysis therapy, divided into two groups	Experimental study, randomized design with control group	Hemodialysis patients who received RAM-based education experienced a decrease in systolic blood pressure and body weight, and an increase in functional performance and self-respect scores.
ID 3	Author: Peggy C. Tallier, Patricia R. Reineke, & Keville Frederickson. Jurnal: Nursing & Health Sciences Nursing Science Quarterly (2017)	Evaluation of Healthy Living Wellness Program With Minority Underserved Economically Disadvantaged Older Adults	Testing the effectiveness of the Roy Adaptation Model-based Healthy Living Wellness Program (HLWP) on the physiological and psychological status of older adults from underserved and low-	30 minority elders living in a senior living community in an urbanized area of the northeastern United States	Quasi-experimental study with pretest/post test design	The group of minority elderly patients who attended the RAM-based HLWP program showed improvements in physiological aspects such as Body Mass Index (BMI),

				income minority communitie s			weight, blood glucose levels, and waist circumferen ce, as well as improveme nts in physical activity and psychologic al state.
ID 4	Author: Jiali Zhang, Lilan Guo, Jundan Mao, Xue Qi, Liqun Chen, Hui Huang, Yanling Sun, Xiaoyue Yang. Jurnal: Annals of Palliative Medicine (2021)	The effects of nursing of Roy adaptation model on the elderly hypertensiv e: a randomised control study	To determine the effects of Roy Adaptation Model (RAM)-based treatment intervention on self-managemen t behavior, medication implementa tion, quality of life, and blood pressure control in elderly hypertensiv e patients.	120 hospitalized elderly hypertensiv e patients from June 2020 to March 2021, randomly divided into two groups	Experiment al study, randomized design with control group		Elderly patients who received RAM-based care showed higher self-efficacy and quality of life, better medication adherence, and more controlled blood pressure than the control group.
ID 5	Author: Figen Erol Ursavaş, Özgül Karayurt, Jurnal: J	Experience With A Support Group Intervention Offered to	Exploring the experiences of women with breast cancer in a	37 women with breast cancer who participated in support groups	Quantitativ e with intervention approach and measureme		Patients Women with breast cancer who joined a support

	Breast Health, 2017	Breast Cancer Women	support group intervention program		nt using assessment forms	group and received RAM-based education felt happier, supported each other, and felt less alone in dealing with their illness.
ID 6	Author: Necibe Dağcan, Dilek Özden. & Gülsah Gürol Arslan. Jurnal: Nursing in Critical Care (2023)	Pain perception of patients in intensive care unit after cardiac surgery	Examining pain perception in patients in the ICU after cardiac surgery using Roy's Adaptation Model (RAM)	16 patients who underwent cardiac surgery in the ICU and experienced postoperative pain	Qualitative, phenomenology with in-depth interviews and numerical rating forms	Pain perception in intensive care patients after undergoing cardiac surgery based on Roy's Adaptation Model (RAM) considers pain management as a positive experience thanks to the help of health workers.
ID 7	Author: Zhu Yu, Wen Jia, Xiangmei Sun, Shuai Zhang, Jing Tan, & Lili	Effect of Roy's Adaptation, Model-based, Perioperative Nursing	Proving the clinical value of Roy Adaptation Model	69 patients with early-stage LC divided into intervention group (42	Retrospective study, controlled study design with	Lung cancer patients who received RAM-based

