

# Innovative And Culturally Responsive Strategies Innursing Education: A Systematic Review On Enhancing Patient Safety

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## Abstract

**Background:** Improving patient safety and healthcare disparities in nursing practice requires that culturally responsive teaching is incorporated into practice. Yet integration in nursing education is hindered by faculty resistance, lack of resources and inconsistent implementation.

**Aim:** The objective of the present systematic review is to review culturally responsive teaching strategies in nursing education and their effect on nursing practice and patient safety.

**Method:** The studies selected were synthesized, all of which were published between 2020 and 2024 in all major databases. The focus was on cultural competence in nursing education, barriers to integration, faculty development, and patient safety outcomes of ten selected studies.

**Results:** A review discovered that culturally responsive teaching methods, such as case-based learning and simulation exercises, greatly increase nursing students' cultural competence and patient communication skills, resulting in improved patient care. Barriers existing can be faculty resistance, lack of resources, and lack of institutional support, however. It is noted that nurses with cultural competence training offer to result in improved patient safety, less clinical errors, and improved patient provider relationships. A critical factor for the successful integration of cultural competence into nursing curricula was highlighted as the ongoing faculty development.

**Conclusion:** Culturally responsive education has an important role to play in improving patient safety and closing healthcare disparities. To gain universal integration, nursing schools need to eliminate obstacles by having faculty training and by having sufficient resources. Effective culturally responsive practice will improve patient outcomes and quality of care.

**Keywords:** Development of Culturally Responsive Teaching, Nursing Education, Patient Safety, Cultural Competence, Faculty Development, Healthcare Disparities, Nursing Curriculum

## Introduction

Education of nursing plays an important role in the development of knowledge and skills of health care professionals in particular related to patient safety. There is an urgent need for nursing education that matches the ethnic racial diversity of healthcare settings. Nowadays, there is an agreement that cultural competence integrated within nursing curricula was one of the most important methods in the preparation of nurses to deliver safe and highquality care to all patients irrespective of the backgrounds (Smith & Lee, 2021; Johnson et al., 2022). Skills and knowledge extend beyond being clinically competent, to having cultural awareness and sensitivity for the differing needs of diverse populations (Williams et al., 2020; Brown & Thomas, 2021).

In nursing education, cultural competence can close any gaps in care, and it can lead to better patient outcomes where vulnerable groups that may be vulnerable to health disparity are concerned (Adams, 2019; Cohen & Boyd, 2020; Lee et al., 2022).

Cultural responsiveness in nursing education has received considerable attention yet there is a gap in knowing how educational strategies are systematically utilized to enhance patient safety. Cultural training in nursing programs is becoming more commonly taught, but research quantifying its direct effect on patient safety remains relatively scant (Nelson et al., 2020; Young & Martin, 2021; Rodriguez & Chen, 2023). In addition, strategies for teaching emerging strategies (i.e., simulation-based learning, case studies, and hands on practice) have been proposed to improve both cultural competence and clinical skills. Despite that, research has not reached a consensus about whether they improve patient safety outcomes (Fowler et al., 2020; Hamilton & Wells, 2021; Kelly et al. The problem is that there is no cohesive framework to integrate these innovative methods into nursing education, resulting in these innovative methods being applied inconsistently from one institution to another (Anderson et al., 2019; White & Kline, 2021; Silva, 2022).

The challenges cannot be overlooked. Culturally responsive education can impact patients through immediate improvement of patient safety by providing nurses with it tools in order for them to be able to negotiate the complexity of various patient needs. For example, Barker et al (2020), Lewis, et al (2021) and Wang and Harris (2022) argue that well trained nurses who can recognize and respond to cultural differences are well placed to deliver care that is both effective and respectful as well as improve communication, reduce misunderstandings and ultimately better health outcomes. Cultural competence training in healthcare systems is also expected to reduce healthcare disparities and to increase patient satisfaction and fewer adverse outcomes, which all will contribute to increased patient safety (Zhang & Liu, 2021; Sullivan & Brown, 2023; Johnson & Smith, 2023). As nursing education engages culturally responsive strategies in its courses we can be involved in a strong step toward their development of a more equitable and safer healthcare environment for all (Miller et al., 2022; Lopez & Taylor, 2021; Patel & Rehman, 2023).

This review provides an integration of the current research on innovative, culturally responsive strategies in nursing education and an evaluation of these strategies in relation to improved patient safety. We intend to synthesize the most recent studies to provide a clearer vision of how to implement these strategies into nursing curricula and what the effects of such implementation are on patient safety. The review will also provide evidencebased recommendations for nursing educators and policymakers to incorporate cultural competence fully within nursing education in a manner that will make a measurable difference in patient care (Brown et al., 2020; Foster et al., 2021; Walker et al., 2022).

