

*ANALYSIS OF THE CONCEPT OF RISK CLASSIFICATION FOR NURSING IN EMERGENCY SERVICES*

*ANÁLISIS DEL CONCEPTO DE CLASIFICACIÓN DE RIESGOS PARA LA ENFERMERÍA EN LOS SERVICIOS DE URGENCIAS*

*ANÁLISE DO CONCEITO DE CLASSIFICAÇÃO DE RISCO PARA ENFERMAGEM EM SERVIÇOS DE EMERGÊNCIA*

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**ABSTRACT**

**Objective:** To analyze the concept of risk classification in nursing practice in emergency services. **Method:** This is a reflective study, based on the concept analysis of the model proposed by Walker and Avant. The following steps were followed: Selection of the concept; Objectives of the conceptual analysis; Identification of the possible uses of the concept; Determination of the defining attributes; Identification of the model case; Identification of an additional case (contrary); Identification of antecedents and consequents; and Definition of empirical references. **Results:** Aspects of the use of the concept in the literature, the presentation of the attributes and the cases that implement the concept were defined. The literature misuses the concept and this was clarified with the findings of the study. **Conclusion:** We emphasize the importance of conceptual definition to improve its use in clinical practice and emergency services.

**Keywords:** Nursing; Nursing Education; Risk Assessment; Emergency Nursing; Emergencies.

**RESUMEN**

**Objetivo:** Analizar el concepto de clasificación de riesgos en la práctica enfermera en los servicios de urgencias. **Método:** Se trata de un estudio reflexivo, realizado a partir de un análisis de concepto, del modelo propuesto por Walker y Avant. Se siguieron los siguientes pasos: Selección del concepto; Objetivos del análisis conceptual; Identificación de los posibles usos del concepto; Determinación de los atributos definitorios; Identificación del caso modelo; Identificación de un caso adicional (contrario); Identificación de antecedentes y consecuencias; y Definición de referencias empíricas. **Resultados:** Se definieron aspectos del uso del concepto en la literatura, la presentación de los atributos y los casos que aplican el concepto. La literatura aporta el uso del concepto de forma errónea y esto se aclaró con los hallazgos del estudio. **Conclusión:** Se destaca la importancia de la definición conceptual para mejorar su uso en la práctica clínica y en los servicios de urgencias.

**Palabras claves:** Enfermería; Educación en Enfermería; Medición de Riesgo; Enfermería de Urgencia; Urgencias Médicas.

**RESUMO**

**Objetivo:** Analisar o conceito de classificação de risco, na prática de Enfermagem, em serviços de emergência. **Método:** Trata-se de um estudo reflexivo, realizado a partir de análise de conceito, do modelo proposto por Walker e Avant. Seguiram-se as seguintes etapas: Seleção do conceito; Objetivos da análise conceitual; Identificação dos possíveis usos do conceito; Determinação dos atributos definidores; Identificação do caso modelo; Identificação de caso adicional (contrário); Identificação de antecedentes e consequentes; e Definição de referenciais empíricos. **Resultados:** Foram definidos aspectos da utilização do uso do conceito na literatura, a apresentação dos atributos e dos casos que implementam o conceito. A literatura traz a utilização do conceito de forma equivocada e este foi clarificado com os achados do estudo. **Conclusão:** Ressalta-se a importância da definição conceitual para a melhoria de sua utilização na prática clínica e nos serviços de emergência.

**Palavras-chave:** Enfermagem; Educação em Enfermagem; Medição de Risco; Enfermagem em Emergência; Emergências.

## INTRODUCTION

The demand for emergency services, motivated by the most diverse etiologies; whether they are clinical, due to external causes or other factors; has grown exponentially over the years.

In view of this, the increase in this demand also results in an increase in the number of people in disordered circulation in these health units. It is known, however, that the work process, for it to occur in a functional and resolute manner, requires instrumentalization for its organization, in order to establish ordering criteria to serve users, based on the severity of the clinical conditions presented and of your needs<sup>(1)</sup>.

The Risk Classification is configured as a dynamic and directed process to stratify the priority of care for patients seeking emergency services. Discrimination is based on the need for immediate treatment, according to the risks involved, health problems and degree of suffering<sup>(2)</sup>.

These evaluations require consideration of the service in all structural aspects and user satisfaction. The evaluative method requires adequacy of objective, planning of strategies and improvement of the service offered<sup>(3)</sup>.