				patients) and control group (27 patients)	chi square analysis	care significantly protected lung function, increased care satisfaction, and improved psychological state and sleep quality.
Feng. Jurnal: Alternative Therapies (2023)	Service on Patients: A Clinical Observational Study	(RAM)-based care services during the perioperative period in patients with lung cancer (LC) undergoing radical resection				
ID 8	Author: Fatemeh Goudarzi, Talat Khadivzadeh, Abbas Ebadi, Raheleh Babazadeh, Jurnal: BMC Women's Health (2022)	Women's interdependence after hysterectomy: a qualitative study based on Roy adaptation model	Understanding women's social interdependence after hysterectomy	30 purposively selected women with a history of hysterectomy	Qualitative, targeted content analysis with semi-structured interviews	Post-hysterectomy women's adaptation process under RAM guidance focused on increasing interdependence with family and healthcare providers.
ID 9	Author: Ya-Ni Peng, Lu Jin, E-Jun Peng, Li Zhang, Jurnal: BMC Urology (2023)	Perioperative care based on Roy Adaptation Model in elderly patients with benign prostatic hyperplasia: impact on psychological well-being, pain,	Assess the effect of RAM-based perioperative care on psychological well-being, postoperative pain, and quality of life in elderly patients	160 elderly patients with BPH, divided into two groups	Experimental study, randomized design with control group	RAM-based patient care reduced anxiety and depression, relieved postoperative pain, and significantly improved quality of life.

		and quality of life	with BPH undergoing TURP			
ID 10	Author: Xiaoqing Shi, Wencan Ma, Jurnal: BMC Musculoskeletal Disorders (2024)	Effect of collaborative nursing method based on RAM model on postoperative functional reconstruction, soft tissue pain and living quality in patients with femoral intertrochanteric fracture	Examined the effect of RAM-based collaborative nursing methods on postoperative function recovery, soft tissue pain, and quality of life in patients with intertrochanteric femur fractures.	96 patients with intertrochanteric femur fracture	Retrospective, paired-control method with multivariate analysis	RAM-based collaborative nursing methods improved joint function recovery, reduced postoperative pain, and improved quality of life.
ID 11	Author: Canan Sari Mukaddes Kalyoncu. Jurnal: European Journal of Pediatrics (2025)	Efficacy of the Roy Adaptation Model with smartphone training in reducing urinary tract infection in pediatric clean intermittent catheterization	Assessing the effect of Roy's adaptation model (RAM) with smartphone training on reducing urinary tract infections in children with clean intermittent catheterization	40 pediatric patients and their caregivers using CIC	Prospective study, descriptive design with data collection via participant forms and urine testing	RAM-based training with an android phone application (RAMACIC) was effective in reducing the frequency of UTIs, preventing antibiotic resistance, and improving the quality

						of life of children and their caregivers.
ID 12	Author: Fariba & Hamid Hojjati. Jurnal: Medical - Surgical Nursing Journal (2019)	Effect of Roy's Adaptation Model on the Care Burden of Mothers of Children Under Chemotherapy in Gorgan in 2018: A Quasi-Experimental Study	Investigating the effect of Roy's adaptation model on the care burden of mothers of children undergoing chemotherapy	36 mothers of children undergoing chemotherapy, randomly divided into two groups	Quasi-experimental study with pretest/post test design	Application of Roy's adaptation model improved adaptability and reduced the care burden of mothers of children undergoing chemotherapy.
ID 13	Author: Lina Zheng & Qi Jin. Jurnal: American Journal of Translational Research (2022)	Roy adaptation model-based nursing diagnosis and implementation reduces the sense of shame and enhances nursing outcomes in female patients with breast cancer	Evaluate the effectiveness of Roy's Adaptation Model-based nursing diagnosis and implementation in reducing shyness and improving nursing outcomes in female patients with breast cancer	69 female patients with breast cancer hospitalized from October 2019-October 2021, divided into two groups	Retrospective study, analysis by t-test and ANOVA	Breast cancer patients who received RAM-based care showed significantly reduced levels of anxiety and stigma, improved psychological resilience and patient self-esteem, improved quality of recovery and lower incidence of

complicatio
ns.