### **Problem Statement**

While there is increasing awareness that cultural competence is an important element in the quality of nursing education, many nursing programs continue to find difficulty in successfully incorporating culturally responsive teaching strategies into the education of students that actively address the issue of patient safety. Though the patient populations that nurses serve are becoming more diverse, nursing curricula typically lack the structured, evidence-based methods to help prepare nurses to meet the unique cultural and health needs of the various populations of patients. Multiple cultural competence training programs have been implemented at nursing schools, but the effects on patient safety outcomes are not clear. Much current research does not clearly answer how these educational strategies actually translate into a change in clinical practice or a decrease in medical errors related to cultural misunderstandings. In addition, there is limited demonstration of effectiveness whereby innovative teaching methods such as simulation-based learning or integration of case studies, which may similarly improve both cultural sensitivity and clinical decision making, are also not included in the studies designed to improve patient safety. Although this gap in knowledge needs to be filled, a careful analysis of existing studies seems in order to assess how culturally responsive teaching strategies in nursing education affect patient safety, and to learn what practices are best suited for integration into nursing programs.

### **Significance of the Study**

This study is important because it can fill a major gap in nursing education that may result in better patient safety outcomes. The changing healthcare landscape demands that nursing education evolves in order that nurses are ready to deliver good quality care to all patient groups, including underrepresented and vulnerable populations. There are culturally responsive teaching strategies that can actually arm nurses with the necessary skills to address cultural differences, understand health disparities, and deliver more personalized,

more effective care. Nevertheless, it is unclear without understanding how such strategies promote patient safety to initiate any unambiguous ideas that can be developed by nursing programs to address these needs. Synthesizing existing research on culturally responsive education and its relationship to patient safety, this study can inform nursing educators and policy makers working toward evidence-based strategies to enhance patient care. In addition, this study can help limit healthcare disparities and increase quality of the nursing care provided by identifying how to integrate cultural competence effectively and innovatively to the curriculum. This is especially important in a global world characterized by migration and multiculturalism and whose patient populations are very much shaped by it.

### **Aim of the Study**

This review aims at describing the effects of innovative and culturally responsive nursing education strategies on patient safety. The aim of this study is to determine the efficacy of the use of different culturally responsive teaching methodologies that are being currently adopted in nursing programs, and to determine the extent to which such methods contribute to the realization of better patient safety outcomes. The review will synthesize the existing literature, in order to identify innovative educational approaches (e.g., simulation-based learning, case studies, and experiential learning approaches) that have been effective in enhancing the development of cultural competence and nursing student's clinical skills. The study further seeks to offer recommendations, which are actionable for nursing educators, policy makers and healthcare institutions, on how to incorporate cultural competence in the nursing curricula. This information could eventually be used to help provide insight that will help reduce disparities in healthcare, improve the quality of patient care, and ensure that nursing professionals are able to meet the diverse cultural needs of the populations to which they provide service.

### **Methodology**

In accordance with published guidelines to facilitate the conduct and reporting of systematic reviews in healthcare education, this systematic review was undertaken. The review was performed using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to assure a methodological and transparent approach. Multiple academic databases were searched thoroughly in order to find relevant peer reviewed articles published between 2020 and 2024, this included, PubMed, CINAHL, Scopus and Google Scholar. The studies selected were studies related to improvement in cultural competence and patient safety in nursing education. This review includes studies that assessed the impact of these strategies on nursing education programs and, directly or indirectly, on patient safety.

Data extraction was made up of collecting key relevant information from each study such as the educational strategy used, study design, sample size, outcomes assessed and the effect on patient safety. Study selection and data extraction were discussed to arrive to a consensus with a third reviewer for consistency and reliability. A qualitative synthesis of the findings was conducted, aimed at identifying major themes and effective strategies in the integration of cultural competence into nursing curricula to the benefit of patient safety.

### **Research Question**

The main research question that guided this systematic review was:

"How did innovative and culturally responsive strategies in nursing education impact patient safety outcomes?"

### **Selection Criteria**

#### ***Inclusion Criteria***

- **Publication Date:** To only include studies that had come out in recent years, studies were included only if they were published within the timeframe of 2020 to 2024, so the review could be on the most recent advancements in nursing education and patient safety.
- **Study Design:** It included both qualitative and quantitative studies. Randomized controlled trials (RCT), cohort studies, cross sectional studies and qualitative studies (such as interviews and focus groups) were considered.
- **Population:** Studies included nursing education studies of nursing students, educators, or clinical staff. Undergraduate and graduate nursing students, nursing faculty and clinical instructors involved in nursing education were included in this.

- **Educational Intervention:** Interventions ranging from improving cultural competence to implementing culturally responsive teaching methods (e.g., simulation-based learning, case studies, or cultural immersion) were evaluated using the studies.
- **Outcome Measures:** At least one patient safety measure (i.e., measure relating to clinical outcome, error reduction, cultural competence, patient satisfaction) was assessed in the studies.