The Risk Classification is the responsibility of a higher-level professional, using protocols from the Ministry of Health, in order to standardize the process used in the stratification of the patient in the emergency room. The Nurse who performs the risk assessment and classification must collect the

necessary information on the patient's condition and organize it for decision making. Priority stratification should be judged and applied effectively<sup>(4)</sup>.

This study aimed to analyze the concept of Risk Classification, for Nursing, of patients seeking emergency units.

It should be noted that there are several studies that use the term in multiple ways and with different scenarios implemented, which reinforces the importance of clarifying the concept so that it can be used correctly within emergency services.

In this perspective, the importance of using concept analysis to promote the production of knowledge in Nursing is evident, because, when clarifying a concept that is still vague or that differs in its general application, there are contributions of statements or hypotheses that allow their correct use, facilitate and standardize understanding and are useful for the practice of health care, especially nursing. Furthermore, the conceptual analysis is related to the evolution and expansion of nursing knowledge<sup>(5)</sup>.

## OBJECTIVE

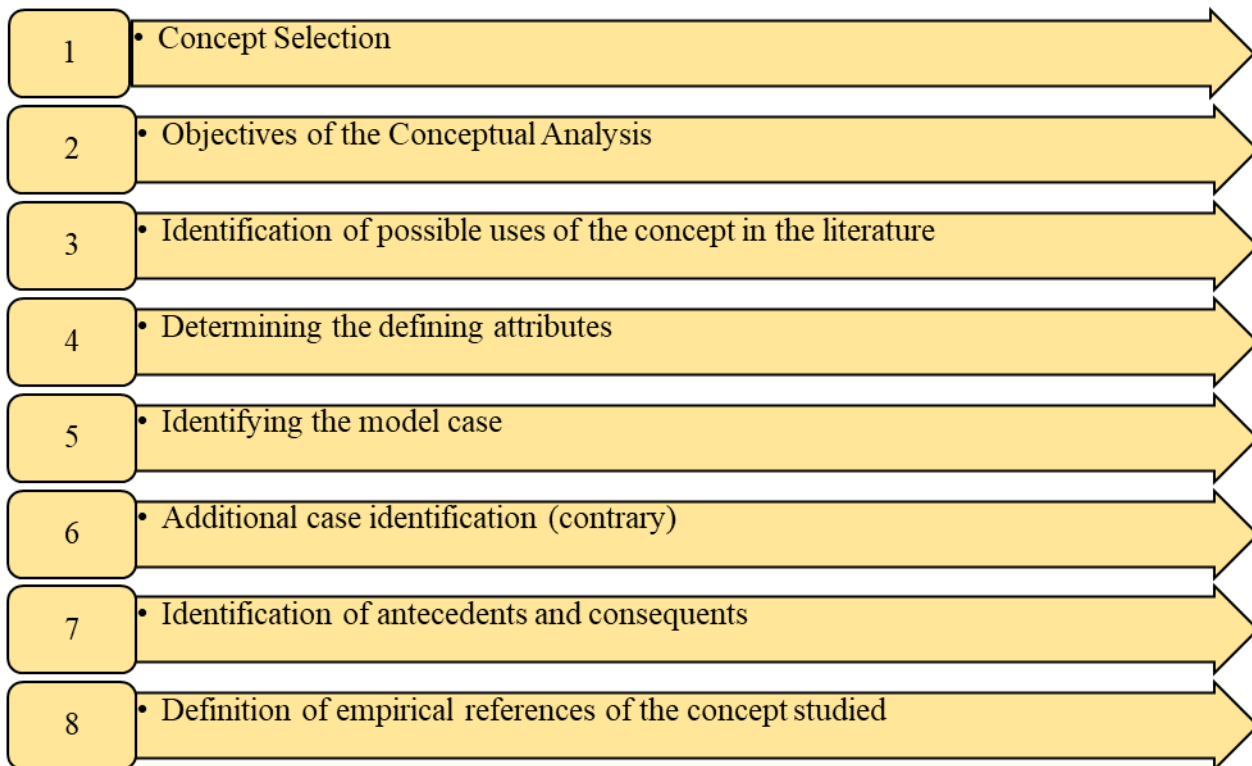
The objective of the study is to analyze the concept of Risk Classification, in nursing practice, in emergency services.

