



Simultaneous analysis of the concepts of anxiety and fear: contributions to nursing diagnoses

Análise simultânea dos conceitos de ansiedade e medo: contribuições para os diagnósticos de enfermagem

Análisis simultáneo de los conceptos de ansiedad y temor: contribuciones a los diagnósticos de enfermería

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ABSTRACT

Objectives: To make a simultaneous analysis on the concepts of anxiety and fear. **Method:** Simultaneous concept analysis with nine steps proposed by Haase, Leidy, Coward, Britt, and Penn. **Results:** A total of 43 articles were included from a search in five literature databases. 51 attributes, 26 antecedents, and 10 consequents were identified from the analysis of these concepts. This analysis revealed that anxiety and fear are subjective, multidimensional concepts with high abstraction degrees. **Conclusion:** The simultaneous analysis of anxiety and fear is useful to refine these diagnoses and propose changes in their components. **Implications for practice:** The analysis of these concepts enables the precise identification of these effects in the clinical practice, applying greater diagnostic accuracy.

Keywords: Anxiety; Fear; Nursing diagnosis; Concept formation; Nursing.

RESUMO

Objetivos: Realizar a análise simultânea dos conceitos de ansiedade e medo. **Método:** Análise simultânea de conceitos com base nas nove etapas propostas por Haase, Leidy, Coward, Britt e Penn. **Resultados:** 43 artigos foram incluídos a partir de uma busca em cinco bases de dados. 51 atributos, 26 antecedentes e 10 consequentes foram identificados a partir da análise destes conceitos. Esta análise revelou que a ansiedade e o medo são conceitos subjetivos, multidimensionais e com altos graus de abstração. **Conclusão:** A análise simultânea da ansiedade e do medo possibilitou o refinamento destes diagnósticos e a proposição de modificações em seus componentes. **Implicações para a prática:** A análise destes conceitos possibilitará a identificação precisa destes fenômenos na prática clínica, proporcionando maior acurácia diagnóstica.

Palavras-chave: Ansiedade; Medo; Diagnóstico de enfermagem; Formação de conceito. Enfermagem.

RESUMEN

Objetivos: Realizar un análisis simultáneo de los conceptos de ansiedad y miedo. **Método:** Análisis simultáneo de conceptos basado en los nueve pasos propuestos por Haase, Leidy, Coward, Britt y Penn. **Resultados:** Se incluyeron 43 artículos de una búsqueda en cinco bases de datos. Del análisis de estos conceptos se identificaron 51 atributos, 26 antecedentes y 10 consecuencias. Este análisis reveló que la ansiedad y el miedo son conceptos subjetivos y multidimensionales con altos grados de abstracción. **Conclusión:** El análisis simultáneo de la ansiedad y del miedo permitió refinar estos diagnósticos y proponer cambios en sus componentes. **Implicaciones para la práctica:** El análisis de estos conceptos permitirá la identificación precisa de estos fenómenos en la práctica clínica, proporcionando una mayor precisión diagnóstica.

Palabras clave: Ansiedad; Miedo; Diagnóstico de Enfermería; Formación de Concepto. Enfermería.

INTRODUCTION

In the context of health, the anesthetic act,¹ the surgical treatment, hospitalization with distancing from family members and changes in life activities,² and receiving various diagnoses and treatments, mainly of diseases associated with terminality,³ are phenomena being often considered positive predictors for the occurrence of anxiety and fear. Epidemiological studies,⁴ systematic reviews and meta-analyses^{5,6} identified 19% of the patients with clinical anxiety levels, 23% with subclinical levels of anxiety, and 10% to 12% of the cancer patients met the criteria for the types of anxiety disorder. In the context of cancer care, Anxiety and Fear are complex and common phenomena, identified as nursing diagnoses^{7,8} or denoting relevant criteria or defining characteristics for the “impaired comfort” nursing diagnosis of NANDA-I.⁹

In the neuroscience field, distinctions have been proposed between defensive behavioral and physiological responses linked to a threat and the resulting feelings. In the two-system model, the involvement of cortical areas generates conscious feelings in the face of the threat, whereas the subcortical regions would operate mainly unconsciously in behaviors and physiological responses. The distinction between fear and anxiety as a conscious feeling (system one) or as an unconscious physiological and behavioral response (system two) is as relevant as distinguishing fear from anxiety.¹⁰

As nursing diagnostic constructs, Fear (00148) and Anxiety (00146) are distinct and disposed by NANDA-I in the “Coping and tolerating stress” domain. The anxiety diagnosis, created in 1973 and reviewed in 1982, 1998 and 2017, is defined as a “vague and uncomfortable feeling of discomfort or fear, accompanied by an autonomic response (a source that is often not specific or unknown to the individual), a feeling of apprehension caused by anticipating danger, and is considered a warning sign that draws the attention to an imminent danger, which allows the individual to take measures to deal with the threat”. The fear diagnosis, created in 1980 and reviewed in 1996, 2000 and 2017, is defined as a “response to the perceived threat that is consciously recognized as a danger”.¹¹

Despite the differences in diagnostic definitions, Anxiety and Fear are two human responses with shared clinical indicators that can be present in both diagnoses, acting as a confounding factor for the clinical decision. A possible overlap in the conceptual description may exist and justify the differentiation in the concepts.

Differentiating one diagnostic construct from another can be an extremely difficult task, and it is essential to carefully consider its definitions and the patient’s manifestations.¹² In this perspective, Lunney pointed out that nurses may be unaware of the differences between fear and anxiety, and thus, they would use them as if they had the same meaning.¹³

However, terminologically, fear can be associated with an imminent and immediate threat or danger, which triggers an immediate fight or flight response and usually disappears when the fear-inducing suggestion is removed; while anxiety is referred

to an uncertain source of danger or threat, remote in time and space, and tending to last longer than fear responses.^{10,14}

Regardless of whether fear and anxiety represent a feeling, an emotion, or a physiological and behavioral response, for the nursing diagnosis construct, both phenomena come to be represented as human responses that are capable of interventions by the nurse. In view of this, previous studies have refined defining characteristics of the nursing diagnoses of anxiety and fear with validation by experts,¹⁵⁻¹⁷ conceptually analyzed anxiety and fear,¹⁸ as well as fear in isolation.¹⁹ The researchers use concept analysis as a methodology to clarify concepts, diagnoses, and their theoretical definitions.^{20,21} However, previous revisions have failed to distinguish the two constructions, requiring further investigation. Even more, considering that concepts and knowledge are dynamic, the constant conceptual update of the nursing diagnoses is recommended.