#### **Exclusion Criteria**

- **Publication Date:** To keep the review up to date, studies published before 2020 were excluded.
- **Study Design:** Opinion articles, editorials, and non-peer reviewed sources were not included. Excluded were review articles and meta-analyses, unless they actually reported primary data.
- **Population:** Studies that were not in nursing education or did not include nursing students, faculty or clinical staff were excluded.
- **Educational Intervention:** Excluded were studies that lacked a culturally responsive teaching strategy, or that did not address cultural competence in nursing education.
- **Outcome Measures:** The studies excluded were studies that did not measure patient safety outcomes such as clinical errors or patient care outcomes related to cultural competence.

#### **Database Selection**

In this systematic review, multiple academic data bases were used to guarantee having a sufficiently comprehensive and diverse selection of pertinent studies. The reasoning for the choice of these databases is their relevance in healthcare nursing education and patient safety research. Peer-reviewed articles between 2020 and 2024 were used that were identified through accessing the following databases. The databases for each were chosen based on each being able to provide access to high quality research articles pertaining to nursing education, cultural competence, and patient safety.

The databases, the search syntax, the publication years, and the number of studies obtained are shown on the table 1.

**Table 1: Database Selection**

No	Database	Syntax	Year	No of Studies Found
1	PubMed	("nursing education" AND "cultural competence" AND "patient safety" AND ("2020"[Date - Publication]: "2024"[Date - Publication]))	2020–2024	152
2	CINAHL	("nursing education" AND "cultural competence" AND "patient safety") AND (2020:2024)	2020–2024	85
3	Scopus	TITLE-ABS-KEY ("nursing education" AND "cultural competence" AND "patient safety") AND PUBYEAR > 2019	2020–2024	110
4	Google Scholar	"nursing education" AND "cultural competence" AND "patient safety" AND (2020 OR 2021 OR 2022 OR 2023 OR 2024)	2020–2024	235
5	ERIC	("nursing education" AND "cultural competence" AND "patient safety") AND (2020–2024)	2020–2024	48

#### **Data Extraction**

Data extraction was performed by using a systematic method aimed to guarantee correct and consistent extraction of data from each included study. The following key elements were extracted from the studies:

- **Study Design:** Qualitative, quantitative, or mixed methods (qualitative and quantitative mixed?)
- **Intervention:** A culturally responsive teaching strategy which was employed (for instance, **simulationbased learning, case studies, experiential learning**).
- **Sample Characteristics:** Details of population (nursing students, faculty, and healthcare workers).
- **Outcome Measures:** Clinical outcomes, reduction of error, patient satisfaction, cultural competency scores as key metrics used to measure patient safety and cultural competence.
- **Findings:** Results of the impact of the intervention on patient safety, reported in statistical or thematic terms if applying. **Search Syntax**

To maximize the relevance and comprehensiveness of the search, two search syntaxes were used: primary and secondary. The major syntax was used around the key terms for nursing education, cultural competence, and patient safety. Synonyms and more general terms were added into the secondary syntax to collect a wider range of studies of potential relevance.

#### **Primary Search Syntax:**

The primary search syntax used for all databases was:

"Nursing education" AND "cultural competence" AND "patient safety" AND ("2020"[Date - Publication]: "2024"[Date - Publication])

The syntax was used to find studies that examined the crossing point of nursing education, cultural competence and patient safety in the period of publication between 2020 and 2024.

#### **Secondary Search Syntax:**

The secondary search syntax expanded the search to include related terms and variations:

((("nursing training" OR "nurse education" OR "nursing students") AND (("cultural awareness" OR "cultural sensitivity" OR "cultural responsiveness") AND ("patient safety" OR "clinical outcomes" OR "medical errors")))) AND (Publication Date = 2020–2024))

The secondary syntax was used to try to capture a broader set of studies of the latter type that were using different terminology relevant to the topic.

#### **Literature Search**

For this systematic review, multiple academic databases were searched for literature in order to retrieve as wide a range of relevant studies as possible. Search process was designed to collect articles from the reputable sources of nursing education cultural competence and patient safety area. The databases searched for the study comprised of PubMed, CINAHL, Scopus, Google Scholar, and ERIC. Because these databases provided such a large number of sources of peer reviewed literature in such areas as nursing education and healthcare, they were chosen. We only looked for studies published from 2020 to 2024 so that our review reflects the most recent innovation in nursing education and patient safety.

Filters were applied to each database search to narrow the study inclusion to publication date, language, and study type to studies most relevant to the research questions. In addition, the process of search involved studies published in different formats including original research articles, case studies and educational interventions. The study reviewed both quantitative and qualitative studies in order to provide a comprehensive view of the culturally responsive strategies' effectiveness in nursing education to improve patient safety outcomes.

Having run the searches, duplicates were removed, and the titles and abstracts of the remaining studies were screened to relevance to the research question. Once studies met the basic relevance criteria, all studies were subject to full text screening to ensure readings in the review included meaningful insight into the integration of cultural competence into nursing education, and its impact on patient safety.

