

The human responses and nursing diagnoses of head and neck cancer patients: literature review and synthesis of evidence

As respostas humanas e diagnósticos de enfermagem em pessoas com cancro de cabeça e pescoço: revisão de literatura e síntese de evidência

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Keywords

nursing diagnosis, head and neck cancer, human responses

Abstract

Introduction: Head and neck cancer is relatively common with a high morbidity rate due to the anatomical sites that surround and may result in psychosocial, physical, or functional effects. Knowledge about the human responses and the corresponding nursing diagnoses of head and neck cancer patients undergoing surgery, as listed on NANDA-I, seems scarce.

Aim: Review the literature on knowledge about the human responses and the corresponding nursing diagnoses of head and neck cancer patients undergoing surgery

Material and Methods: Integrative literature review with a search on electronic databases: CINALH®, MEDLINE®, Nursing & Allied Health®, and Scopus®.

Results: A total of 31 papers were included in this review and 72 human responses, categorized in 29 diagnoses. Most diagnoses are subjective, and the most frequent nursing diagnosis was disturbed body image.

Conclusion: Identifying the most frequent human responses of these patients facilitates nurses in providing adequate care and in developing further research aiming to improve diagnoses accuracy. Most diagnoses are subjective, and the clinical validation could improve the level of evidence and provide nurses with clinical indicators for clinical reasoning and effective planning and interventions. Particularly, differential validation is needed in these patients as similar diagnoses and confounding clinical indicators have been identified. Further research is needed to evaluate the subjective nursing diagnoses considering the similarity and specific defining characteristics in head and neck cancer.

Palavras-chave

Diagnóstico de enfermagem; cancro de cabeça e pescoço; respostas humanas.

Resumo

Introdução: O cancro de cabeça e pescoço é relativamente comum com elevada taxa de morbidade pelos locais anatómicos que o circundam e pode ter consequências psicossociais, físicas ou funcionais. O conhecimento sobre as respostas humanas e os diagnósticos de enfermagem dos doentes com cancro de cabeça e pescoço submetidos a cirurgia, conforme listado na NANDA-I, parece escasso.

Objetivo: Revisão da literatura quanto ao conhecimento sobre as respostas humanas e os diagnósticos de enfermagem dos doentes com cancro de cabeça e pescoço submetidos a cirurgia.

Materiais e Métodos: Revisão integrativa da literatura com pesquisa realizada nas bases de dados eletrónicas CINALH®, MEDLINE®, Nursing & Allied Health® e Scopus®.

Resultados: Nesta revisão foram incluídos um total de 31 artigos e identificadas 72 respostas humanas, categorizadas em 29 diagnósticos. A maioria dos diagnósticos é subjetiva, e o diagnóstico de enfermagem mais frequente foi distúrbio na imagem corporal.

Conclusão: A identificação das respostas humanas mais frequentes nestes doentes facilita a prestação de cuidados adequados pelos enfermeiros e o desenvolvimento de novas pesquisas com o objetivo de melhorar a acurácia do diagnóstico. A maioria dos diagnósticos é subjetiva, a sua validação poderia melhorar o nível de evidência e fornecer aos enfermeiros indicadores clínicos de raciocínio clínico e planeamento de intervenções eficazes. Em particular, a validação diferencial é necessária nestes doentes, pois foram identificados diagnósticos similares e indicadores clínicos confusos. São necessárias mais pesquisas para avaliar os diagnósticos de enfermagem subjetivos dos doentes com cancro de cabeça e pescoço, considerando a semelhança das suas características definidoras.