The results of the literature analysis are as follows:

An analysis of 13 articles addressing the application of the Roy Adaptation Implementation Model (RAM) revealed high levels of patient satisfaction with significant positive changes in their healthcare experiences and outcomes. The key findings of this literature analysis can be summarized under the following five themes:

1. **Application of RAM in Improving Nurse Competence and Patient Satisfaction.**

   The RAM model has been shown to be effective in improving nurses' skills and competencies in managing complex patient conditions, so that patients receive care that is more appropriate and responsive to their needs, such as pain management and chronic disease care. Studies by Hatami & Hojjati, (2019) and Sari & Kalyoncu, (2025) showed that nurses or caregivers who implemented RAM became more sensitive and understanding of the patient's overall physical and psychosocial needs. This results in patients experiencing improved quality of life and comfort during the care process due to a better response to their medical condition.

2. **Patient Care Management with RAM**

The implementation of the Roy Adaptation Model (RAM) has a significant positive impact on patients, especially in physiological, psychological, and social aspects. With a holistic approach, nurses are able to understand and respond to patients' needs thoroughly, as shown in the study of Dağcan et al., (2024)), where intensive care patients experienced increased comfort and pain reduction through more adaptive pain management. In addition, Goudarzi et al., (2022) study revealed that post-hysterectomy patients felt more emotionally cared for as the RAM approach enabled nurses to recognize the importance of social support from family and surroundings. Thus, RAM not only improves the quality of care, but also strengthens the patient's experience of care through meeting physical and psychosocial needs in a balanced manner.

3. **Improved Patient Satisfaction with Care with RAM**

   One of the most significant impacts of implementing the Roy Adaptation Model (RAM) is the increase in the level of patient satisfaction with the services received. Based on a number of studies, the application of this model not only improves the quality of care, but also contributes

positively to the patient's emotional experience, which is an essential aspect in determining satisfaction. As an illustration, studies conducted by Zheng & Jin, (2022) and Zhang et al., (2021) showed that RAM significantly reduced the symptoms of depression, anxiety, and stigma felt by patients, thereby increasing their psychological resilience. As a result, patients experience deeper understanding and optimal emotional assistance, which in turn strengthens their perception of the quality and outcomes of care provided.

4. **Flexibility of RAM in Various Health Care Settings**

RAM has high flexibility in being applied in various healthcare settings, both in hospitals and in the community. Studies by Goudarzi et al., (2022) and Wang & Li, (2021) showed that RAM can be adapted to local needs and patient conditions, and can be applied in the management of postoperative patients in hospitals or community care.

5. **Limitations in Implementation and Further Research**

Although the Roy Adaptation Model (RAM) shows great potential in improving the quality of nursing care, its application in clinical practice still faces various challenges that have a direct impact on the quality-of-care patients receive. The study by Peng et al., (2023) emphasized that the practical feasibility and sustainability of using RAM needs to be studied in more depth to ensure that patients receive consistent and sustainable interventions according to their adaptive needs. In addition, Shi & Ma, (2024) revealed that long-term research is needed to assess the effectiveness of implementing RAM in delivering collaborative care that has a tangible impact on patient well-being and satisfaction. Thus, although RAM has the potential to improve patients' quality of life, its effectiveness is highly dependent on the consistency and success of its implementation in the field.

Table 4. Key issues emerging

Key Issue	Specific Aspects	Source	Citation
Application of RAM in Improving Nurse Competence	RAM helps improve nurses' skills and competencies in managing various patient conditions, including in pain management and care of patients with chronic conditions.	(Hatami & Hojjati, 2019); (Sari & Kalyoncu, 2025)	"Adopting effective nursing theories such as RAM can promote the development of nursing knowledge and improve the quality of nursing care." (Hatami & Hojjati, 2019 p. 6); "Android application-based RAMACIC training shows a positive