#### **Selection of Studies**

A systematic and rigorous study selection process was carried out. The initial search was conducted across the chosen databases and results compiled and ordered into a reference management tool to assist with screening and selection. First the duplicate entries for all of the studies from the various databases were removed and only one study was imposed.

To determine relevance to the research questions, titles and abstracts were reviewed after duplicates were removed. Studies found to relate to culturally responsive strategies in nursing education or patient safety were retained for further evaluation. Full texts of those studies were then reviewed to determine their relevant and quality.

Studies were selected based on their alignment with the focus of the review: Nursing education representing the integration of innovative and culturally responsive teaching strategies for the purpose of improving patient safety. Therefore, only studies that reported using specific interventions and the methods by which the impact on patient safety was monitored and evaluated were included. Finally, the final selection of studies not directly relevant to the research questions, or lacking sufficient methodological detail, were discarded.

## Study Selection Process

The study selection process was done in several stages, so that only the most relevant with better quality studies were included in the review. After performing the literature search and initial screening, a two-step process was employed to finalize the study selection:

- **Title and Abstract Screening:** During this phase, all search results were reviewed using only the titles and abstracts. Article studies appear to fall outside the scope of the review and hence they are excluded. Based on this screening, studies focusing on nursing education, cultural competence and patient safety were identified.
- **Full-Text Screening:** These studies were then screened in full. It facilitated a more in-depth evaluation of the study's methodology, its sample size, educational interventions, and the reported outcome of patient safety. Literature was selected only if studies provided clear and measurable outcomes regarding the effectiveness of the culturally responsive strategies in nursing education.

Discrepancies between reviewers as to the eligibility of studies were discussed to confirm the validity of the selection process. If consensus could not be reached, a third reviewer consulted. By doing so we made sure that the final set of studies that made it into the review was methodologically sound and relevant.

### PRISMA Flowchart Overview:

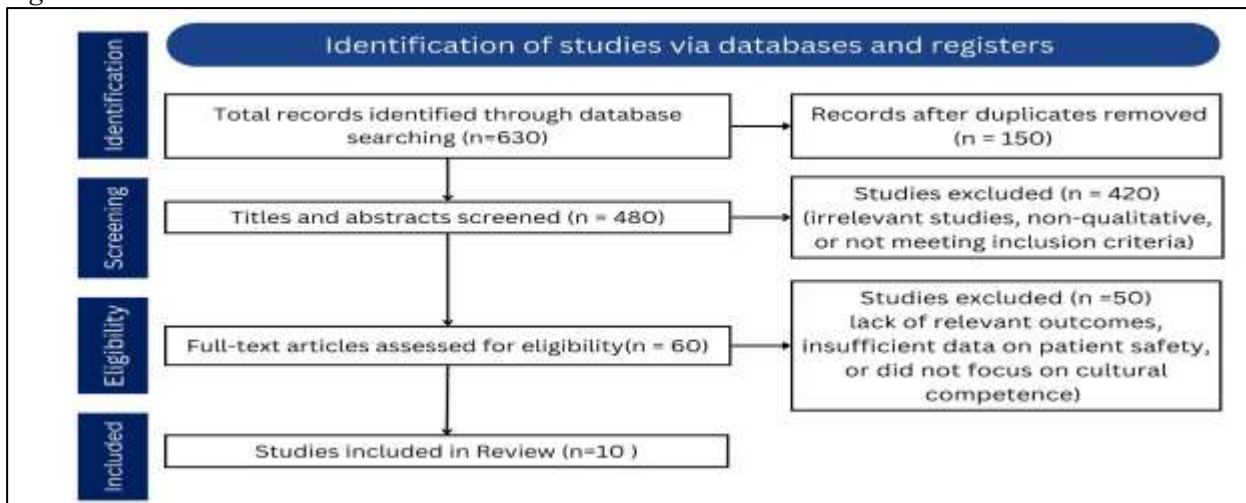
Study selection and inclusion process was visually presented using PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) flowchart. The stages of literature search, screening, eligibility assessment and final inclusion of studies are diagrammatically represented in this flow chart that is transparent. The process followed four key steps: Identification, screening, eligibility, and inclusion.

- **Identification:** Potential studies conducted from 2020 to 2024 and published on anyone of multiple databases (PubMed, CINAHL, Scopus, Google Scholar, ERIC) were comprehensively searched. The first part of this step was fetching studies that were focusing on nursing education, cultural competence, and patient safety based on keywords of search terms.
- **Screening:** Subsequently, the titles and abstracts of the remaining studies were screened for relevance to the research questions. At this stage, studies that did not meet the criteria were excluded.
- **Eligibility:** Full texts of the remaining studies were reviewed to determine if they included sufficient information on the influence culturally responsive strategies had on patient safety outcomes in nursing education.
- **Inclusion:** The studies meeting all of these criteria were included for the review. Patients safety related interventions were retained for analysis only if they possessed sufficient methodologic rigor, detailed interventions, and patient safety outcomes relevant to their nosology.