Introduction

Head and neck cancer (HNC) englobe a heterogeneous group of malign neoplasia, originated in the most part at the upper aerodigestive tract.^{1,2} These type of cancers encompass the tumors that arise in the head and neck including lips, oral cavity, hypopharynx, oropharynx, nasopharynx or larynx,³ and represent the sixth most common malignancy worldwide, with approximately 6% of all cases of cancer and it is estimated to represent 1%-2% of all deaths related to cancer.^{3,4} Several etiological factors are related to these tumors, but the major are as follows: tobacco, alcohol, tobacco and alcohol interaction, Human Papillomavirus, other additional factors are immune status, environmental pollutants, occupational exposures (exposures to high levels of solvents and cement/ metal/wood), heritable conditions.⁵

The time elapsed between the first signs and symptoms, diagnosis and treatment interfere with the evolution, prognosis, and quality of life of the person with HNC.⁶ The treatment of HNC is either surgical or non-surgical (radiation therapy or chemotherapy) and can lead to a considerable long-term functional impairment.^{2,7} Surgical treatments can have devastating effects on patients' daily life⁸ and image and often compromise vital organs, principally those used in keeping ordinary activities, like breathing, speaking, eating and drink.^{2,9,10} Also, a high level of pain, xerostomia, and shoulder dysfunction are often associated with this cancer.¹⁰

Some of the HNC treatments involve temporary or permanent loss of verbal communication, limiting patients' ability to self-report critical information during the post-operative period.¹¹ Radical surgeries, such as total laryngectomy or total glossectomy, result in permanent speech loss, but temporary conditions are related to the upper area edema, endotracheal intubation, or a tracheotomy.¹¹ Patients undergoing head and neck treatments require nur-

sing specialized care before, during, and after their treatment.¹²

The diagnosis of chronic diseases, such as cancer, leads to physical and psychosocial changes, as the person can lose physical abilities, compromising daily life either due to illness, treatments or dependence of others.¹³

Nurses should be able to implement a care plan for the entire perioperative aiming the management of basic human responses, prevention of complications, and screening of risk factors that may compromise recovery.¹⁴

Nurses need to recognize human responses to provide individualized and holistic health care as human responses reflect the way people process and manage their daily health problems.¹⁵ Patients' human responses to health and disease processes are complex and based on the cultural, social, and historical background.¹⁶

The nurse has a key role in the "assessment, nursing diagnosis, planning, outcome setting, and evaluation".¹⁷

As a dynamic structure, the nursing process requires the knowledge of the subjective concepts to the nursing science to identify the clinical patterns and identify accurate diagnoses.¹⁷ A variety of subjective and objective data is required for nursing assessment, which is then analyzed into discernible patterns of human responses, including patient strengths and health promotion, problem-focused and/or risk nursing diagnoses.¹⁸

According to NANDA International, Inc. (NANDA-I), the focus of nursing diagnosis is "the principal element or the fundamental and essential part, the root, of the diagnostic concept. It describes the «human response» that is the core of the diagnosis."¹⁷

The nursing diagnosis is defined as "a clinical judgment concerning a human response to health conditions/life processes, or vulnerability for that response, by an individual, family, group, or community".¹⁷

The human being is unique, complex, and is always in change. As so, classifying the basic human responses and identifying nursing diagnoses may be challenging. Nurses should use a systematic approach in the validation of nursing diagnoses to increase accuracy.¹⁹

This study aims to systematically retrieve, criticize, and synthesize HNC patients' human responses, when undergoing surgery, and to identify possible related nursing diagnoses according to the taxonomy II of NANDA-I.¹⁷

Materials and Methods

Literature search methods

Literature review and synthesis of evidence from original studies, based on an electronic search conducted in October 2018. The search strategy was defined after a preliminary search (Table 1). International electronic databases were accessed, such as The Cumulative Index to Nursing and Allied Health Literature – CINALH®, MEDLINE®, Nursing & Allied Health®, and Scopus®.

The search terms were: [*Neoplasm*(AB) OR *Cancer*(AB) OR *Carcino**(AB) OR

*Onc*o*(AB) OR *Tumor*(AB) OR *ENT*(AB)] AND [*Head, neck cancer* (AB) OR *Facial neoplasm* (AB) OR *Head and neck*(AB) OR *Otolaryngology* (AB) OR *Oral surgery* (AB)] AND [*Nurs**(AB)].