## METHOD

This is an Analysis of the Concept of Risk Classification for Nursing in Emergency services, following the model proposed by Walker and Avant<sup>(6)</sup>, which indicate eight steps,

as shown in figure 1, and which will be described individually for its implementation.

**Figure 1-** Walker and Avant Conceptual Analysis Model Diagram<sup>(6)</sup>.



Source: Adaptation by the authors of Walker and Avant<sup>(6)</sup>.

### First step: Concept Selection

The chosen concept was Risk Classification, in the practice of Emergency Nursing, in order to clarify its meaning.

### Second stage: Objectives of the Conceptual Analysis

It is important to determine the purpose of the conceptual analysis, so that the research is directed. It was decided, for this study, to clarify the aforementioned concept, which will provide its updating and correct use<sup>(6)</sup>.

In addition, it will provide opportunities for the use of the concept for the development of

research carried out in the academy and may increase the understanding of nursing students<sup>(7)</sup>.

### Third step: Identification of possible uses of the concept in the literature

At this stage, we opted for a narrative literature review. The steps for its execution are found in the results of the study. For a better understanding of the use of the concept, according to the authors' guidelines, the search was expanded beyond specific health literature, books, dictionaries, manuals and expert opinion were used<sup>(6)</sup>.

#### **Fourth step: Determining the defining attributes**

This step was important to verify the use of attributes that are associated with the concept. Attributes are the most frequent terms, expressions or characteristics used repeatedly in the literature to characterize the concept, which, when used correctly, avoid confusion in understanding<sup>(6)</sup>.

#### **Fifth step: model case identification**

The identification of a model case is configured as a situation based on reality that exemplifies the use of the concept. It also refers to the creation of a case based on the literature and the opinion of specialists with experience and prior knowledge<sup>(6)</sup>.

#### **Sixth step: Identification of additional case (contrary)**

The opposite case consists of a situation that is not exactly applied to the concept. In this study, the opposite case was created by the authors, in order to determine the inapplicability of the concept, or its applicability incorrectly<sup>(6)</sup>.

#### **Seventh step: identification of antecedents and consequences**

The events that occurred before the concept are the antecedents and cannot be defining attributes of the concept, since the consequent ones are events resulting from the emergence of the concept<sup>(6)</sup>.

#### **Eighth step: Definition of empirical references of the studied concept**

It refers to the curation of the references used and employed in the concept. Through a narrative review and a search in the gray literature, it is possible to understand and clarify the studied concept.

To conduct the present study, a narrative review was carried out in the Virtual Health Library (VHL), in the Latin American and Caribbean Literature in Health Sciences (LILACS), in the National Library of Medicine and National Institutes of Health (PUBMED/MEDLINE) and in the Cumulative Index to Nursing and Allied Health Literature (CINAHL), using the descriptors “Nursing” OR “Nursing” OR “Enfermería” AND “Medição de Risco” OR “Risk Assessment” OR “Medición de Riesgo” AND “Emergência ” OR “Emergency” OR “Emergency”. The search was carried out from November to December 2022, in the years 2015 to 2022.

#### **RESULTS**

In the three selected databases, as a result of the search, 187 papers were found. Of which, after applying the exclusion criteria, 9 articles were selected to compose the study sample.

Of these, 6 were extracted from the LILACS database, 2 from the PUBMED/MEDLINE database and 1 from the CINAHL database. As shown in Table 1.

**Chart 1** - Search strategy and final selection of studies. Itapipoca, Brazil, 2023.

Data base	Search Strategy	Redeemed Items	final sample
LILACS	(nursing) OR (nursing) OR (nursing)) AND ((risk measurement) OR (risk classification) OR (risk analysis) OR (risk assessment) OR (health risk assessment) OR (health risk assessment) benefit-risk) OR (risk-benefit assessment) OR (risk determination) OR (risks and benefits) OR (risk assessment) OR (risk measurement)) AND (emergency) ( db:("LILACS"))	125	6
PUBMED/MEDLINE	(Nursing) AND ((((((Risk Assessment) OR (Assessment, Risk)) OR (Benefit-Risk Assessment)) OR (Health Risk Assessment)) OR (Risk Analysis)) OR (Risk-Benefit Assessment)) OR (Risks and Benefits))	55	two
CINAHL	"Nursing" AND (MH "Risk Assessment") AND "Emergency"	7	1

Source: The authors (2023).