In this regard, the objective of the study is the following: to perform the simultaneous analysis of the concepts of anxiety and fear.

METHOD

A conceptual analysis study based on the simultaneous concept analysis model.²² The model has nine stages: developing a consensus group, selecting the concepts to be analyzed, refining the concept clarification approach, clarifying the individual concepts, developing validation matrices, reviewing the individual concepts, re-examining the validation matrices, developing a procedural model, and submitting the results of the simultaneous analysis of the concepts to the experts for criticism.

Concept analyses are studies of nursing diagnostic validation that precede validation by experts and clinical validation.²³ Currently, the diagnoses of Fear (00148) and Anxiety (000146) are not anchored in any level of evidence. For this reason, in its latest edition, NANDA International, Inc. encourages the development of studies, mainly with older diagnoses, with the aim of providing levels of evidence to them, so that they can be maintained in the terminology.¹¹

Concept analysis studies have mostly used the more classic approach proposed by Lorraine O. Walker and Kay C. Avant. However, this approach does not serve the purpose of differentiating similar or interrelated concepts. For such, Haase, Leidy, Coward, Britt and Penn proposed the strategy of simultaneous analysis of concepts, in which the individual analysis of two or more concepts occurs, accompanied by a critical examination of the interrelationships of antecedents, consequents and critical attributes.

Stages 1 and 2 - Developing a consensus group and selecting the concepts to be analyzed

The consensus group was made up by three researchers. One of the researchers served as an analyst and moderator of the consensus group. All the participants had prior knowledge on the concept analysis methods.

The selection of the concepts of anxiety and fear was based on the clinical relevance that these phenomena represent in the

different health contexts and on the absence of recent analytical studies of these two concepts simultaneously.

Stage 3 - Refining the concept clarification approach

Completing the third stage, an instrument was built by one of the authors to extract the antecedents, attributes, consequents and definitions for each of the concepts. The same author also carried out an integrative review,²⁴ without setting up a time frame. The search was developed in April 2017, through access to the following databases: Latin American and Caribbean Health Sciences Literature (LILACS), Medical Literature Analysis and Retrieval System on Line (MEDLINE), Cumulative Index to Nursing and Allied Health Literature (CINAHL), Excerpta medica Database (EMBASE) and Behavioral Sciences and Mental Health (PSYCINFO).

The search terms used in the databases were “signs and symptoms”, “anxiety”, “fear”, “antecedents” and “consequences”, combined with the Boolean operators AND and OR. The inclusion criteria were qualitative, quantitative or mixed studies, published in the following languages: English, Portuguese or Spanish. And the exclusion criteria were as follows: duplicate articles, non-adherence to the proposed theme, experience reports, literature reviews, editorials, and letters to the editor.

The search process was carried out as follows: application of the strategies in the selected databases; removal of duplicates; application of inclusion and exclusion criteria when reading titles and abstracts; selection and reading of the complete texts; and reading and analysis of the texts selected by three researchers.²⁴ The selected texts were archived in the EndNote bibliographic manager. At the end of this process, articles were selected that comprised the final sample of this review (see Figure 1).

For analyzing the concept, the integrative review represents the technique, and not the method; therefore, the present study goes on to detail the analytical procedures.

Stage 4 - Clarifying the individual concepts

In the fourth stage, the moderator of the consensus group analyzed the selected texts referring to the concepts of anxiety and fear, extracted all the elements of conceptual decomposition and allocated them to that instrument. Two analysts performed the same procedure, but each of them was responsible for one of the concepts.

After the individual analyses, all were combined and each attribute, antecedent and consequent was only considered appropriate for inclusion when it obtained the agreement of the three members of the consensus group. Such a procedure aims to increase the reliability of the study, reducing the possible bias of individual interpretation.

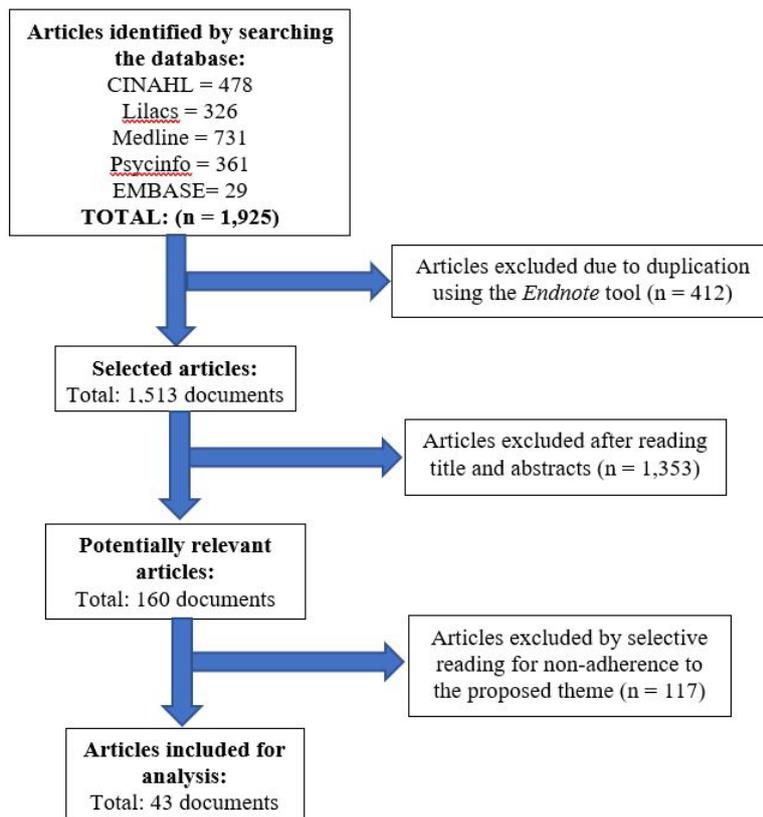


Figure 1. Flowchart of studies identified and selected for inclusion in the integrative review. Source: Prepared by the authors.

