

## INTERDISCIPLINARY INTEGRATION IN HEALTHCARE: AN ANALYSIS OF EXPERIENCES BETWEEN MEDICINE AND NURSING

### INTEGRAÇÃO INTERDISCIPLINAR EM SAÚDE: UMA ANÁLISE DAS EXPERIÊNCIAS ENTRE MEDICINA E ENFERMAGEM

### INTEGRACIÓN INTERDISCIPLINARIA EN SALUD: UN ANÁLISIS DE EXPERIENCIAS ENTRE MEDICINA Y ENFERMERÍA

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#### ABSTRACT

**Objective:** To understand the meaning of interdisciplinarity, its history, its relationship with health, and its integration with the fields of medicine and nursing. **Method:** An integrative literature review based on the guiding question: "How can interdisciplinary education and the promotion of cooperation between the fields of medicine and nursing influence the quality of care and clinical practice during and after their training?" The PICO strategy was used, with inclusion criteria limited to articles published in journals, available online, in Portuguese, English, and Spanish, from the period between 2019 and 2024. **Results:** The sample consisted of five articles. Content analysis revealed two categories related to interdisciplinarity: nurse-physician communication and quality of health care. **Conclusion:** Interdisciplinarity in health plays a fundamental role in the education of medical and nursing students. It promotes effective collaboration, the development of interpersonal skills, and a deeper understanding of patient needs.

**Descriptors:** Interdisciplinary Placement; Physician-nurse relations; Interprofessional Education; Quality of Health Care.

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## RESUMO

**Objetivo:** Conhecer o significado da interdisciplinaridade, seu histórico, suas relações com a saúde e sua integração com as áreas de medicina e enfermagem. **Método:** revisão integrativa de literatura baseada na questão norteadora “Como a educação interdisciplinar e o incentivo à cooperação entre as áreas de medicina e enfermagem podem influenciar na qualidade da atenção e na prática clínica durante e após suas formações?”. Utilizou-se a estratégia PICO e critério de inclusão somente publicações em periódicos, disponível online, idiomas português, inglês e espanhol, no período entre 2019 e 2024. **Resultados:** A amostra resultou em cinco artigos. A análise de conteúdo desvelou duas categorias relacionadas a interdisciplinaridade: comunicação enfermeiro-médico e qualidade da assistência à saúde. **Conclusão:** A interdisciplinaridade em saúde desempenha um papel fundamental na formação de estudantes de medicina e enfermagem. Ela promove a colaboração eficaz, o desenvolvimento de habilidades interpessoais e uma compreensão mais profunda das necessidades dos pacientes. **Descritores:** Práticas Interdisciplinares; Relações Médico-Enfermeiro; Educação Interprofissional; Qualidade da Assistência à Saúde.

## RESUMEN

**Objetivo:** Conocer el significado de la interdisciplinaridad, su historia, sus relaciones con la salud y su integración con las áreas de medicina y enfermería. **Método:** revisión integradora de la literatura basada en la pregunta orientadora: “¿Cómo la educación interdisciplinaria y el fomento de la cooperación entre las áreas de medicina y enfermería pueden influir en la calidad de la atención y en la práctica clínica durante y después de sus formaciones?” Se utilizó la estrategia PICO y los criterios de inclusión consideraron únicamente publicaciones en revistas, disponibles en línea, en portugués, inglés y español, en el periodo entre 2019 y 2024. **Resultados:** La muestra resultó en cinco artículos. El análisis de contenido reveló dos categorías relacionadas con la interdisciplinaridad: comunicación entre enfermeros y médicos, y calidad de la atención sanitaria. **Conclusión:** La interdisciplinaridad en salud desempeña un papel fundamental en la formación de estudiantes de medicina y enfermería. Promueve la colaboración eficaz, el desarrollo de habilidades interpersonales y una comprensión más profunda de las necesidades de los pacientes. **Descritores:** Practicas Interdisciplinarias; Relaciones Médico-Enfermero; Educación Interprofesional; Calidad de la Atención de Salud.

## INTRODUCTION

Interdisciplinarity in healthcare has proven to be an indispensable strategy for improving patient care, especially given the complexity of health conditions and the need for comprehensive, humanized care. Cooperation between professionals from different areas, such as doctors, nurses, physiotherapists, nutritionists and psychologists, allows for a more comprehensive approach that considers not only biological aspects, but also the emotional, social and cultural factors that impact on the health of health service users.