Eligibility criteria

The results were selected considering the aim of this review, and papers should provide relevant data about the human responses and nursing diagnoses of HNC patients undergoing surgery, written in either English or Portuguese. Only original papers were included. Literature reviews, editorials, and opinion pieces were excluded

Selection of studies and data extraction

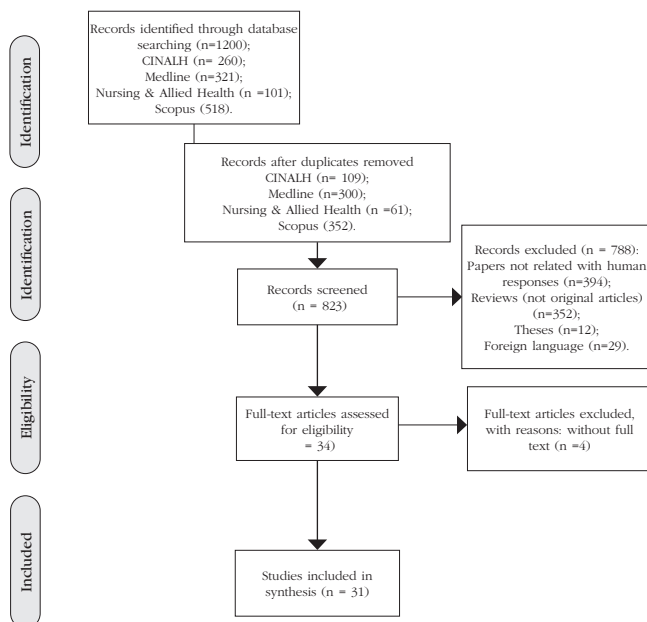
First, two reviewers independently reviewed titles and abstracts of initially identified articles. In the second stage of screening, full texts were categorized based on eligibility criteria. The following data was extracted using a standardized reporting form: the date of publication, the authors, the country, the population and samples, the health context, the research focus, the methods, and the focus/human responses.

Results

Description of the studies

From the search, 1200 references were identified. Duplicates were removed and, 823 remained. Two independent reviewers analysed the titles and the abstracts according to the inclusion criteria. A total of 35 papers were selected, but only 31 full texts were included in the analysis as these were the only full texts available after a search period that included asking the authors and libraries for the full text (Figure 1).

Figure 1 – Flow chart outlining the study selection process



Thirty-one studies reporting evidence regarding human responses and corresponding nursing diagnoses of HNC patients undergoing surgery were included in this review (Table 1). Papers were published between 1978 and 2018; mostly over the last five years (n=14); and published in different journals, some specifically from nursing (n=16), and in other areas (n=15), such as medicine, psychology, and education.

The country of publication was the United States (n=10), England (n=8), Canada (n=4), Sweden (n=3), Brazil (n=2), followed the New Zealand, Denmark, Australia, and Germany with one study each.

The most frequent data collection method was interview (n=11), followed by self-report questionnaire (n=4), and focus group (n=1).

The human responses have been identified in several health contexts. Most of the studies have

been conducted in hospitals (n=15). Some studies were conducted in the outpatient context (n=9), in outpatient oncological department (n=7), and

outpatient radiation department (n=2), and others have also been conducted at the patients' home (n=8).