Stage 5 - Developing validation matrices

In the fifth stage, validation matrices were built for the antecedents, attributes and consequents of each of the concepts. It is possible to visualize the differences and interrelationships of each concept, offering an insight into the potential for confusion and theoretical overlap underlying each concept.

Stages 6 and 7 - Reviewing the individual concepts and re-examining the validation matrices

Continuing, in stages 6 and 7, a re-examination of all the concepts and validation matrices was carried out, in an attempt to avoid the inclusion of any element that was not necessary.

Stage 8 - Developing a procedural model

In the eighth stage, a procedural model of fear and anxiety was built, so as to enable the visualization in a single image of all the constitutive elements for concept formation.

Stage 9 - Submitting the results of the simultaneous analysis of the concepts to the experts for criticism

The ninth stage was the submission of the results of the simultaneous analysis of the concepts of anxiety and fear to three nurses who are specialists in Oncology, based on the premise that fear and anxiety are frequently verified in their clinical practices.^{3,25} The selection of the specialists followed these criteria: being part of the permanent staff of a federal public hospital located in the city of Rio de Janeiro and specialized in Oncology; having at least five years of clinical experience in the area; and having a specialist degree. The objective of this stage was the external evaluation of the model. Finally, by consensus, the model was approved. This stage must not be confused with validation by specialists, as it represents a small sample, described in the method. The experience of Oncology nurses was used as a quality assessment in this stage.

RESULTS

Antecedents

The analysis of the antecedents made it possible to identify the knowledge produced about the factors that precede the phenomena of anxiety and fear and to verify if these are present in the nursing diagnoses of "Anxiety" and "Fear" included in NANDA-I taxonomy, comparing them to the related factors, at-risk populations, and associated conditions.

The consensus of the analysts allowed the incorporation of 26 antecedents for the concepts of anxiety and fear. Of these, 7 are exclusive to the concept of anxiety, 12 are shared by both concepts and 7 are exclusive to the concept of fear.

Of the 19 antecedents identified for the concept of anxiety, 13 were identified from the consensus and are not part of the current constituents of NANDA-I. As for the concept of fear, 19 antecedents were also identified, but of these, 15 are not found in NANDA-I.

Attributes

The consensus of the experts made it possible to identify the incorporation of 51 attributes for the concepts of anxiety and fear. Of these, 11 are exclusive to anxiety, 29 are shared by both concepts, and 11 are exclusive to fear. These attributes were compared to the defining characteristics found in NANDA-I.

Of the 40 attributes present for the concept of anxiety, 13 are not found in NANDA-I; and for the 40 attributes of fear, 21 are not found in NANDA-I.

Consequents

For Walker and Avant, in a concept analysis, the consequents are those events or incidents that occur as a result of the occurrence of the concept, that is, they are the results of the concept.²⁶

The consequences were classified as negative in this simultaneous analysis, based on the understanding that the consequences carry the dimension of results or objectives to be achieved with or without solving the problems. Negative consequences imply that they can impose psychological, physiological and social harms on the subjects. It is expected that they will be modified based on the selection and implementation of assertive nursing care.

The results of stages 5 to 9 are described in Table 1.

DISCUSSION

The results from the simultaneous analysis of the concepts of anxiety and fear revealed that these are subjective, multidimensional concepts with a high degree of abstraction. They were characterized as reactions, emotions, states, feelings, and experiences, and encompass emotional, physiological, psychological, social, cognitive, and cultural aspects. They are quite frequent in the contexts of the clinical nursing practice, being difficult to differentiate and, therefore, difficult to be operationalized.

The procedural model reflected distinct characteristics of each of the two concepts, since in a single image it is possible to visualize the potential sources of confusion of the two concepts, such as, for example, the large sharing of attributes between the concepts, as well as it is possible to obtain an image of what is unique to each concept, giving it an identity. Still on this procedural model, it is possible to assert that there are synonyms, interrelations and differences between the concepts.

This also contributes to the development of definitions that are unique to each concept and, at the same time, the interrelations and their distinct elements that are associated with the concepts are highlighted, enabling the identification of what is unique to the concept, that is, its identity and what is shared by two or more concepts. The main objective of this strategy is to obtain an overview of the potential sources of theoretical, empirical and practical confusion between the concepts, as well as to offer a better understanding of the process that makes up the basis for each concept.²²

The last stage of the simultaneous analysis, which is the submission of the results of the simultaneous analysis to peers for criticism, should not be understood as a content validation study by specialists. Nurses specialized in Oncology evaluated the

results, since anxiety and fear are often experienced by patients with diseases associated with terminality, such as cancer,³ which does not exclude that this model may also be evaluated by nurses from other specialties.

Each specialist received a copy of the procedural model, a copy of all the conceptual definitions of the antecedents, attributes and consequents and an instrument with a Likert scale, with eight indicators to verify the agreement degree of the specialists regarding the procedural model, with regard to the following: consistency in representing the concepts, ability to demonstrate

the similarities and differences between the concepts, setting up relationships between the concepts, adequacy and sufficiency of the terms, layout and adequacy for use in the clinical oncology nursing practice.

All the experts agreed on the adequacy of the procedural model in the clinical practice, in addition to highlighting that it was capable of establishing differences and similarities between the concepts.

The simultaneous analysis of the concepts made it possible to propose a new diagnostic composition for the diagnoses of

Table 1. Validation matrix and procedural model for the antecedents, attributes and consequents of the concepts of anxiety and fear.