Interdisciplinary integration results in more effective communication between professionals, providing greater precision in clinical decisions and better coordination of care, which is directly reflected in better outcomes for patients. In addition, interdisciplinarity contributes to reducing medical errors, since it promotes the sharing of responsibilities and a collective view of the patient.<sup>1</sup>

Interdisciplinary practice is becoming a fundamental tool for tackling the challenges facing health systems, such as an ageing population and the increase in chronic non-communicable diseases, guaranteeing continuous, quality care. Interdisciplinarity is characterized by exchanges between specialists and the integration of curricula in a common project, in which a relationship of reciprocity is

established that can enable dialogue between participants. In this sense, interdisciplinarity is an open door to transdisciplinary processes.<sup>2</sup>

Studies show that interdisciplinary teams and an empathetic clinical relationship increase user satisfaction and promote greater adherence to treatment by patients, as well as improvements in health indicators and satisfaction with the services provided, strengthening health promotion.<sup>3</sup>

Interdisciplinary practice favors communication between team members, optimizes clinical decision-making and improves health outcomes, as well as reducing length of stay and hospital costs.<sup>4</sup> The integration of competencies between medicine and nursing also strengthens the role of continuous care and health education, which is essential for health promotion and disease prevention.<sup>5</sup>

In short, the studies carried out between 2019 and 2024 corroborate the importance of interdisciplinary integration between medical and nursing students. By promoting a collaborative and patient-centered approach, this practice not only enriches the training of future health professionals, but also contributes significantly to improving the care offered to patients. Continued research in this field is essential to improve interdisciplinary integration and strengthen collaboration between the various areas of health,

ensuring a brighter future for the health system as a whole. The question therefore arises as to how interdisciplinary education and the encouragement of cooperation between healthcare professionals can influence the quality of care and clinical practice during and after their training. This study aims to understand the meaning of interdisciplinarity, its history, its relationship with health and its integration with the fields of medicine and nursing.

## METHODOLOGY

An integrative literature review was carried out, which is one of the methodological approaches to reviews, allowing the inclusion of experimental and non-experimental studies for a complete understanding of the phenomenon analyzed.<sup>6,7</sup>

The process of drawing up an integrative review can be summarized in six stages: 1) drawing up the guiding question; 2) searching the literature; 3) collecting data; 4) critically analyzing the studies included; 5) discussing the results; 6) presenting the integrative review.<sup>7</sup>

## ELABORATION OF THE GUIDING QUESTION

One of the main challenges in promoting interdisciplinarity in health care is overcoming traditional barriers that exist between professionals, such as lack of

communication and uncooperative and competitive behavior. This raises the question: "How can interdisciplinary education and encouraging cooperation between the fields of medicine and nursing influence the quality of care and clinical practice during and after their training?".

## LITERATURE SEARCH

In order to answer this question, we used the PICO strategy<sup>8</sup>, which is based on dividing the hypothesis into thematic blocks, in order to find answers to the research problem.<sup>9</sup> It is one of the most widespread conceptual models used for information retrieval with a focus on health evidence.<sup>10</sup>

This method of dividing the topic into blocks forms the acronym PICO, which considers the following words: *Population/Patient/Problem* (the population, patient or problem addressed by the research); *Intervention* (the interventions or exposures to be considered); *Control/Comparison* (a comparison between the intervention or exposure, only when necessary and relevant); *Outcome* (the outcome).<sup>9</sup>

Taking into account each block of this model and the guiding question of this research, the strategy was applied as follows:

1) Hypothesis and PICO questions: The hypothesis was applied to the main questions that make up the PICO Strategy:

<b>P</b>	What is the problem or the individuals/population of the research?
<b>I</b>	What is the intervention/exhibition?
<b>C</b>	Will there be a parallel intervention?
<b>O</b>	What are the expected results?

Figure 1 : (Source: Adapted from ARAÚJO, 2020)

2) Standardization by descriptors: After extracting the answers to the aforementioned questions, the answers obtained were converted into standardized descriptors corresponding to the alignment of the subject of interest. The LILACS methodology was applied, an integrating component of the VHL, with the list of terms available in the multilingual thesaurus list, such as the Health Sciences Descriptors

(DeCS) and Medical Subject Headings (MeSH).

3) Construction of the search strategy: The descriptors were combined with Boolean operators in order to provide information to search systems and databases on the topics of interest to this research. Restrictive (*AND*) and additive (*OR*) combinations were used.