Table 1 – Characteristics of the Studies Included in this review

Author, Year	Journal	Country of publication (country of study)	Health Context	Aims/Purpose	Study population and sample size	Methods
Barichello E et al. ²⁰ 2009	Revista Latino-Americana de Enfermagem	Brazil	One up to six months postoperative, attended return visits in the outpatients' facility.	To evaluate surgical-oncologic patients' quality of sleep through the Pittsburgh Sleep Quality Index questionnaire.	46 postoperative head & neck and urology cancer patients.	Exploratory study with transversal-observational design
Björklund M et al. ²¹ 2008	European Journal of Oncology Nursing	Sweden	Some participants were interviewed in the room at the hospital and others in their own home.	To shed light on health promotion from the perspective of individuals living with head and neck cancer.	8 (4 men and 4 women)	A qualitative design Interviewed and latent content analysis was used.
Chen SC et al. ²² 2018	European Journal of Cancer Care	England (Taiwan)	A large medical Centre. Patients were recruited from the head and neck outpatient radiation department.	To determine factors associated with self-perceived body image in female patients with HNC, and factors associated with healthcare professional's rating of disfigurement, as well as the correlation between patient and observer ratings.	105 women with HNC	Cross-sectional study multivariate multiple linear regression.
Chiou YJ et al. ²³ 2016	Neuropsychiatric Disease and Treatment	New Zeland (Taiwan)	General hospital	To evaluate the prevalence and related factors of psychological distress and mental illness among cancer inpatients in Taiwan.	810 participants	Retrospective chart review The Distress Thermometer and the 12-item Chinese Health Questionnaire
Collie K et al. ²⁴ 2014	Current Oncology	Canada	Unknow	To assess the value of Survivorship care plans for cancer survivors in western Canada.	36 breast cancer and 21 HNC survivors.	Interviews
D'Souza V et al. ²⁵ 2018	Support Care Cancer	Canada	Contacted by phone	To understand how information was delivered HNC patients and describe the perceptions of the head and neck patients concerning information delivery.	11 Head and neck participants	Qualitative investigation
Felder BE ²⁶ 2004	Cancer Nursing	United States	The hematology/oncology outpatient	Explored hope and coping in patients with various cancer diagnoses.	183 participants with different cancers	Descriptive correlational study
Formigosa JAS et al. ¹ 2018	Rev Fund Care Online	Brazil	Oncological hospital They were undergoing radiotherapy treatment and/or were hospitalized.	To explore the social representations of patients with head and neck cancer before the alteration of their body image.	23 patients	Descriptive study with a qualitative analysis (The semi-structured interview combines open and closed-ended questions).
Grattan K et al. ⁹ 2018	Global Qualitative Nursing Research	Canada	Surgical and oncologic units of two hospitals.	To begin addressing this knowledge gap by describing the experience of middle-aged adults with Head neck cancer.	10 Middle-aged adults who had experienced HNC	Was designed using interpretive description as developed by Thorne for qualitative research in applied health disciplines interviews.
Hughes LC et al. ²⁷ 2000	Journal of Nursing Scholarship	UK	Transition from Hospital to Home.	To describe information needs of elderly postsurgical cancer patients.	148 patients surgically 18 with head and neck cancer	Descriptive, using records kept for patients assigned to the experimental group in a larger study. Content analysis of 3,280 statements of teaching interventions.

Author, Year	Journal	Country of publication (country of study)	Health Context	Aims/Purpose	Study population and sample size	Methods
Humphris G, Ozakinci ²⁸ 2008	British Journal of Health Psychology	UK	Outpatient clinic visit	Describes the design and development of the adjustment to the fear, threat or expectation of recurrence (AFTER) intervention which targets recurrence fears, inappropriate checking behaviour, and beliefs about cancer, adopting recognized cognitive behavioural and health psychology principles, particularly Leventhal's self-regulation model.	Unknown	Semi-structured interviews The intervention consisted of six sessions, each of 60 minutes duration
Johansen S et al. ²⁹ 2018	Cancer nursing	United States (Norway)	University Hospital in Norway Home (access by internet)	To examine the effect of cancer patients' and family caregivers symptoms and demographic characteristics on caregiver burden at initiation of the patients radiation treatment.	281 Patients with different cancer (42 with HNC) 281 caregivers	Cross-sectional study
Konradsen H et al. ³⁰ 2009	Journal of Advanced Nursing	Denmark	Participating university hospitals. In the period in which patients are still in hospital after surgery	To explore and explain how disfigurement is addressed in interactions between patient and nurse during the period in hospital immediately after undergoing disfiguring facial surgery.	14 Patients	Grounded theory design
Konradsen H. et al. ³¹ 2012	Qualitative Health Research	United States (Denmark)	Hospital and included patients who had undergone head, neck, or eye cancer surgery.	To gain a better understanding of the ongoing process of how patients learn to live with disfigurement in the first postoperative year after receiving surgical treatment of head, neck, or eye cancer.	15 Patients	Qualitative study grounded theory
Langius A, Lind MG ³² 1995	European Journal of Cancer	Sweden	The patients in this study had all received surgical treatment.	To analyze the perceived severity of disease and the treatment circumstances in patients with oral and pharyngeal cancer 12 months after treatment, to relate this to coping capacity, somatic anxiety and general health and to describe the support and information they received from health-care providers.	42 Patients with oral and pharyngeal cancer	Four self-administered questionnaires were used to collect data.
Luctkar-Flude M et al. ³³ 2009	Oncology Nursing Forum	Canada	Attended consultation at the Cancer Center.	To determine the relationship between fatigue and physical activity in older patients with cancer.	328 Patients Various cancers	Prospective longitudinal study Self-report questionnaires
Marbach TJ, Griffie J ³⁴ 2011	Oncology Nursing Forum	United States	Patients who had completed surgery, radiation therapy, and/or chemotherapy for one of the predetermined disease types.	To examine patient preferences for content and methods of delivering treatment plans, educational information, and survivorship care plans.	40 Cancer survivor 6 Head and neck	An exploratory, descriptive approach with in-depth focus group thematic
Monga U et al. ³⁵ 1997	Archives of Physical Medicine and Rehabilitation	United States	All patients treated with radiation (with or without surgery).	To describe sexual functioning and its relationship with age, extent of disfigurement, performance status, and psychological functioning in head and neck cancer patients following radiation therapy with or without surgery.	55 Patients	Descriptive study, self-report survey, convenience sample