	ANXIETY	ANXIETY AND FEAR	FEAR
ANTECEDENTS	Substance abuse ²⁷⁻³⁰ ; Low self-esteem; ^{1,19,31-33} Previous hospitalizations; ^{34,35} Loneliness; ³⁰ Heredity; ³⁶ Family history of anxiety; ^{27,31,37} Previous history of anxiety. ^{36,38-42}	Unknown environment ^{1,18,34,35} ; Threat to the current condition; ^{18,43} Poor knowledge; ^{19,41} Stressors; ^{1,18,28,38,39,42,44,45} Death threat; ⁴⁶ Uncertainty ^{41,42} ; Support system separation; ^{19,34,38,47} Young age; ^{27,37,40,41,48-50} Female gender; ^{27,32,37,46,48,50-52} Diagnosis of a disease; ^{28,41,53} Clinical and surgical procedures; ^{1,28,35} Physical symptoms of a disease. ^{46,50}	Language barrier; ^{19,47} Innate conditions; ^{18,19} Perception on the risk of disease recurrence; ^{42,49,51} Vulnerability situations; ^{19,47,54} Low schooling; ^{40,45} Low socio-economic level; ⁴⁵ Sensory deficit ¹⁹
ATTRIBUTES	Mood change; ^{31,43,44,46} Impotence; ^{35,52,55} Feeling of loneliness; ^{34,35} Sadness; ^{34,35,55} Focus on oneself; ^{16,18,56} Appetite change; ³⁵ Cephalaea; ^{27,31,43} Impaired swallowing; ⁴⁶ Fatigue; ^{19,27,30,41,43,57,58} Nausea and vomiting; ^{19,31,39,43} Dizziness ^{31,55-57}	Agitation/ Restlessness; ^{1,15,18,28-30,33,38,39,44,51,55,59} Anguish; ^{1,16,42} Apprehension; ^{1,15,16,18,19,34,47,57} Crying; ^{15,34,35,38,55} Hyperactivity; ^{18,48} Uncertainty; ¹⁶ Irritability; ^{15,28,29,35,36,43,55,57} Feeling of fear; ^{1,16,18,19,31,33,41-43,46} Nervousness; ^{1,16,27,28,55,60} Intrusive thoughts; ^{29,39,42,59} Anxiety report; ^{1,15,27,28,51} Tension; ^{15,16,27,28,31,47,48,56,57} Avoidance behavior; ^{32,42,56} Increased alertness; ^{34,55} Impulsivity; ⁵⁵ Concern; ^{15,16,18,28,29,48-50,56,59} Respiratory change; ^{16,35,37,39,51,61} Cardiovascular change; ^{16,19,31,33,36,37,39,43,47,51,55-57} Dry mouth; ^{31,44} Dilated pupils; ^{19,35,46,55,61} Sleep disorders; ^{15,27-30} Insomnia; ^{16,28,39,46,52,55} Altered intestinal motility; ⁶¹ Paleness; ^{19,55} Sweating; ^{16,19,31,51,55,56} Tremors; ^{18,30,55,57} Decreased ability to learn; ¹⁶ Decreased concentration; ^{16,27,30,33,34,39,55} Decreased capacity to solve problems ^{27,60}	Feeling of panic; ^{15,16,19} Suffering; ^{34,59} Feeling of terror; ^{19,57} Aversion; ^{62,63} Flight behavior; ^{18,19,55,61} Fight behavior; ^{18,19,55,61} Freezing/Paralysis; ^{55,61} Focus on the source of threat; ¹⁸ Increased capillary glycaemia; ⁶¹ Decreased productivity; ¹⁶ Identifies the object of fear ⁶¹
CONSEQUENTS	Low productivity; ⁵⁷ Substance dependence; ^{44,47} Impaired immune system; ⁴⁴ Emergence of comorbidities ^{18,51,64}	Increase in health spending; ^{42,43,53} Low quality of life; ^{27,42,49,51,52,64} Declining physical health; ^{36,39,44,51} Eating disorders; ⁴⁴ Psychological disorders ^{32,39,44,49}	Long-term fear memory ¹⁸

“Anxiety” and “Fear”. It is then possible to propose a definition for each nursing diagnosis, as well as the inclusion of some background and attributes that are strongly associated with the concepts and that help in the precise identification of the phenomenon, but are not found in the Nanda-I classification. It was also possible to suggest the replacement of some existing terms. The antecedents are represented by the related factors, and also by the at-risk populations and by the associated conditions. Just as the attributes are interpreted by the defining characteristics.

Through the analysis it was possible to propose a new definition for the nursing diagnosis of “Anxiety” (00146), that is, to replace “Vague and uncomfortable feeling of discomfort

or fear, accompanied by an autonomic response (the source is often non-specific or unknown for the individual); feeling of apprehension caused by anticipating danger. It is a warning sign that draws the attention to an imminent danger and allows the individual to take measures to deal with the threat”¹¹ by “Feeling caused by an anticipation of a future threat that is often nonspecific or unknown and has more lasting psychological, physiological, behavioral and cognitive components”.

As for the substitutions, there was no substitution of the antecedents. However, we suggest replacing some attributes, as described in Chart 1. This procedure aims to reduce the long list of clinical indicators belonging to a diagnosis, which are sometimes

Chart 1. Proposal to reformulate the nursing diagnoses of “Anxiety” and “Fear”.