Each stage of this process is illustrated in figure 2:

<b>Hypothesis</b>	How can interdisciplinary education and encouraging cooperation between the fields of medicine and nursing influence the quality of care and clinical practice during and after their training?			
-	<b>P</b>	<b>I</b>	<b>C</b>	<b>O</b>
<b>Extracting answers from the hypothesis</b>	Medicine and Nursing	Interdisciplinary education and encouraging cooperation	-	Quality of care and clinical practice
<b>Conversion to standardized descriptors and combination with synonyms</b>	<b>Doctor-Nurse Relations; Clinical Staff; Doctors; Medicine; Nurses; Nursing Professionals; Nursing</b>	<b>Interprofessional Education; Interdisciplinary Communication; Interdisciplinary Practices; Interprofessional Relationships; Cooperative Behavior</b>	-	<b>Quality of Health Care; Quality of Care; Attitude of Health Personnel; Clinical Competence; Clinical Skill</b>
<b>Construction</b>	("Doctor-Nurse Relations" AND "Clinical Staff" OR Doctors OR Medicine AND "Nurses" OR "Nursing Professionals" OR Nursing)	("Interprofessional Education" OR "Interdisciplinary Practices" OR "Interprofessional Relations" OR "Interdisciplinary Communication" OR "Cooperative Behavior")	-	("Quality of Health Care" OR "Quality of Care" OR "Attitude of Health Personnel" OR "Clinical Competence" OR "Clinical Skill")
<b>Search strategy</b>	("Doctor-Nurse Relations" AND "Clinical Staff" OR Doctors OR Medicine AND "Nurses and Nurses" OR "Nursing Professionals" OR Nursing) AND ("Interprofessional Education" OR "Interdisciplinary Practices" OR "Interprofessional Relations" OR "Interdisciplinary Communication" OR "Cooperative Behavior" OR "Interdisciplinary Studies") AND ("Quality of Health Care" OR "Quality of Care" OR "Attitude of Health Personnel" OR "Clinical Competence" OR "Clinical Skill").			

**Figure 2** : (Source: Adapted from ARAÚJO, 2020)

Four databases were used to search for articles in the literature: Latin American and Caribbean Health Sciences Literature (LILACS), *Scientific Electronic Library Online* (SCIELO), Online Medical Literature Search and Analysis System (MEDLINE), and Nursing Database (BDENF).

## DATA COLLECTION

Papers published in national and international journals were taken into account, considering the aim of the review to present what was reproduced between the years 2019 and 2024.

Data was therefore collected between September and October 2024. The initial sample included 75 articles, of which zero were in the LILACS database, zero BDENF, zero SCIELO and 75 MEDLINE.

The inclusion criteria were: type of literature (only publications in journals); publication available online in journals in the following languages: Portuguese, English and Spanish; time of publication (between 2019 and 2024). We excluded literature review articles, monographs, dissertations, theses or book chapters, works that were repeated between databases or that belonged to gray literature.

After applying the inclusion and exclusion criteria, the final sample consisted of five articles. To systematize the data, a

filing tool was used, which included: title, year, authors, objectives and main results found.

## CRITICAL ANALYSIS OF INCLUDED STUDIES

The scientific production found was subjected to exhaustive reading and a relationship was sought regarding the formulation of categories related to its content. The data was analyzed thematically according to the assumptions of Bardin's Content Analysis<sup>11</sup>, which is divided into three phases:

1) Pre-analysis: a phase of organization that aims to make initial ideas operational and systematize them, allowing hypotheses to be developed.

2) Exploring the material: This phase is more extensive, as it consists of sorting through coding, classification and categorization operations, based on the interviewees' statements.

3) Processing the results: inference and interpretation: The raw results are processed in a meaningful and valid way. If it is possible to propose inferences, continue with the interpretations of the planned objectives or other unexpected findings, the results can also be subjected to statistical evaluation, such as validation tests.

After a thorough and repetitive reading process, the paragraphs were selected and highlighted by theme, which

gave rise to two categories. The data was discussed in the light of the theoretical framework analyzed.

Table 1 summarizes the five articles related to the topic that made up the sample.

## **DISCUSSION OF RESULTS**

The results obtained from the studies were discussed and summarized explicitly under clear rules. For widely studied topics, it is possible to deepen the discussion or, by raising existing knowledge gaps, suggest avenues for future studies.

The bibliographic material referenced in the inclusion criteria, considering the relevant data verified and related to the theme addressed in this study, mentions that they confer aspects described by approaches that mainly report interdisciplinarity, Doctor-Nurse relations, interprofessional education, quality of health care. The bibliographic analysis that underpins this study also provides the possibility of obtaining more in-depth knowledge about the need to improve communication between the areas.

## **PRESENTATION OF THE INTEGRATIVE REVIEW**

The sample of publications resulted in five articles, representing 6.67% of the initial sample, which was obtained from a search of databases carried out in September and October 2024, with zero indexed in LILACS, zero in SCIELO, zero in BDEF and five in MEDLINE.



**Table 1** - Characteristics of the papers selected from national and international journals indexed in *LILACS*, *SCIELO*, *BDENF* and *MEDLINE*, in the period from September 2024 according to: title, year of publication, first author's surname and results, of the study on interdisciplinary integration in health: an analysis of experiences between medicine and nursing. Bauru, SP, Brazil, 2024.