Author, Year	Journal	Country of publication (country of study)	Health Context	Aims/Purpose	Study population and sample size	Methods
O'Brien K et al. ³⁶ 2012	Journal of Clinical Nursing.	UK	Postal questionnaires were sent to all patients treated for head and neck cancer as identified from the University Hospital Aintree Head and Neck database.	To explore and describe patients' experiences of changes within their intimate relationships as a consequence of treatment for HNC.	16 Participants	Qualitative study in depth semi-structured interviews.
Olson ML, Shedd DP ³⁷ 1978	Head & Neck Surgery	United States	Patients were selected from among those scheduled for a regular follow-up visit regarding their head and neck cancer surgery	To determine, in specific terms, how many patients sustain significant disability as a result of treatment for HNC.	51 patients 28 with laryngectomy and 23 with other major surgery	Interview
Regan T et al. ³⁸ 2015	Plos One	Australia	Support groups, psycho-oncology services, and hospital-based oncological services.	To explore the perspectives of health care professionals and couples on the provision of couple-focused psychosocial care in routine cancer services.	20 health care professionals and 20 couples where one member had been diagnosed with cancer (breast, prostate, head/ neck, bowel, multiple myeloma).	Qualitative study using semi-structured interviews
Rodriguez CS, Blischak DM ¹¹ 2010	Applied Nursing Research	United States	During the acute care hospitalization period after surgery.	Identify communication needs for nonspeaking patients with H&N cancer during their acute care hospitalization after surgery and explore whether family caregivers' and nurses' perceptions of communication needs differed from those identified by these patients.	11 patients unable to speak after HNC surgery, 8 family caregivers 8 registered nurses	Descriptive pilot study
Rodriguez CS et al. ³⁹ 2016	American Journal of Critical Care	United States	Intensive unit care	To determine the impact of a technology-based communication intervention on patients' perception of communication difficulty, satisfaction with communication methods, and frustration with communication.	115 patients in adult critical care units	A quasi-experimental, 4-cohort (control and intervention)
Rogers SN Lowe M ⁴⁰ 2014	The British Journal of Oral & Maxillofacial Surgery	UK	Hospital Oncology follow-up clinics.	To evaluate use of the inventory across the Merseyside and Cheshire cancer network.	Patients from 5 hospitals were included and 66 patients, 8 doctors, and 6 nurse specialists took part.	Semi-structured telephone interview
Salander P et al. ⁴¹ 2016	Journal of Clinical Nursing	UK	Invited to contact a specialist nurse by telephone.	To systematically explore the motives for patients with head and neck cancer to contact a specialist nurse during two years post diagnosis.	60 Patients	Qualitative, descriptive study based on the contacts between patients with head and neck cancer and a specialist nurse
Saroa O et al. ⁴² 2018	Oncology Nursing Forum	Pittsburgh, Pennsylvania (Canada)	Unknown	To determine the information needs and preferences of patients who had human papillomavirus-associated head and neck cancer (HNC) and who were aged 18-65 years in the post-treatment phase of recovery.	205 patients who completed treatment for HNC	Self-administered survey