			contribution to caregiver knowledge/skills and reduces the risk of urinary tract infections and antibiotic resistance in patients." (Sari & Kalyoncu, 2025, p.9);
Patient Care Management with RAM	The application of RAM in care management helps in understanding the patient's needs holistically, improving the effectiveness of care	(Goudarzi et al., 2022); (Dağcan et al., 2024); (Vicdan & Karabacak, 2016)	"The RAM-based approach in women who have undergone hysterectomy provides information that they need strong support from family members, health care providers, and colleagues." (Goudarzi et al., 2022, p. 9); "Roy's adaptation model is able to address intensive care patients experiencing pain holistically in the improvement and development of pain management." (Dağcan et al., 2024, p. 512); "RAM can be used to provide a holistic approach to hemodialysis patients and improve their ability to adapt." (Vicdan & Karabacak, 2016, p. 12)
Improved Quality of Care with RAM	The application of RAM improves quality of care by relieving psychological symptoms, improving patients' quality of life, according to the four adaptive dimensions of RAM	(Zheng & Jin, 2022); (Zhang et al., 2021); (Tallier et al., 2017)	"RAM-based care significantly reduced stigma and negative emotions, improved psychological resilience and self-esteem, and quality of life of breast cancer patients." (Zheng & Jin 2022, pp. 5528); "RAM-based care intervention in elderly patients with hypertension promotes healthy behavior change, improves quality of life, and increases medication adherence." (Zhang et al.,

			2021, pp. 12156); "HLWP program in minority elderly supports four adaptive modes of RAM: role functioning, self-concept, interdependence, and physiological." (Tallier et al., 2017, p.149).
Flexibility of RAM in Various Healthcare Settings	RAM can be adapted in various cultural contexts and healthcare settings such as intensive care or community care.	(Ursavas & Karayurt, 2017) (Goudarzi et al., 2022); (Wang & Li, 2021)	"The implementation of RAM-based support groups in Turkey can make it easier for women diagnosed with breast cancer to provide mutual support to fellow survivors." (Ursavas & Karayurt, 2017, p. 60); "The application of RAM is highly effective in hospitals for postoperative patients and can be adapted in various other clinical settings." (Goudarzi et al., 2022, p. 7); "RAM-based community care interventions effectively reduce depression in postpartum mothers and improve sleep quality." (Wang & Li, 2021, p. 8284).
Limitations in the Implementation of RAM in Clinical Practice	Despite the great potential, there is a need for long-term evaluation of RAM as well as actual implementation in clinical practice	(Peng et al., 2023); (Shi & Ma, 2024); (Yu et al., 2023)	"Although this study highlights positive results, the practical feasibility and sustainability of RAM-based treatments in real clinical contexts need to be thoroughly evaluated." (Peng et al., p. 8); "It is necessary to conduct studies with relatively long follow-up cycles to more objectively and accurately evaluate the clinical value of collaborative nursing care based on the

RAM model." (Shi & Ma., 2024, p. 10); "Due to the short duration of the study, the research team could not evaluate the long-term prognosis of the participants, so further research is needed to determine the effects of RAM-based nursing on patients." (Yu et al., 2023, p. 123).

Discussion
Application of the Roy Adaptation Implementation Model (RAM) in Improving Nurse Competence and Patient Satisfaction.

Several studies have shown that the implementation of RAM significantly improves nurse competence and patient satisfaction. For example, Sari & Kalyoncu, (2025) reported that the Android application-based RAMACIC training positively contributed to caregiver knowledge and skills. Similarly, Hatami & Hojjati, (2019) highlighted that applying nursing theories based on adaptation models like RAM can promote the development of nursing professionalism and care quality.

The Roy Adaptation Model emphasizes the adaptive responses of both patients and nurses to physical, psychological, and social changes, which aligns with the goal of improving nursing care. This model promotes the development of nurse competence in managing complex patient needs through a comprehensive understanding of adaptation.

The integration of RAM into nursing practice not only enhances nurse competence but also improves patient experience. However, successful implementation depends on adequate institutional support and the availability of time and resources. Therefore, comprehensive nurse training programs are essential, not only to understand the theoretical principles of RAM but also to integrate it consistently into clinical practice to ensure better care quality and patient experience.