From the search results, articles were excluded: unavailable in full, those that were not related to the theme or did not meet the objective of the study, course conclusion works, theses and dissertations.

## DISCUSSION

From the sample refinement analysis, it was noticed that there are many publications that bring the Risk Classification theme, however,

there are not many studies that try to delimit the concept itself.

Risk classification is used in different ways and does not have a clear definition. Although there are terms that are similar, it is necessary to operationalize the terminology in order to standardize its use.

Next, in Table 2, possible definitions of the concept found in the literature will be presented.

**Table 2** - Concepts of Risk Classification present in the literature. Itapipoca, Brazil, 2023.

<p>Roncalli AA, Oliveira DN, Silva ICM, Brito RF, Viegas SMF, et al. Manchester protocol and user population in risk classification: nurse's view. <i>Rev Baiana de Enf.</i> 2017; 31(2): 1649-1649. <sup>(8)</sup></p>	<p>“It is an instrument that is necessary in emergency services to improve the care provided and guarantee universal and equitable access with resolving capacity for comprehensive health actions”.</p>
<p>Soares ACL, Brasileiro M, Souza DG. Embracement with risk classification: the nurse's action in urgency and emergency. <i>Rev Recien-Revista Científica de Enf.</i> 2018; 8(22): 22-33. <sup>(9)</sup></p>	<p>“It has the objective of organizing the flow of care, establishing, through institutional protocols, priority of care for conditions considered to be of greater severity to the patient's health”.</p>
<p>Cavalcante AB, Silveira MA, Lima PVS, Trindade LS, Catapreta AA, Barros AMMS. The applicability of risk classification in the unified health system: a bibliographical review. <i>Cad of Graduation-Biological and Health Sciences-Unit-Sergipe.</i> 2018; 4(3): 11-11. <sup>(10)</sup></p>	<p>“Risk classification should be understood as an agile resource in recognizing users who need prompt care, which takes into account the potential risk, level of suffering and damage to health”.</p>
<p>Gloria Filho EA, Sodr� MCC. nursing performance in the risk classification of the emergency service. <i>Rev Ibero-Americana of Humanities, Sciences and Education.</i> 2021; 7(10): 2442-60. <sup>(11)</sup></p>	<p>“It aims to reorganize care, with a view to welcoming the user and prioritizing care, according to the severity of the risk or condition presented, and then starting to systematize care so that it is more agile, safe and humane”.</p>
<p>Pereira SB. User embracement with risk classification in primary health care: an integrative review. <i>Rev Gest�o &amp; Tecnologia,</i> 2019; 2(29): 54-69. <sup>(2)</sup></p>	<p>“It promotes greater organization of health services, as it allows the classification of individuals according to risk and enables the use of the agenda, with consequent organization of spontaneous and scheduled demand”.</p>
<p>Frota CA, Lima SVA, Cardoso AO, Sousa LF, Santos FAZ, Wheat AHA, et al. Difficulties faced by nurses in carrying out risk classification in the urgency and emergency service. <i>Rev Eletr Acervo Saude.</i> 2021; 13(2): 5498-98. <sup>(3)</sup></p>	<p>“As a dynamic process of identifying patients who need immediate treatment, according to the potential risk, health problems or degree of suffering for quality care and with large-scale resolution, ensuring that all patients are treated satisfactorily and in a timely manner”.</p>
<p>Silva WF, Lopes SM, Correa MM, Junior FAL, Leite CL, et al. The risk classification according to the user's perception of the health services of an Emergency Care Unit in Imperatriz-MA. <i>Research, Society and Development.</i> 2021; 10(14): e505101422783. <sup>(12)</sup></p>	<p>“Risk classification is a protocol based on one of the principles of the SUS, equity, making it possible to detect the level of severity and/or risk of each patient, and so that they are treated according to their needs”.</p>

