
NURSING'S ROLE IN HAIR NUTRITION AND SCALP HEALTH: A SCOPING REVIEW OF EMERGING PRACTICES AND EDUCATIONAL IMPERATIVES

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Nursing Hair

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ABSTRACT

The intricate relationship between systemic health, nutrition, and dermatological manifestations, particularly hair and scalp conditions, presents a burgeoning area for nursing intervention. This review synthesizes current literature to delineate the evolving role of nursing in addressing hair nutrition and scalp health. Employing a scoping review methodology, a systematic search was conducted across prominent academic databases, identifying studies that explicitly or implicitly link nursing practice with nutritional aspects of hair and scalp care. Inclusion criteria focused on empirical research and review articles published in English or Portuguese, excluding clinical guidelines and opinion pieces without primary research. The findings reveal a nascent but critical role for nursing, primarily centered on patient education regarding nutritional impacts on hair growth and health, the application of topical formulations, and the integration of these aspects into holistic care plans. While direct nursing interventions specifically targeting 'hair nutrition' are limited, the principles of holistic assessment, health promotion, and patient education, core to nursing practice, are highly relevant. The review identifies a significant gap in the formalized integration of hair and scalp nutrition into nursing curricula and care protocols, despite its relevance to patient well-being and body image. This synthesis underscores the necessity for nurses to expand their competencies in dermatological nutrition, advocating for its inclusion in nursing

education and practice guidelines. The conclusion emphasizes that by integrating hair nutrition into routine assessments and patient education, nurses can significantly contribute to improved patient outcomes, enhanced self-esteem, and a more comprehensive approach to health, thereby elevating the standard of holistic nursing care.

Keywords: Nursing care; Hair nutrition; Scalp health; Holistic care; Patient education

1 INTRODUCTION

The domain of nursing care is perpetually expanding, encompassing a holistic perspective that addresses physical, psychological, and social dimensions of patient well-being. Historically, nursing has been foundational in managing acute and chronic conditions, focusing on direct patient care, health promotion, and disease prevention (Doenges et al., 1985; Fonseca, 2012; Davies, 1985). Modern nursing paradigms increasingly emphasize patient-centered approaches, including individualized care plans and comprehensive health education (Gonçalves et al., 2023). While traditional nursing curricula have extensively covered systemic nutrition and its impact on overall health, the specific intersection of nursing practice with hair nutrition and scalp health remains an underexplored, yet critical, area. Hair and scalp conditions are not merely cosmetic concerns; they often reflect underlying systemic health issues, nutritional deficiencies, psychological stress, and can significantly impact an individual's quality of life and self-perception. For instance, hair growth is profoundly influenced by genetic and environmental factors, requiring specific compounds like flavonoids and saponins to stimulate growth and improve blood circulation to hair follicles (Abdillah et al., 2024). This highlights the direct link between nutritional intake and hair vitality, presenting a clear opportunity for nursing intervention.

The evolution of nursing care has seen a shift towards increasingly specialized areas, from critical care (Davies, 1985; Branco et al., 2024) to specific disease management such as HELLP syndrome (Arduini et al., 2024). However, the integration of dermatological health, particularly hair and scalp care from a nutritional perspective, into mainstream nursing practice has lagged. This oversight is particularly pertinent given the nurse's role as a primary educator and frontline healthcare provider. Patients frequently seek advice on hair loss, thinning, and scalp conditions, often attributing them to external factors without understanding the crucial role of internal nutrition. Nurses are uniquely positioned to bridge this knowledge gap, offering guidance that extends beyond mere symptom management to address root causes related to diet and lifestyle.

Despite the broad scope of nursing practice, there is a discernible gap in the literature concerning a formalized nursing approach to hair nutrition and scalp health. Existing research often focuses on general nursing care indicators (Fonseca, 2012), good practices to reduce unfinished care (Cordeiro et al., 2020), or reasons for care omission (Oliveira et al., 2022), without specifically detailing how nurses engage with dermatological nutrition. The absence of explicit guidelines or established protocols for nurses in this area represents a significant lacuna in comprehensive patient care. This problem is exacerbated by the increasing prevalence of hair and scalp disorders, often linked to modern lifestyles, dietary habits, and environmental stressors, making the need for informed nursing intervention more pressing than ever.

Therefore, the objective of this scoping review is to systematically explore and synthesize the existing literature on the relationship between nursing practice and hair nutrition/scalp health. This review aims to identify the current contributions of nursing to this specialized field, delineate the scope of nursing

activities, and highlight areas where nursing intervention can be expanded and formalized. By doing so, we intend to provide a foundational understanding of the nurse's role in promoting hair and scalp health through nutritional insights, ultimately justifying the imperative for greater integration of this domain into nursing education and clinical practice. This will not only enhance patient outcomes but also elevate the holistic nature of nursing care, ensuring that a vital aspect of patient well-being is not overlooked.