Patient Care Management with RAM

Studies by Dağcan et al., (2024) and Vicdan & Karabacak, (2016) show that RAM provides a holistic approach to patient care by addressing patients'

physical, psychological, and social needs in-depth. For instance, Goudarzi et al., (2022) found that RAM-based care significantly improved emotional support from family members, healthcare providers, and colleagues for women post-hysterectomy.

RAM's holistic approach is grounded in the understanding that patient adaptation requires care that addresses all aspects of their being—physiological, psychological, and social. This comprehensive view aligns with the core principles of the model, where care is tailored to meet patients' dynamic needs.

The holistic nature of RAM offers substantial benefits in patient care. It builds trust between patients and healthcare providers and encourages a more personalized care plan. However, effective implementation requires ongoing support and training to ensure that nurses can fully engage with the model's principles in practice.

Improved Quality of Care for RAM-based patients

Research by Zheng & Jin, (2022) and Zhang et al., (2021) found that RAM-based care significantly reduced stigma, enhanced psychological resilience, and improved self-esteem and quality of life among patients, particularly breast cancer patients and elderly patients with hypertension. Tallier et al., (2017) RAM's focus on addressing both physical and emotional issues simultaneously result in more personalized and comprehensive care.

The four adaptive dimensions of RAM—physiological, self-concept, role function, and interdependence—provide a comprehensive framework that aligns with a biopsychosocial approach to care. This approach is crucial for addressing patients' multifaceted needs.

By addressing both physical and emotional aspects simultaneously, RAM allows nurses to provide a more holistic and personalized experience for patients. This results in improved care quality, as shown in the studies, but its long-term effectiveness will require continuous validation and adaptation to different patient populations.

Flexibility and Adaptability of RAM in Various Healthcare Settings

RAM has proven to be adaptable in various healthcare settings. For instance, Goudarzi et al., (2022) demonstrated its effectiveness in hospital settings for postoperative patients, while Wang & Li, (2021) showed its success in community care, reducing depression in postpartum mothers.

RAM's flexibility stems from its core concept of adaptation, which can be tailored to different healthcare environments. Its application across diverse settings is supported by the emphasis on individual patient needs and responses, which vary across different social and cultural contexts.

The adaptability of RAM is a major strength, allowing it to be applied in both hospital and community care settings. However, challenges remain in adapting the model to different cultural contexts. Further research is needed to ensure its effective implementation and global acceptance across various health systems and countries (Ursavas & Karayurt, 2017).

Limitations in RAM Implementation and Further Research

Although RAM shows great potential, there are still some limitations in its implementation, especially in its feasibility and sustainability in daily clinical practice. A study by Peng et al., (2023) revealed that although the implementation of RAM provides positive outcomes in patient care management, the practical feasibility and sustainability of RAM-based care in real clinical contexts need to be thoroughly evaluated. Issues such as the possibility of increased work hours for health workers, the need for

training, and changes in resource distribution need to be considered. A thorough cost-benefit analysis is also needed to assess the economic impact of implementing RAM-based care.

In addition, there is still a need for further research that evaluates the long-term impact of implementing RAM. Research by Shi & Ma, (2024) and Yu et al., (2023) revealed that studies with relatively long follow-up cycles are needed to more objectively and accurately evaluate the clinical value of collaborative nursing care based on the RAM model. Longitudinal studies that monitor patients over a longer period of time will provide a clearer picture of the impact of RAM on long-term patient outcomes. Therefore, further research is essential to ensure the optimal implementation of RAM in various healthcare settings around the world.

Conclusion

Based on the results of a review of 13 articles, Roy Adaptation Model (RAM) has proven effective in improving patient quality of life by reducing anxiety, pain intensity, and enhancing psychosocial adaptation. While its application in patient care is well-established, its use in nurse development remains limited. RAM demonstrates flexibility across various patient groups and healthcare settings, but challenges related to cross-cultural adaptation and individual patient needs still exist. Further research is needed to assess

the long-term impact of RAM on patient satisfaction, experience, and clinical outcomes across diverse healthcare environments.

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