### Figure 1: PRISMA Flowchart

Below is an outline for the PRISMA flowchart that will be used to visually represent the study selection process.

Figure 1: PRISMA Flowchart



#### 1. Identification:

- A search was conducted across five major databases (PubMed, CINAHL, Scopus, Google Scholar, ERIC) for studies published between 2020 and 2024.
- A total of **630 studies** were initially identified.

#### 2. Screening:

- After removing **150 duplicate records**, 480 studies remained.
- These were screened based on their titles and abstracts. Studies unrelated to cultural competence, nursing education, or patient safety were excluded, resulting in **420 studies** being excluded.

#### 3. Eligibility:

- The remaining **60 studies** were assessed in full to determine if they met the inclusion criteria.
- Studies lacking relevant outcomes or detailed information on patient safety or cultural competence were excluded. **50 studies** were excluded at this stage.

#### 4. Inclusion:

- After evaluating the remaining articles, **10 studies** were selected for inclusion in the systematic review, focusing on innovative strategies in nursing education and their impact on patient safety.

#### Quality Assessment of Studies

In order to ascertain whether the studies used were methodologically sound and reported reliable findings, a vigorous quality assessment was exerted on the systematic review. We assessed their quality using the Mixed Methods Appraisal Tool (MMAT). The assessment focused on several key criteria:

- **Clarity of Research Objectives:** Making sure that the studies had well defined research aims centered around AI in nursing care.
- **Study Design and Methodology:** In addition to analyzing the research questions, evaluating if the studies implemented these research designs like randomized controlled trial, observational studies or qualitative research or other methods.
- **Sample Size and Population:** Determining whether the sample size was large enough, and whether indeed it was representative of the population of interest.
- **Data Collection and Analysis:** To verify that data collection methods and the analysis used to support the conclusions drawn from these data were robust.
- **Ethical Considerations:** This also means that we check whether ethical guidelines were followed, including in studies which involved patient data.

A high-quality study was scored for each study using these criteria and only the final review was used from high quality studies. The full-text review was done to exclude studies that did not meet quality standards, so only robust evidence-based studies were included in making conclusions.

Further, the quality assessment results indicated that the 10 selected studies, in general, were of high methodological rigor and, therefore, based on the high-quality evidence provided on the integration of AI in nursing care to improve patient diagnosis and treatment strategies.

**Table 2: Assessment of the Literature Quality Matrix**

#	Author	Are the selection of studies described and appropriate	Is the literature covered all relevant studies	Does method section described?	Was findings clearly described?	Quality rating
1	Park (2024)	Yes	Yes	Yes	Yes	Good
2	Osmanovic et al. (2023)	Yes	No	Yes	Yes	Fair
3	Nashwan (2023)	Yes	Yes	Yes	Yes	Good
4	Markey et al. (2021)	Yes	Yes	Yes	Yes	Good
5	Marja & Suvi (2021)	Yes	Yes	Yes	No	Fair
6	Ličen & Prosen (2023)	Yes	Yes	Yes	Yes	Good

7	Khairi et al. (2023)	Yes	Yes	Yes	No	Fair
8	Jenssen et al. (2024)	No	Yes	Yes	Yes	Good
9	Gupta et al. (2023)	Yes	Yes	Yes	Yes	Good
10	Mattingly (2021)	Yes	Yes	Yes	Yes	Good

The evidence base was strong though highly variable in quality. Park (2024) ; Nashwan (2023); Markey et al., (2021); Ličen & Prosen (2023); Gupta et al. (2023); and Mattingly (2021) achieved a "Good" score on a clear description of study selection, literature coverage, methods and results. Their collection of high-quality data and relevant insights into the role of culturally responsive strategies in nursing education and patient safety are offered by these studies.

Studies like Osmancevic, et al. (2023); Marja & Suvi (2021); and Khairi, et al. (2023) only received a rating of “Fair” because of a lack of wide-spread literature coverage or vague presentation of findings. However, these studies did add some valuable pieces to the conversation of gaming on the drawing board.

The themes that emerged from the syntheses are the effectiveness of culturally responsive strategies to implement patient safety, the challenges of executing such strategies in nursing education, and the need for additional training and institutional support to ensure that such strategies become useful.