Author, Year	Journal	Country of publication (country of study)	Health Context	Aims/Purpose	Study population and sample size	Methods
Semple CJ, McCance T ⁴³ 2010	Journal of Advanced Nursing	UK (Northern Ireland)	Covering letter were interviewed in their own homes.	To explore the experience of parents diagnosed with HNC who are caring for young children.	12 patients with young children under the age of 16 were interviewed.	Qualitative descriptive design interviewed
Tschiesner U et al. ⁴⁴ 2013	European Archives of Oto-Rhino-Laryngology	Germany	Patients of the Department of Otorhinolaryngology Head and Neck Surgery at the Ludwig Maximilians University.	To evaluate patients' priorities using the brief ICF-HNC as a starting point. A priorities assessment checklist consisting of 15 statements was created based on the 14 validated categories of the brief ICF-HNC.	465 Patients	In a cross-sectional study
Westman B et al. ⁴⁵ 2018	Acta Oncologica	Sweden (Stockholm-Gotland)	Follow-up phase via regular mail.	To evaluate how these supportive care strategies are experienced by patients treated for cancer in the Stockholm-Gotland region.	869 Patients 202 HNC	Cross-sectional study Descriptive statistics
Wood S, Bisson JI ⁴⁶ 2004	British Journal of Oral and Maxillofacial Surgery	UK	These included all those who had had head and neck resections and were currently inpatients in the ward.	The two main aims were to assist in meeting the mental health needs of patients and to find out how best to do this after major head and neck resections for cancer.	58 Patients	Routine psychological screening of patients one week postoperatively using the Impact of Event Scale questionnaire
Zullig LL et al. ⁴⁷ 2019	Journal of Cancer Education	United States	Telephone-based, qualitative interviews	To obtain perspectives from multiple stakeholders about their knowledge, informational needs, and preferences for survivorship care plan delivery.	25 participants 21 stakeholder 4 HNC survivors	Qualitative study Interview Guide Development

The human responses from HNC, identified in the results were grouped by the respective domain and class (Table 2) for better understanding and analysis.

Table 2 – Nursing diagnoses (NANDA-I), domain, and class by author and study (n)

Human Responses (NANDA -I Diagnosis focus)	Domain	Class	Number of studies	Authors
Readiness for enhance Health literacy (00262)	Domain 1 Health promotion	Class 1 Health awareness	1	Grattan K et al. ⁹
Readiness for enhanced health management (00162)		Class 2 Health management	1	Björklund M et al. ²¹ .
Impaired swallowing (00103)	Domain 2 Nutrition	Class 1 Ingestion	1	Langius A, Lind MG ³²
Insomnia (00095)		Class 1 Sleep/rest	1	Chiou YJ et al. ²³
Disturbed sleep pattern (00198)			2	Barichello E et al. ²⁰ Johansen S et al. ²⁹
Fatigue (00093)	Domain 4 Activity/rest	Class 3 Energy balance	6	Grattan K et al. ⁹ Langius A, Lind MG ³² Luctkar-Flude M et al. ³³ Johansen S et al. ²⁹ Rogers SN Lowe M ⁴⁰ Zullig LL et al. ⁴⁷