Title	Anxiety	
Domain	Domain 9- Coping/Stress tolerance	
Definition	Feeling caused by anticipation of a future threat that is often nonspecific or unknown and has more lasting psychological, physiological, behavioral and cognitive components.	
Defining Characteristics	<p>Affective: Agitation/ Restlessness (b); Agony; Altered mood (a); Anguish (a); Apprehension; Repentance; Crying (a); Helplessness; Excessive enthusiasm; Hyperactivity (a); Impotence (a); Uncertainty; Irritability; Nervousness; Intrusive thoughts (b); Anxiety report (a); Feeling of inadequacy; Feeling of fear (b); Feeling of loneliness (a); Suffering; Increased suspicion; Tension (b); Sadness (a)</p> <p>Cognitive: Blocking of thoughts; Decreased perception field; Decreased learning capacity; Decreased capacity to solve problems; Confusion; Awareness of the physiological symptoms; Decreased concentration (b); Forgetfulness; Tendency to blame the others</p>	<p>Physiological: Cardiovascular change (b); Change in blood pressure (b); Appetite change (b); Respiratory change (b); Urinary change (b); Dry mouth; Cephalgia (a); Impaired swallowing (a); Fainting; Sleep disorders (b); Abdominal pain; Fatigue; Tingling of the extremities; Weakness; Insomnia; Altered intestinal motility (b); Nausea and vomiting (b); Paleness (a); Dilated pupils; Face redness; Sweating (b); Dizziness (a); Tremors; Superficial vasoconstriction</p> <p>Behavioral: Acts as if examining the environment; Abrupt acts; Avoidance behavior (b); State of alert (b); Focus on oneself; Impulsivity (a); Movement without purpose; Jerkiness; Concern (b); Decreased productivity; Quick reflexes</p>
Related factors	Substance Abuse; Unknown environment (a); Threat to the current condition; Death threat; Low self-esteem (a); Deficient knowledge (a); Conflict of values; Conflict over life goals; Interpersonal contagion; Stressors; Previous hospitalizations (a); Uncertainty (a); Unmet needs; Support system separation (a); Loneliness (a); Interpersonal transmission	
At-Risk Populations	Maturational crisis; Situational crisis; Exposure to toxins; Heredity; Family history of anxiety; Previous history of anxiety (a); Young age (a); Important change; Female gender (a)	
Associated Condition	Diagnosis of a disease (a); Clinical and surgical procedures (a); Physical symptoms of a disease (a)	
Title	Fear	
Domain	Domain 9- Coping/Stress tolerance	

(a) Inclusion of a term. (b) Substitution of a term.

Chart 1. Continued...

Title	Anxiety		
Definition	Immediate response to a threat that is consciously recognized as a danger, being associated with flight or fight behavior.		
Defining Characteristics	<p>Affective: Agitation/ Restlessness (b); Anguish (a); Apprehension; Decreased self-security; Crying (a); Hyperactivity (a); Uncertainty (a); Irritability (a); Nervousness (a); Intrusive thoughts (a); Anxiety report (a); Feeling of alarm; Feeling of fear; Feeling of panic; Feeling of dismay; Feeling of terror; Suffering (a); Tension (b)</p>	<p>Cognitive: Decreased problem-solving ability; Decreased ability to learn (b); Decreased concentration (a); Decreased productivity (a); Stimuli understood as a threat; Identifies the object of fear; Decreased productivity</p>	<p>Physiological: Cardiovascular change (a); Change in physiological response; Appetite change (b); Respiratory change (b); Increased capillary glycaemia (a); Increase in blood pressure; Dry mouth; Sleep disorders (a); Fatigue; Insomnia (a); Altered intestinal motility (b); Nausea and vomiting (b); Paleness; Dilated pupils; Sweating (b); Tremors (a)</p>
Related factors	Unknown environment (b); Threat to current condition (a); Death threat (a); Language barrier; Innate conditions (a); Deficient knowledge (a); Stressors (a); Uncertainty (a); Perception on the risk of disease recurrence (a); Reaction to a phobic stimulus; Learned reaction to a threat; Support system separation; Vulnerability situations (a)		
At-Risk Populations	Low schooling (a); Low socioeconomic level (a); Young age (a); Female gender (a)		
Associated Condition	Sensory deficit; Diagnosis of a disease (a); Clinical and surgical procedures (a); Physical symptoms of a disease (a)		

(a) Inclusion of a term. (b) Substitution of a term.

very similar and which end up hindering diagnostic reasoning, since the best analysis is that which refines the attributes to the smallest possible number and which allows to differentiate the concept in question from the surrounding ones.²⁶

For the concept of fear, the analysis carried out made it possible to propose a new definition for the nursing diagnosis of “Fear” (00148) that proposes to replace “response to a perceived threat that is consciously recognized as a danger”¹¹ by “immediate response to a threat that is consciously recognized as a danger, being associated with an flight or fight behavior”.

The proposal is to only replace the antecedents, and also the substitution of some attributes. Chart 1 summarizes the content proposal for the nursing diagnoses in question, based on the simultaneous concept analysis performed.

CONCLUSIONS AND IMPLICATIONS FOR PRACTICE

Anxiety and fear are phenomena frequently experienced by patients in various health contexts, requiring a clear understanding

of these concepts by the nurse. The simultaneous analysis made it possible to propose new definitions for these diagnoses present in the NANDA-I taxonomy, the inclusion and substitution of related factors, at-risk populations, associated conditions and defining characteristics, corroborating for a better understanding of these phenomena.

The method employed evidenced that anxiety and fear are multidimensional phenomena, with a high abstraction level. The importance of this study lies in the clarification of these concepts, which can assist in diagnostic accuracy and, consequently, in implementing a more effective nursing care.

Considering that the diagnostic language of this taxonomy is in constant improvement and that diagnoses without levels of evidence may be removed from the taxonomy in the next edition, the analysis of these concepts enables the provision of levels of evidence for the diagnosis of anxiety and fear according to the criteria of levels of evidence from the NANDA-I Education and Research Committee.

This study is expected to contribute to the advancement of knowledge and to the improvement of the diagnostic language,

by clarifying these phenomena, highlighting their similarities and differences. In addition, it may assist students and nurses in the precise identification of these diagnoses.

One of the limitations of this study can be related to the selection of texts only in the Portuguese, Spanish and English languages, making it impossible to include other cultures. Another limitation lies in the fact that it was not proposed to remove some indicators from the nursing diagnoses of Anxiety and Fear found in NANDA-I and that were not evidenced during the integrative review.

In addition, a limitation to the generalization of the criticism of the procedural model stems from only nurses who are specialists in Oncology having assessed the model. Future studies can explore the opinion of nurses from other specialties. However, this limit is not a problem for the validity of the study, considering that, in levels of evidence, the review and analysis made from the literature surpass the experts' opinion on the procedural model.