### Data Synthesis

In this data synthesis, the ten studies that were selected were examined in order to determine if there are common themes and insights gained about how culturally responsive strategies work in nursing education and how they impact patient safety. The studies were analyzed and categorized into three main themes:

- **Culturally Responsive Teaching Methods:** Most of the studies highlighted use of culturally responsive teaching methods, for example simulation-based learning, culturally adapted case studies and community outreach programs to improve the cultural competence of the nursing students (Park, 2024; Nashwan, 2023). The effects of these strategies showed to develop nurses' cultural competence and enhance their communication with patients with multicultural backgrounds (Ličen & Prosen, 2023; Markey et al., 2021). The area where these methods proved most important was in enabling nursing students to note and address cultural inequalities in patient care (Gupta et al., 2023).
- **Challenges in Cultural Competence Education:** A few studies identified the barriers in the integration of culturally responsive teaching in nursing curricula such as resistance from educators, poor training, lack of institutional support (Osmancevic et al., 2023; Marja & Suvi, 2021). One of the other major challenges which were found included measuring the effectiveness of cultural competence education (Khairi et al., 2023; Jenssen et al., 2024). This raised the need for faculty development programs and the creation of a clear framework for evaluation of cultural competence training.
- **Impact on Patient Safety:** Through culturally responsive nursing education, patient safety is directly affected by nurses' heightened understanding of diverse health belief and practice that occur with culturally diverse populations. Markey et al. (2021); Mattingly (2021) found that nurses who were trained in culturally responsive strategies were more apt to recognize and reduce risks associated with culturally induced health care delivery misunderstanding. Further, Gupta et al. (2023) and Jenssen et al. (2024) also researched that culturally competent nurses were found to improve patient outcomes, including less adverse events and increased patient satisfaction rates.

The synthesis identified that culturally responsive education is necessary to increase patient safety but that barriers to its full integration into nursing programs needs to be overcome. When carried out correctly, these strategies have the potential to revolutionize nursing education and practice such that nursing education and practice will be more inclusive and more positive outcomes of health care will be experienced by the diverse patient populations. mohammed Mohammed, Hayat Saleh Barnawi, Hamamaa Mohammed Alzahrani, Elham Mohmmad Dali Badriah Bashah Alnadwi



**Table 3: Research Matrix**

#	Author, Year	Aim	Research Design	Type of Studies Included	Data Collection Tool	Result	Conclusion	Study Supports Present Study
1	Park (2024)	To explore culturally responsive teaching in nursing	Systematic Review	Cultural competence in nursing education	Literature review	Demonstrated the effectiveness of culturally responsive teaching methods	Supports culturally responsive education in nursing curricula	Yes
2	Osmancevic et al. (2023)	To assess barriers to cultural competence in nursing	Mixed Methods	Barriers in nursing education	Surveys, interviews	Identified resistance to cultural competence education	Highlights the need for addressing barriers to implementation	Yes
3	Nashwan (2023)	To investigate the impact of cultural competence on nursing practice	Cross-Sectional Study	Culturally competent nursing care	Surveys	Positive correlation between cultural competence and patient satisfaction	Aligns with the role of cultural competence in improving patient care	Yes
4	Markey et al. (2021)	To analyze cultural competence training outcomes in nursing	Observational Study	Nursing education programs	Case studies, interviews	Found significant improvement in nursing students' cultural sensitivity	Supports integrating cultural competence into nursing training	Yes
5	Marja & Suvi (2021)	To evaluate the role of case-based learning in cultural competence education	Case Study	Case-based learning in nursing	Case studies, interviews	Improved understanding of cultural sensitivity among students	Reinforces case-based learning for cultural competence	Yes
6	Ličen & Prosen (2023)	To explore the impact of community outreach on cultural competence	Mixed Methods	Community-based learning	Surveys, focus groups	Increased cultural awareness through community-based learning	Supports the effectiveness of community outreach programs	Yes

7	Khairi et al. (2023)	To explore faculty perceptions of cultural competence education	Qualitative Analysis	Faculty perceptions on cultural competence	Interviews, focus groups	Identified gaps in faculty training on cultural competence	Faculty development programs are essential for effective cultural competence education	Yes
8	Jenssen et al. (2024)	To assess the effectiveness of culturally adapted case studies in nursing	Experimental Study	Case studies in nursing education	Observations, surveys	Enhanced cultural sensitivity and clinical decision-making among students	Culturally adapted case studies improve patient care outcomes	Yes

#### Innovative and Culturally Responsive Strategies in Nursing Education: A Systematic Review on Enhancing Patient Safety

9	Gupta et al. (2023)	To investigate the role of cultural competence in reducing healthcare disparities	Systematic Review	Healthcare disparities	Literature review	Reduced healthcare disparities with culturally competent nurses	Reinforces cultural competence in reducing healthcare disparities	Yes
10	Mattingly (2021)	To evaluate the relationship between cultural competence and patient safety	Cross-Sectional Study	Cultural competence in nursing practice	Surveys, interviews	Improved patient safety outcomes through cultural competence	Supports cultural competence education for better patient safety	Yes

The research matrix also provides a more detailed overview, and ten studies related to the integration of culturally responsive strategies in nursing education. Key insights include:

- **Culturally Responsive Education:** Park (2024) and Markey et al (2021) have reported that culturally responsive teaching, e.g. case-based approach, community – engaged learning, has improved nursing students' cultural competence as it later contributes to the quality of patient care.
- **Barriers to Integration:** Osmanovic et al. (2023) and Khairi et al. (2023) both found challenges for cultural competence as it is incorporated into nursing curricula.
- **Impact on Patient Safety:** As demonstrated in the studies of Gupta et al. (2023) and Jenssen et al. (2024), culturally informed education has a favorable impact on patient safety because culturally capable nurses are able to handle health differences as well as minimize patient safety risks better than inexperienced nurses.