Human Responses (NANDA -I Diagnosis focus)	Domain	Class	Number of studies	Authors
Deficient Knowledge (00126)	Domain 5 Perception/cog- nition	Class 4 Cognition	7	Grattan K et al. ⁹ Hughes LC et al. ²⁷ Salander P et al. ⁴¹ Saroa O et al. ⁴² D'Souza V et al. ²⁵ Westman B et al. ⁴⁵ Wood S, Bisson JI ⁴⁶
Labile emotional control (00251)			2	Marbach TJ, Griffie J ³⁴ Olson ML, Shedd DP ³⁷
Readiness for enhance knowledge (00161)			1	Grattan K et al. ⁹
Impaired verbal communication (00051)		Class 5 Communication	6	Grattan K et al. ⁹ Langius A, Lind MG ³² Rodriguez CS et al. ³⁹ Rodriguez CS, Blischak DM ¹¹ Tschiesner U et al. ⁴⁴ Zullig LL et al. ⁴⁷
Hopelessness (00124)	Domain 6 Self-perception	Class 1 Self-concept	1	Formigosa JAS et al. ¹
Readiness for enhanced Self-concept (00167)			1	
Readiness for enhanced hope (00185)			1	Felder BE ²⁶
Disturbed personal identity (00121)			2	O'Brien K et al. ³⁶ Formigosa JAS et al. ¹
Situational low self-esteem (00120)		Class 2 Self-esteem	3	Chen SC et al. ²² Formigosa JAS et al. ¹ O'Brien K et al. ³⁶
Risk for situation low self-esteem (00153)			2	Björklund M et al. ²¹ Grattan K et al. ⁹
Disturbed Body Image (00118)		Class 3 Body Image	8	Chen SC et al. ²² Formigosa JAS et al. ¹ Konradsen H. et al. ³¹ Marbach TJ, Griffie J ³⁴ Olson ML, Shedd DP ³⁷ Wood S, Bisson JI ⁴⁶ Konradsen H et al. ³⁰ Zullig LL et al. ⁴⁷
Readiness for enhance family process (00159)	Domain 7 Role relationship	Class 2 Family Relationships	1	Semple CJ, McCance T ⁴³
Interrupted family process (00060)			2	Grattan K et al. ⁹ Semple CJ, McCance T ⁴³
Impaired social interaction (00052)		Class 3 Role performance	3	Formigosa JAS et al. ¹ Johansen S et al. ²⁹ O'Brien K et al. ³⁶
Sexual dysfunctional (00059)	Domain 8 Sexuality	Class 2 Sexual Function	1	Monga U et al. ³⁵
Ineffective sexuality pattern (00065)			1	Grattan K et al. ⁹
Readiness for enhanced resilience (00212)	Domain 9 Coping/stress tolerance	Class 2 Coping responses	1	Collie K et al. ²⁴
Readiness for enhanced coping (00158)			2	Felder BE ²⁶ Olson ML, Shedd DP ³⁷
Anxiety (00146)			3	Chiou YJ et al. ²³ Langius A, Lind MG ³² Wood S, Bisson JI ⁴⁶
Fear (00148)			6	Grattan K et al. ⁹ Humphris G, Ozakinci ²⁸ Regan T et al. ³⁸ Rogers SN Lowe M ⁴⁰ Semple CJ, McCance T ⁴³ Wood S, Bisson JI ⁴⁶
Ineffective denial (00072)			1	Grattan K et al. ⁹
Readiness for enhanced Religiosity (00171)	Domain 10 Life principles	Class3 Value/belief/action congruence	1	Formigosa JAS et al. ¹
Social isolation (00053)	Domain 12 Comfort	Class 3 Social Comfort	1	

Discussion

This study aimed to identify the human responses of HNC patients undergoing surgery through the analysis and synthesis of the nursing literature. A total of 72 human responses and 29 nursing diagnoses have been identified.