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REFERENCES

1. Suriano MLF, Lopes DCDF, Macedo GPDOS, Michel JLM, Barros ALBLD. Identification of the defining characteristics of fear and anxiety in patients scheduled for gynecological surgery. *Acta Paul Enferm.* 2009;22:928-34.
2. Grisa GH, Monteiro JK. Aspectos emocionais do paciente cardíaco cirúrgico no período pré-operatório. *Gerias [Internet]*. 2015; [citado 2020 jun 10];8(1):111-30. Disponível em: <https://pdfs.semanticscholar.org/d8b5/3ab60f2882bc60f84dffbaa6aac580b87838.pdf>
3. Bronner MB, Nguyen MH, Smets EM, Van de Ven AW, van Weert JC. Anxiety during cancer diagnosis: Examining the influence of monitoring coping style and treatment plan. *Psychooncology.* 2018;27(2):661-7. <http://dx.doi.org/10.1002/pon.4560>. PMID:28976610.
4. Mehnert A, Brähler E, Faller H, Härter M, Keller M, Schulz H et al. Four-week prevalence of mental disorders in patients with cancer across major tumor entities. *J Clin Oncol.* 2014;32(31):3540-6. <http://dx.doi.org/10.1200/JCO.2014.56.0086>. PMID:25287821.
5. Mitchell AJ, Chan M, Bhatti H, Halton M, Grassi L, Johansen C et al. Prevalence of depression, anxiety, and adjustment disorder in oncological, haematological, and palliative-care settings: a meta-analysis of 94 interview-based studies. *Lancet Oncol.* 2011;12(2):160-74. [http://dx.doi.org/10.1016/S1470-2045\(11\)70002-X](http://dx.doi.org/10.1016/S1470-2045(11)70002-X). PMID:21251875.
6. Vehling S, Koch U, Ladehoff N, Schön G, Wegscheider K, Heckl U et al. Prevalence of affective and anxiety disorders in cancer: systematic literature review and meta-analysis. *Psychother Psychosom Med Psychol.* 2012;62(7):249-58. <http://dx.doi.org/10.1055/s-0032-1309032>. PMID:22585582.
7. Sousa RMD, Santo FHDE, Santana RF, Lopes MVDO. Nursing diagnoses identified in onco-hematologic patients: a cross-mapping study. *Esc Anna Nery.* 2015;19(1):54-65. <http://dx.doi.org/10.5935/1414-8145.20150008>.
8. Castro MCF, Fuly PDSC, Garcia TR, Santos MLSC. ICNP® terminological subgroup for palliative care patients with malignant tumor wounds. *Acta Paul Enferm.* 2016;29(3):340-6. <http://dx.doi.org/10.1590/1982-0194201600047>.
9. Gonçalves MCDS, Brandão MAG, Duran ECM. Validation of the defining characteristics of the nursing diagnosis impaired comfort in oncology. *Acta Paul Enferm.* 2016;29(1):115-24. <http://dx.doi.org/10.1590/1982-0194201600016>.
10. LeDoux JE, Pine DS. Using neuroscience to help understand fear and anxiety: a two-system framework. *Am J Psychiatry.* 2016;173(11):1083-93. <http://dx.doi.org/10.1176/appi.ajp.2016.16030353>. PMID:27609244.
11. Herdman H, Kamitsuru S. Diagnósticos de enfermagem da NANDA-I: definições e classificação - 2018/2020. 11. ed. Porto Alegre: Art Med; 2018
12. Bousso RS, Poles K, Cruz DDALM. Nursing concepts and theories. *Rev Esc Enferm USP.* 2014;48(1):141-5. <http://dx.doi.org/10.1590/S0080-623420140000100018>. PMID:24676120.
13. Lunney M. Uso do pensamento crítico para o alcance de resultados positivos de saúde. In: Lunney M. *Pensamento crítico para o alcance de resultados positivos em saúde: análise e estudos de caso em enfermagem.* Porto Alegre: Artmed; 2011. p. 25-55.
14. Craske MG, Stein MB, Eley TC, Milad MR, Holmes A, Rapee RM et al. Correction: anxiety disorders. *Nat Rev Dis Primers.* 2017;3(1):17100. <http://dx.doi.org/10.1038/nrdp.2017.100>. PMID:29239346.
15. Taylor-Loughran AE, O'Brien ME, LaChapelle R, Rangel S. Defining characteristics of the nursing diagnoses fear and anxiety: A validation study. *Appl Nurs Res.* 1989;2(4):178-86. [http://dx.doi.org/10.1016/S0897-1897\(89\)80007-2](http://dx.doi.org/10.1016/S0897-1897(89)80007-2).
16. Whitley GG, Tousman SA. A multivariate approach for validation of anxiety and fear. *Int J Nurs Terminol Classif.* 1996;7(3):116-24. <http://dx.doi.org/10.1111/j.1744-618X.1996.tb00303.x>. PMID:8868795.
17. Suriano MLF, Michel JM, Zeitoun SS, Herdman TH, Barros ALBL. Consensual validation of the nursing diagnoses fear and anxiety identified at the immediate preoperative period in patients undergoing elective surgery. *Int J Nurs Terminol Classif.* 2011;22(3):133-41. <http://dx.doi.org/10.1111/j.1744-618X.2011.01181.x>. PMID:21777374.
18. Bay EJ, Algase DL. Fear and anxiety: a simultaneous concept analysis. *Int J Nurs Knowl.* 1999;10(3):103-11. <http://dx.doi.org/10.1111/j.1744-618X.1999.tb00036.x>. PMID:10595125.
19. Whitley GG. Concept analysis of fear. *Int J Nurs Terminol Classif.* 1992;3(4):155-61. <http://dx.doi.org/10.1111/j.1744-618X.1992.tb00531.x>. PMID:1489587.
20. Letho RH, Stein KF. Death anxiety: an analysis of an evolving concept: research and theory for nursing practice. *Int J.* 2009;23(1):23-41. <http://dx.doi.org/10.1891/1541-6577.23.1.23>.