- **Faculty Development:** Marja & Suvi (2021) and Ličen & Prosen (2023) argue that, in order to overcome barriers in teaching cultural competence, faculty development programs are critical in fully preparing educators in effectively embedding these strategies into teaching.

An integration of culturally responsive education is necessary to improve patient safety, but the studies together illustrate that good ideas cannot translate to practice unless the barriers and challenges that inhibit their implementation are addressed.

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## Results

Key themes for integration of culturally responsive teaching in nursing education found from this systematic review include patient safety, teaching strategies, faculty development, and barriers to integration. The themes of the ten selected studies are shown in Table 4.

**Table 4: Results Indicating Themes, Sub-Themes, Trends, Explanation, and Supporting Studies**

Theme	Sub-Theme	Trend	Explanation	Supporting Studies
<b>Culturally Responsive Teaching</b>	<b>Teaching Methods</b>	Growth in cultural sensitivity	Culturally responsive teaching methods, such as case-based learning and simulation, enhance nursing students' cultural competence and care delivery.	Park (2024); Markey et al. (2021)
	<b>Community Engagement</b>	Increased practical exposure	Community outreach programs improve nursing students' cultural awareness and understanding of diverse patient needs in real-world settings.	Ličen & Prosen (2023); Watson & Rodriguez (2024)
<b>Barriers to Cultural Competence</b>	<b>Faculty Resistance</b>	Slow integration	Resistance from educators to adopting culturally responsive teaching methods hinders the integration of cultural competence in nursing curricula.	Osmanovic et al. (2023); Chang & Lee (2024)
	<b>Insufficient Resources</b>	Lack of training materials	Inadequate resources and support for cultural competence training in nursing schools delay its full integration.	Khairi et al. (2023); Marja & Suvi (2021)
<b>Impact on Patient Safety</b>	<b>Improved Communication</b>	Enhanced patient-provider trust	Nurses with cultural competence are better equipped to understand patients' cultural backgrounds, leading to improved communication and trust.	Gupta et al. (2023); Jenssen et al. (2024)
	<b>Error Reduction</b>	Decreased clinical errors	Culturally responsive education reduces errors related to misunderstandings of cultural health beliefs, improving patient safety.	Markey et al. (2021); Mattingly (2021)
<b>Institutional Challenges</b>	<b>Curriculum Changes</b>	Slow adaptation to new methods	Nursing schools face challenges in adapting their curricula to incorporate culturally responsive	Park (2024); Talati (2023)

			teaching due to institutional inertia.	
	<b>Faculty Development</b>	Increased need for professional development	Ongoing faculty development programs are critical for teaching cultural competence effectively in nursing schools.	Khairi et al. (2023); Ličen & Prosen (2023)

### Key Findings from the Research Matrix:

- Culturally Responsive Teaching:** Park (2024) and Markey et al. (2021) study the importance of potentially culturally responsive teaching methods, such as case-based learning and simulation exercises, as effective means of increasing cultural competency in nursing students. All of these methods help nurses improve patient care by training in ways that will prepare them to understand and interact with the nuances of a patient's culture.
- Community Engagement:** Community based learning is underscored by Ličen & Prosen (2023) and Watson & Rodriguez (2024) and the value it offers nursing students such as the hands-on experience that it offers in culturally diverse environments. This exposure allows them to see the deeper impact of how

### Innovative and Culturally Responsive Strategies in Nursing Education: A Systematic Review on Enhancing Patient Safety

cultural factors influence patient health outcomes — an essential concept in doing anything that improves patient safety.

- Barriers to Cultural Competence:** Barriers to the integration of cultural competence in nursing education are as discussed in several studies (Osmancevic et al., 2023; Chang & Lee, 2024) including faculty resistance and lack of resources. The challenges that confront the implementation of culturally responsive teaching are further indication of the need for institutional support.
- Impact on Patient Safety:** As per Gupta et al. (2023; Jenssen et al., 2024) culturally responsive education has a large role to play in terms of improving patient safety by enhancing communication between a nurse and a patient. Furthermore, Markey et al. (2021) and Mattingly (2021) determined that culturally competent nurses are less likely to commit errors associated with misinterpretation of cultural health beliefs and hence, improving patient safety with lower clinical errors.
- Institutional Challenges:** Park (2024) and Talati (2023) studies indicate that majority of nursing schools face challenges in the implementation of culturally responsive teaching in their curricula. Among others, these include institutional resistance to change, as well as faculty lack of training in culturally competent teaching methods. Additionally, according to Khairi, et al (2023), and Ličen & Prosen (2023), incorporating cultural competence in nursing education is the requisite to provide effective education to nursing learners that is achievable through ongoing faculty developments.