A high number of human responses in HNC patients emerged only from two studies.^{1,9} According to the domains of NANDA-I taxonomy, those human responses are listed as follows: domain 6: Self-perception (n=18) including seven diagnoses, domain 5: Perception/cognition (n=16), including four diagnoses and domain 9: Coping / stress tolerance (n=13), in which five different diagnoses emerged. The most frequent diagnosis was disturbed body image (000118) (n=8)^{1,22,30,31,34,37,46,47}. Also, deficient knowledge (00126) (n=7),^{9,25,27,41-42,45-46} impaired verbal communication (00051) (n=6),^{9,11,32,39,44,47} fatigue (00093) (n=6)^{9,29,32,33,40,47} and fear (00148) (n=6).^{9,28,38,40,43,46} The nursing diagnosis 'situational low self-esteem'^{1,22,36} has been identified in three articles, but also the risk diagnosis.^{9,21}

The diagnosis and treatment of HNC directly affect the quality of life of the person.¹ Results underline the predominance of the nursing diagnosis "disturbed body image" related to the aesthetic changes that patients experience and may change self-perception of body, image, and self-concept, which are critical for keeping a social life. In a society keeping the representation of the beauty of particular importance,¹ nurses must be alert and able to intervene particularly with these patients when having the risk or the diagnosis.

When looking after the participants' inclusion criteria, the main studies stated that patients must have the ability to communicate verbally²⁰ using of different ways or resources to be enrolled in interviews^{1,9,21,25,28,30-31,37-38,43,47} or by telephone,^{21,40,41} responding to open-ended questions,^{24,36} using session of focus group,³⁴ or reporting personal experiences.^{28,47} This aspect discloses some caution that researchers may need when selecting the research method in studying these population. Research methods should be inclusive, particularly, the data collection method and procedures. Otherwise, evidence-based nursing to these patients could be compromised. Few studies included patients with impaired verbal communication, using questionnaires.^{22,32-33,35,44-46} Impaired verbal communication was an inclusion criterion for being a participant in two studies.^{11,39} Voicelessness interferes with family roles, the relationships of patients with

their offspring and with elderly parents. The inability to take care of their own leads to additional streams in patients who have already been negatively affected by altered self-image, nurses should help the patient and family to identify, plan, and address these role changes.⁹

HNC has a substantial impact on the person, despite technological advances at the surgical level, patients become different after temporary or permanent surgery.³¹ These patients presented greater dissatisfaction with body image compared to those who underwent another type of treatment.²²

It is essential to plan nursing care for these patients by establishing a relationship of trust, which provides moments to reflect on the new reality, expectations, positive and negative feelings.¹ Koradsen *et al*⁶⁰ studied the interactions between patient and nurse during the period in hospital, after surgical treatment for HNC with facial disfigurement and reinforce the importance of nursing care based on exploring the values, beliefs, and concerns of these patients in the early postoperative period.

Patients facing the diagnosis of cancer live in a transitional situation, enhanced by the possibilities of treatment that may be underlying surgery, chemotherapy or radiotherapy, or the combination of various therapies, as well as any changes resulting from these processes. The nurse prepares for imminent transitions facilitating the process of learning new skills related to health and the experience of the disease.⁴⁸

All changes that occur in patients' life due to HNC and treatments require reorganization, and these factors can cause loss of self-esteem, social isolation or depression.¹ Faced with predominantly subjective diagnoses and the evolution of knowledge, there is a need for more efficient and effective care based on scientific evidence attending all patients' needs.⁴⁹

Rejecting papers written in other languages different from Portuguese and English might have limited other relevant studies. Despite the various attempts, there were four articles could not be accessed in full text.

Nursing care of HNC patients should be based on the nursing process, from assessment to outcomes. As so, knowing the main human responses of patients with HNC as identified in literature may facilitate nurses to be awake for these diagnoses and ultimately, patient safety, improving nursing care and quality of life.

Conclusion

Nurses' focus of interest concerns the human responses to life and health transitions, and these comprise subjective phenomena, which are sometimes difficult to measure or to understand.

From a perspective of holistic care, the nurse must know which changes that this type of tumors and treatments may cause. But also, the emotional, social, spiritual, economic and social changes, which affect the family. Nurses provide care for these patients in various health contexts, such as hospital, outpatient or home, and in all settings is essential to know the central nursing responses patients usually may have, as synthesized in this review, for evidence-based practice.

The diagnoses identified in this population are predominantly a subjective nature. As so, the clinical validation could improve the level of evidence and provide nurses with clinical indicators for clinical reasoning and effective planning and interventions.

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