21. Costa JN, Lopes MVO, Moraes MHB. Simultaneous concept analysis of diagnoses related to urinary incontinence. *Int J Nurs Knowl*. 2019;31(2):109-23. <http://dx.doi.org/10.1111/2047-3095.12254>. PMID:31339006.
22. Haase JE, Britt T, Coward DD, Leidy NK, Penn PE. Simultaneous concept analysis of spiritual perspective, hope, acceptance and self-transcendence. *Image J Nurs Sch*. 1992;24(2):141-7. <http://dx.doi.org/10.1111/j.1547-5069.1992.tb00239.x>. PMID:1601456.
23. Lopes MVO, Silva VM. Métodos avançados de validação de diagnósticos de enfermagem. In Herdman TH, organizador. PRONANDA Programa de atualização em diagnósticos de enfermagem: conceitos básicos. Porto Alegre: Artmed Panamericana; 2016. p. 87-132.
24. Mendes KDS, Silveira RCDCP, Galvão CM. Integrative literature review: a research method to incorporate evidence in health care and nursing. *Texto Contexto Enferm*. 2008;17(4):758-64. <http://dx.doi.org/10.1590/S0104-07072008000400018>.
25. Galica J, Brennenstuhl S, Maheu C, Townsley C, Metcalfe K. Examining the dimensionality of the Fear of Cancer Recurrence Inventory. *Psychooncology*. 2018;27(11):2602-8. <http://dx.doi.org/10.1002/pon.4839>. PMID:29998546.
26. Walker LO, Avant KC. *Strategies for theory construction in nursing* (6th ed.). Upper Saddle River: Pearson/Prentice Hall; 2018.
27. Martin P. The epidemiology of anxiety disorders: a review. *Dialogues Clin Neurosci*. 2003;5(3):281-98. PMID:22034470.
28. Oliveira N, Chianca T, Rassool GH. A validation study of the nursing diagnosis anxiety in Brazil. *Int J Nurs Terminol Classif*. 2008;19(3):102-10. <http://dx.doi.org/10.1111/j.1744-618X.2008.00089.x>. PMID:18798941.
29. Wein S, Sulkes A, Stemmer S. The oncologist's role in managing depression, anxiety, and demoralization with advanced cancer. *Cancer J*. 2010;16(5):493-9. <http://dx.doi.org/10.1097/PPO.0b013e3181f28b64>. PMID:20890146.
30. Stoklosa J, Patterson K, Rosielle D, Arnold RM. Anxiety in palliative care: causes and diagnosis# 186. *J Palliat Med*. 2011;14(10):1173-4. <http://dx.doi.org/10.1089/jpm.2011.9644>. PMID:22004149.
31. Castillo ARG, Recondo R, Asbahr FR, Manfro GG. Transtornos de ansiedade. *Br J Psychiatry*. 2000;22(suppl 2):20-3. <http://dx.doi.org/10.1590/S1516-44462000000600006>.
32. Locker D. Psychosocial consequences of dental fear and anxiety. *Community Dent Oral Epidemiol*. 2003;31(2):144-51. <http://dx.doi.org/10.1034/j.1600-0528.2003.00028.x>. PMID:12641596.
33. Finks K. Symptoms and treatment of anxiety disorders. *NASN Sch Nurse*. 2012;27(5):251-3. <http://dx.doi.org/10.1177/1942602X12455950>. PMID:23008867.
34. Gomes GLL, Nóbrega MML. Anxiety in children following hospitalization: a proposal for a nursing diagnosis. *Rev Lat Am Enfermagem*. 2015;23(5):963-70. <http://dx.doi.org/10.1590/0104-1169.0372.2637>. PMID:26487148.
35. Gomes GLL, Fernandes MGM, Nóbrega MML. Hospitalization anxiety in children: conceptual analysis. *Rev Bras Enferm*. 2016;69(5):940-5. <http://dx.doi.org/10.1590/0034-7167-2015-0116>. PMID:27783738.
36. Goyal AR, Bergh S, Engedal K, Kirkevold M, Kirkevold Ø. Anxiety, anxiety symptoms, and their correlates in persons with dementia in Norwegian nursing homes: a cause for concern. *Dement Geriatr Cogn Disord*. 2017;43(5-6):294-305. <http://dx.doi.org/10.1159/000471796>. PMID:28463828.
37. Humble M. Aetiology and mechanisms of anxiety disorders. *Acta Psychiatr Scand*. 1987;76(S335):15-30. <http://dx.doi.org/10.1111/j.1600-0447.1987.tb07745.x>. PMID:3314357.
38. Frederickson K. Using a nursing model to manage symptoms: anxiety and the Roy adaptation model. *Holist Nurs Pract*. 1993;7(2):36-43. <http://dx.doi.org/10.1097/00004650-199301000-00006>. PMID:8429068.
39. Hilliard KM, Iwamasa GY. The conceptualization of anxiety: an exploratory study of Japanese American older adults. *J Clin Geropsychol*. 2001;7(1):53-65. <http://dx.doi.org/10.1023/A:1026416802568>.
40. Koivula M, Paunonen-Ilmonen M, Tarkka MT, Tarkka M, Laippala P. Fear and anxiety in patients awaiting coronary artery bypass grafting. *Heart Lung*. 2001;30(4):302-11. <http://dx.doi.org/10.1067/mhl.2001.116134>. PMID:11449217.
41. Kilbride L, Smith G, Grant R. The frequency and cause of anxiety and depression amongst patients with malignant brain tumours and surgery and radiotherapy. *J Neurooncol*. 2007;84(3):297-304. <http://dx.doi.org/10.1007/s11060-007-9374-7>. PMID:17594056.
42. Fardell JE, Thewes B, Turner J, Gilchrist J, Sharpe L, Smith A et al. Fear of cancer recurrence: a theoretical review and novel cognitive processing formulation. *J Cancer Surviv*. 2016;10(4):663-73. <http://dx.doi.org/10.1007/s11764-015-0512-5>. PMID:26782171.
43. Bayrampour H, Ali E, McNeil DA, Benzie K, MacQueen G, Tough S. Pregnancy-related anxiety: a concept analysis. *Int J Nurs Stud*. 2016;55:115-30. <http://dx.doi.org/10.1016/j.ijnurstu.2015.10.023>. PMID:26626973.
44. McNaughton N. What is anxiety and how should we treat it?'. *N Z J Psychol [Internet]*. 1996; [citado 2020 jun 10];25(1):51-61. Disponível em: https://www.researchgate.net/profile/Neil_Mcnaughton/publication/291904855_What_is_anxiety_and_how_should_we_treat_it/links/56f992cc08ae38d710a3025c.pdf
45. Skaali T, Fosså SD, Bremnes R, Dahl O, Haaland CF, Hauge ER et al. Fear of recurrence in long-term testicular cancer survivors. *Psychooncology*. 2009;18(6):580-8. <http://dx.doi.org/10.1002/pon.1437>. PMID:18855944.
46. Vasconcelos ADS, Costa C, Barbosa LNF. Do transtorno de ansiedade ao câncer. *Rev SBPH [Internet]*. 2008; [citado 2020 jun 10];11(2):51-71. Disponível em: <http://pepsic.bvsalud.org/pdf/rsbph/v11n2/v11n2a06.pdf>
47. Bergamasco EC, Rossi LA, Carvalho EC, Dalri MCB. Diagnósticos de medo e ansiedade: validação de conteúdo para o paciente queimado. *Rev Bras Enferm*. 2004;57(2):170-7. <http://dx.doi.org/10.1590/S0034-71672004000200008>. PMID:15535515.
48. Rapee RM. Generalized anxiety disorder: a review of clinical features and theoretical concepts. *Clin Psychol Rev*. 1991;11(4):419-40. [http://dx.doi.org/10.1016/0272-7358\(91\)90116-C](http://dx.doi.org/10.1016/0272-7358(91)90116-C).
49. Ziner KW, Sledge Jr GW, Bell CJ, Johns S, Miller KD, Champion VL. Predicting fear of breast cancer recurrence and self-efficacy in survivors by age at diagnosis. *Oncol Nurs Forum*. 2012;39(3):287-95. <http://dx.doi.org/10.1188/12.ONF.287-295>. PMID:22543387.
50. Shay LA, Carpentier MY, Vernon SW. Prevalence and correlates of fear of recurrence among adolescent and young adult versus older adult post-treatment cancer survivors. *Support Care Cancer*. 2016;24(11):4689-96. <http://dx.doi.org/10.1007/s00520-016-3317-9>. PMID:27387913.
51. Moser DK. "The rust of life": impact of anxiety on cardiac patients. *Am J Crit Care*. 2007;16(4):361-9. <http://dx.doi.org/10.4037/ajcc2007.16.4.361>. PMID:17595368.
52. Tramonti F, Maestri M, Gronchi A, Fabbrini M, Di Coscio E, Carnicelli L et al. Psychological well-being of patients with insomnia and its relationship with anxiety and depression. *Psychol Health Med*. 2016;21(3):309-16. <http://dx.doi.org/10.1080/13548506.2015.1069856>. PMID:26222934.
53. Taylor C, Richardson A, Cowley S. Surviving cancer treatment: an investigation of the experience of fear about, and monitoring for, recurrence in patients following treatment for colorectal cancer. *Eur J Oncol Nurs*. 2011;15(3):243-9. <http://dx.doi.org/10.1016/j.ejon.2011.03.010>. PMID:21530395.
54. Armfield JM. Cognitive vulnerability: a model of the etiology of fear. *Clin Psychol Rev*. 2006;26(6):746-68. <http://dx.doi.org/10.1016/j.cpr.2006.03.007>. PMID:16806621.
55. Gomes ET, Souza Melo RLA, Vasconcelos EMR, Alencar EN. Uso dos diagnósticos de enfermagem ansiedade e medo nas clínicas médica e cirúrgica de um hospital universitário. *Rev Pesquisa [Internet]*. 2012; [citado 2020 jun 10];4(2):2419-26. Disponível em: <https://www.redalyc.org/pdf/5057/505750893027.pdf>
56. Calhoun GG, Tye KM. Resolving the neural circuits of anxiety. *Nat Neurosci*. 2015;18(10):1394-404. <http://dx.doi.org/10.1038/nn.4101>. PMID:26404714.
57. Whitley GG. Expert validation and differentiation of the nursing diagnoses anxiety and fear. *Int J Nurs Terminol Classif*. 1994;5(4):143-50. <http://dx.doi.org/10.1111/j.1744-618X.1994.tb00263.x>. PMID:7826717.
58. Fulton CL. The physical and psychological symptoms experienced by patients with metastatic breast cancer before death. *Eur J Cancer Care*. 1997;6(4):262-6. <http://dx.doi.org/10.1046/j.1365-2354.1997.00057.x>. PMID:9460344.
59. Lebel S, Ozakinci G, Humphris G, Mutsaers B, Thewes B, Prins J et al.