<p>Oliveira VLG, Junior EJB, Cavalcante MS, Nascimento MHM, Sacramento RH, Oliveira ASS, et al. Manchester Triage System: difficulties faced by nurses in risk classification. <i>Research, Society and Development</i>. 2022; 11(1):3911124358. <sup>(13)</sup></p>	<p>“Welcoming with Risk Assessment and Classification (AACR) has the purpose of promoting improvements in the organization of health services, in order to minimize management problems and enable better service to individuals who need assistance related to EU”.</p>
<p>Carvalho SS, Oliveira BR, Nascimento CSO, Gois CTS, Pinto IO. Perception of the nursing team on the implementation of the host sector with risk classification for pregnant women. <i>Rev Brasileira de Saúde Materno Infantil</i>. 2018; 18(2): 301-07. <sup>(14)</sup></p>	<p>“The risk classification which is based on the assessment of the urgency of the signs and symptoms presented, defined by colors (red, orange, yellow, green and blue).</p>
<p>Quaresma AS, Xavier DM, Cezar-Vaz MR. The nurse's role in risk classification in urgent and emergency services. <i>Rev Enferm Atual In Derme</i>. 2019; 87(25): 1-10. <sup>(15)</sup></p>	<p>Risk Classification is a process that allows the management of clinical risks, so that care and treatment of patients who are in critical and time-sensitive situations is prioritized.</p>

Source: The authors (2023).

Another important context is that of the attributes that are associated with the concept. These are configured as words or expressions most used in the literature to analyze the characteristics of the concept. They still allow

for a broad view of the concept and improved understanding.

In addition, they can be changed or adapted according to the concept presented. Chart 3 presents the attributes found in the literature.

**Table 3** - Attributes present in the literature. Itapipoca, Brazil, 2023.

Attributes
Health Risk
Severity or Risk
Risk Stratification

Source: The authors (2023).

After analyzing the uses of the concept of Risk Classification, for Nursing, in emergency services, it was possible to identify the

antecedents and consequences present in the analyzed studies, as summarized in Table 4 below.



**Table 4** - Antecedents and Consequences present in the literature. Itapipoca, Brazil, 2023.

Background	Clinical Situation; Symptoms; illness
consequences	Classified patient; Clinically classified patient; Implemented risk stratification; Priority patient;

Source: The authors (2023).

The next step was the identification of a model case and an opposite case for Risk Classification.

### Model Case

Mr. Manoel, 35, has been working as a mason's servant since he was 15. He was at work when he reported severe chest pain associated with nausea and numbness in the left upper limb. When he arrived at the emergency care unit, he filled out the form and was sent to check his vital signs: Heart rate 72bpm, Respiratory rate 24mrpm, Blood pressure 180/100mmHg, Axillary temperature 36.0°C, due to the results he was classified as orange and referred to the cardiology sector to perform an electrocardiogram.

### Otherwise

Mrs. Letícia, 25 years old, works as a bakery attendant. Annually, due to family history (mother with breast cancer), she performs gynecological and breast prevention. On January 30, she attended the primary care service for the consultation and, along with other patients, she was welcomed and her vital signs were measured: Heart rate 72bpm, Respiratory rate 14mrpm, Blood pressure 112/79mmHg, Axillary temperature 36,0°C, completed the form and waited to be answered.

In the first case, it is possible to identify the proper use of the term risk classification, since the prioritization of patient care was determined based on the clinical signs and symptoms of the patient.

On the other hand, the opposite case, fictitious and based on a hypothetical situation, contradicts the concept of critical attribution of the risk classification. This is an elective demand of the patient in question. Which may take into account different criteria, those of the previous case, to determine the order of care, due to the fact that it is not an emergency situation.

After the analysis of the concepts, the identification of the attributes and the construction of the model case and the contrary case related to the employability of the risk classification concept, a definition was constructed that contemplates the results of the conceptual analysis.



The conceptual definition constructed was: Risk Classification is a stratification that defines, through clinical evaluation, the degree of risk of death and priority in patient care based on their symptomatology.

Finally, the events before the occurrence of the concept are called antecedents, these are still classified as risk factors. And, after the institution of the concept, we have the consequences that are facts derived from the occurrence of the concept, as presented in Table 4.

## CONCLUSION

The studies that composed this analysis allowed the possible identification of the use of the concept and diversity used.

It is important to highlight that understanding the studies included in the literature does not clarify or clarify this concept.

Walker and Avant's method made it possible to delimit the aspects for operationalizing the concept of Risk Classification for Nursing in Emergency services. From its conduction, it was possible to better understand and build the attributes, cases, antecedents and consequences and conceptual definition, which led to the achievement of the proposed objective.

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