N.	Title	Year	Author	Results
1	The attitudes of healthcare professionals towards nurse-physician collaboration	2021	Hossny	Internal nurses score high (38.6%) in low level of satisfaction regarding the quality of collaboration between nurses and doctors, compared to staff nurses and doctors. Doctors are satisfied (61%) with the level of collaboration between them and nurses. Staff nurses have a highly positive attitude (48.45 (4.03)) towards collaboration between nurses and doctors, compared to doctors and in-house nurses.
2	The decline in attitudes toward physician-nurse collaboration from medical school to residency	2019	Kempner	The scores of students (n = 129) and residents (n = 292) were compared using <i>Student's</i> t-tests. Residents' responses were further analyzed by type of specialty. The students' perceptions of the doctor-nurse relationship were significantly more favorable than the residents' opinions, particularly in the "Authority" and "Responsibility" domains. Residents in procedural specialties had less favorable attitudes towards doctor-nurse collaboration than those in non-procedural specialties.
3	'This is our liver patient...': use of narratives during resident and nurse handoff conversations	2019	Kannampalli I	The handover conversations between residents and nurses used three types of narratives: narratives about creating clinical images, narratives about coordinating continuity of care, and narratives about integrating contextual aspects of care. Clinical imagery narratives were common during patient presentations: residents used a top-down approach, relying on the patient's overarching clinical situations (e.g. "a patient with liver problems"), while nurses used a bottom-up approach using patient-specific identifying information. The narratives about coordinating continuity of care for residents focused on managing internal and external coordination activities, while the nurses' narratives focused on internal coordination, emphasizing their role as an interface between patients and their doctors. Residents' and nurses' narratives about the contextual aspects of care had a considerable focus on highlighting anticipatory "alert" information and personal patient information; this information was generally not present in patients' records, but was important for ensuring effective care management.
4	Getting work done: a grounded theory study of resident physician value of nursing communication	2019	Forbes	Interviews were conducted with 15 medical residents. A constructivist grounded theory approach was used to develop the substantive theory of Getting Work Done. Getting Work Done incorporated three main categories: discerning the team, changing communication, and accessing the nurse's knowledge and skills. Hierarchical behaviours and language, and nurse collusion in both, characterized nurse-doctor communication and situated nurses outside the decision-making team. Complex work environments further devalued nurse-doctor communication.

5	Ward round competences in surgery and psychiatry - a comparative multidisciplinary interview study	2019	Vietz	Relevant skills for both fields are: collaborative clinical reasoning, patient and team communication, organization, teamwork, managing difficult situations, self-management, error management, teaching, empathy, non-verbal communication, patient management and professionalism. Clinical skills were mentioned most often in surgical interviews, while non-verbal communication was described most often in psychiatric interviews. Empathy and communication with staff were more frequently attributed to psychiatric residents.
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**Source:** LILACS, SCIELO, BDEF and MEDLINE databases).

After exhaustive reading and interpretation of the results, content analysis revealed two categories related to interdisciplinarity: nurse-doctor communication and quality of health care.

Hierarchical attitudes and language, rather than interpersonal attitudes and professional collaboration, progressively evolve and dominate physician communication with nurses. Resident nurses have a low level of satisfaction regarding the quality of collaboration between nurses and doctors, compared to staff nurses and doctors.<sup>12</sup> Attitudes towards doctor-nurse collaboration are generally favorable among medical students, but studies suggest a decline in these attitudes as students move from undergraduate to postgraduate studies. The role of interprofessional education in training can provide *insights* into ways in which collaboration between doctors and nurses can be improved.<sup>13</sup> Studies indicate that poor communication between such professionals can have potential implications for patient safety.<sup>14</sup>

Skills are needed to establish good care for both areas, including collaborative clinical reasoning, patient and team communication, organization, teamwork, managing difficult situations, self-management, error management, teaching, empathy, non-verbal communication, patient management and professionalism. Empathy

and communication with the team were most frequently attributed.<sup>15</sup> The introduction of topics related to interdisciplinarity between nurses and doctors in nursing and medical curricula is inevitable. Managerial support for nursing staff in different workplaces is needed to increase their professional autonomy.<sup>16</sup>

## FINAL CONSIDERATIONS

Interdisciplinarity in health plays a key role in the training of medical and nursing students. It promotes effective collaboration, the development of interpersonal skills and a deeper understanding of patients' needs. However, to successfully implement interdisciplinarity, it is necessary to overcome traditional barriers and adopt innovative pedagogical approaches. The research cited provides important *insights* that can guide educational institutions in promoting interdisciplinarity in healthcare and thus improve the quality of healthcare offered to patients.

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