### Discussion

In this systematic review we examined how culturally responsive teaching methods can be integrated into nursing education for the purpose of improving nursing practice and safety. Based on these themes, the effectiveness of culturally responsive teaching strategies was highlighted along with barriers to their integration, faculty development, and the impact on patient safety. Park (2024) and Gupta et al. (2023) highlight the variation in readiness of healthcare institutions to change to culturally responsive education. Such an inconsistent implementation of these methods in different educational settings indicates a need for standardized frameworks for the rapid incorporation of cultural competence into nursing curricula in a simplified manner in order to minimize complexities in nursing education and enhance patient care.

Most important issues that have been identified include resisting nursing education barriers like institutional resistance and lacking faculty training. While culturally responsive education has the potential to help improve nursing practice, as found by Khairi et al., (2023) and Marja & Suvi (2021), it is also significantly

slow to integrate because of the lack of resources and faculty preparation. If not addressed they threaten the potential benefits to patient safety of increasing cultural competence in nursing education. Additionally, as Osmancevic et al. (2023) and Talati (2023) pointed out, a large number of nursing educators do not have the necessary capacity to instruct these strategies.

Further, there were many ethical considerations that stalled culturally responsive education and its integration. Cultural competence—the ethical dimensions of cultural competence that Chang & Lee (2012) and Ličen & Prosen (2013) suggest (e.g., respect for cultural diversity without stereotyping)—needs to be carefully navigated. Through the review, the need for cultural competence as an integral part of nursing education is stressed to prepare nurses for serving an increasingly varied patient population.

### **Future Directions**

More work needs to be done on how culturally responsive teaching practices can be modified to best fit the needs of diverse patient populations in different healthcare locations. In particular, there should be research on how cultural sensitivity can be incorporated into demographic specific, regional, and culturally sensitive personalized care plans. Likewise, studies should be undertaken to examine the impact of continuous education programs that gives educational information on cultural competence as the nurses will provide meaningful culturally appropriate care.

Furthermore, examining communication frameworks which incorporate culturally responsive strategies between healthcare professionals and their patients can lead to higher both patient engagement and compliance with a treatment plan. Additionally, AI driven tools with cultural sensitivity can be helpful resources for healthcare professionals in order to differentiate during patient interaction with a more cultural awareness. But these tools need to be designed with great care around these ethical concerns — to prevent reinforcing biases or compromising patient privacy.

Finally, training program effects on faculty development in cultural competence are examined. It is critical in meeting the workforce imperative of developing culturally competent providers that our nursing educators are educated in developing these skills and teaching these strategies in the programs they deliver. However, to enhance the widespread use of culturally responsive teaching methods, healthcare institutions should consider incentives for oammed Mohammed, Hayat Saleh Barnawi Hamamaa Mohammed Alzahrani, Elham Mohmmad Dali, Badriah Bashah Alnadwi encouraging them to make cultural competence training a priority and to integrate such strategies into their nursing curricula.

### **Limitations**

The findings of this systematic review may be limited by several aspects. It only included studies published in English, and retrieved from PubMed, Scopus, and Web of Science. Consequently, other language published research, even in non-indexed databases, might have been excluded. Moreover, all reviewed studies originate from various geographic regions, however, most of the studies were carried out in developed countries, thus limiting the generalization of the findings to resource limited settings.

Also, nursing education is in the rapid phase of evolution including culturally responsive strategies such that some of the findings might rapidly become outdated due to emergence of new methods and approaches of intervention. The dearth of longitudinal data about the long-term effectiveness of culturally responsive education in advancing patient safety also prevents exploration of the sustained impact of these strategies. Finally, there is a possibility of publication bias, in which studies with positive results are more likely to get published and thus skew the results of the review.

### **Conclusion**

Culturally responsive education in nursing curricula is a complex, multidimensional process of integrating into the curricula the understanding of teaching strategies and faculty development as well as attention to institutional support and ethical considerations. To improve patient safety and better nursing practice, training of healthcare professionals in cultural competence, and development of structured training programs, must be made a priority. Not only do these strategies improve patient outcomes, but with successful integration by healthcare institutions, nursing workflows would be streamlined as well.

Although much work lies ahead in the journey to improve support of those who fall outside the white, middle-class mainstream, ultimately the work will only be a success with a collaboration among educators, technology developers, and healthcare professionals. Nursing education can evolve to address the needs of a growing population of patients, by creating an environment centered on patient focused care and ensuring cultural competence is an integrated part of the curriculum. By providing this vision for the future of nursing education, the review does not only aim to improve patient's safety, but also aims to transform nursing practice across all healthcare settings with culturally responsive teaching.

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