- From normal response to clinical problem: definition and clinical features of fear of cancer recurrence. *Support Care Cancer*. 2016;24(8):3265-8. <http://dx.doi.org/10.1007/s00520-016-3272-5>. PMID:27169703.
60. Sharpley CF, Christie DR. 'How I was then and how I am now': current and retrospective self-reports of anxiety and depression in Australian women with breast cancer. *Psychooncology*. 2007;16(8):752-62. <http://dx.doi.org/10.1002/pon.1125>. PMID:17089443.
61. Holanda VN, Bezerra AS, Tavares AR, Lima CIR, Mamede LTS, Araújo RLQ et al. As bases biológicas do medo: uma revisão sistemática da literatura. *Rev Interfaces [Internet]*. 2013; [citado 2020 jun 10];1(3):1-15. Disponível em: <http://interfaces.leaosampaio.edu.br/index.php/revista-interfaces/article/viewFile/419/300>
62. Esperidião-Antonio V, Majeski-Colombo M, Toledo-Monte Verde D, Moraes-Martins G, Fernandes JJ, Assis MBD et al. Neurobiologia das emoções. *Archives of Clinical Psychiatry*. 2008;35(2):55-65. <http://dx.doi.org/10.1590/S0101-60832008000200003>.
63. Brandão ML. As bases biológicas do comportamento: introdução à neurociência. *Rev Inst Med Trop São Paulo*. 2005;47(3):124. <http://dx.doi.org/10.1590/S0036-46652005000300013>.
64. Menezes GB, Fontenelle LF, Mululo S, Versiani M. Treatment-resistant anxiety disorders: social phobia, generalized anxiety disorder and panic disorder. *Rev Bras Psiquiatr*. 2007;29(2, Suppl 2):S55-60. <http://dx.doi.org/10.1590/S1516-44462007000600004>. PMID:18157434.