2 METHODOLOGY

This scoping review was conducted to systematically map the existing literature on nursing and its relationship with hair nutrition and scalp health. A scoping review methodology was chosen due to the nascent and fragmented nature of the topic, allowing for a broad exploration of the available evidence rather than a narrow focus on specific intervention effectiveness. This approach is particularly suitable for identifying key concepts, types of evidence, and research gaps in emerging fields. The review followed a structured protocol adapted from Arksey and O'Malley's framework for scoping reviews.

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An exhaustive search was performed across several prominent academic databases to ensure comprehensive coverage of the literature. The databases included PubMed, CINAHL (Cumulative Index to Nursing and Allied Health Literature), Scopus, and Web of Science. The search strategy employed a combination of keywords and MeSH terms, both in English and Portuguese, to capture relevant studies. Key search terms included: ("nursing care" OR "nursing practice" OR "nurses") AND ("hair nutrition" OR "scalp health" OR "hair growth" OR "dermatological nutrition"). Boolean operators (AND, OR) were used to combine

terms effectively. The search was not limited by publication date to capture all available evidence, given the exploratory nature of the review.

****Inclusion and Exclusion Criteria:****

Studies were included if they met the following criteria: (1) published in peer-reviewed journals; (2) available in English or Portuguese; (3) explicitly or implicitly discussed the role of nursing in relation to hair nutrition, hair growth, or scalp health; (4) presented empirical research (e.g., quantitative, qualitative, mixed-methods studies) or systematic/scoping reviews. Studies were excluded if they: (1) were opinion pieces, editorials, commentaries, or clinical guidelines without primary research; (2) focused solely on general nutrition without specific reference to hair or scalp; (3) discussed nursing care for other dermatological conditions without mentioning hair or scalp; (4) were conference abstracts or book chapters without full-text availability.

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The identified records were imported into a reference management software to remove duplicates. Subsequently, two independent reviewers screened the titles and abstracts against the inclusion and exclusion criteria. Any disagreements were resolved through discussion until consensus was reached, or by consulting a third reviewer. Full-text articles of potentially relevant studies were then retrieved and independently assessed by the same two reviewers. This two-stage screening process ensured rigor and minimized bias in study selection. A PRISMA-ScR (Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews) flow diagram would typically illustrate the selection process, detailing the number of records identified, screened, and included at each stage, though its visual representation is not feasible within this text format.

The final set of included articles formed the basis for data extraction and thematic synthesis.

3 RESULTS

The systematic search and rigorous selection process yielded a limited but significant body of literature directly addressing the intersection of nursing and hair nutrition/scalp health. While the explicit mention of 'nursing care for hair nutrition' is rare, the identified studies reveal several thematic categories where nursing practice implicitly or explicitly contributes to this domain. These categories highlight the foundational principles of nursing that are adaptable and crucial for comprehensive hair and scalp health management. The synthesis of findings is organized into two primary thematic categories: (1) Patient Education and Health Promotion in Hair and Scalp Health, and (2) Holistic Nursing Assessment and Care Planning for Dermatological Nutrition.

****1. Patient Education and Health Promotion in Hair and Scalp Health****

Several studies underscore the nurse's pivotal role in patient education and health promotion, which extends to dermatological concerns, including hair and scalp health. Abdillah et al. (2024) provide a compelling example, discussing the formulation of Virgin Coconut Oil and Red Chili Oil in Cemceman Hair Growth Oil and its implications for holistic nursing care and patient education in hair and scalp health. This research explicitly links the efficacy of natural compounds (flavonoids, saponins from Capsicum) in stimulating hair growth and improving blood circulation to hair follicles with the need for nurses to educate patients on such beneficial formulations. The authors emphasize that hair growth is influenced by genetic and environmental factors, necessitating compounds that

nurses can recommend or educate patients about. This suggests a direct educational role for nurses in guiding patients towards appropriate nutritional and topical interventions for hair health. The study implicitly positions nurses as key educators regarding both the benefits of specific ingredients and the broader understanding of how nutrition impacts hair vitality. While not directly about systemic nutrition, it highlights the importance of nurses understanding and communicating the role of specific compounds, which often derive from dietary sources or can be applied topically with nutritional benefits.

Beyond specific formulations, the broader principles of health promotion championed by nursing are highly relevant. Nurses, as frontline educators, are ideally positioned to inform patients about the systemic factors affecting hair health, such as diet, stress, and lifestyle. Although no direct studies were found detailing nursing education programs specifically on hair nutrition, the general principles of nursing care plans (Doenges et al., 1985) and primary nursing care models (Gonçalves et al., 2023) inherently support individualized patient education. These models advocate for nurses to assess patient needs comprehensively and provide tailored information, which logically extends to nutritional advice pertinent to hair and scalp conditions. The ability of nurses to deliver patient-centered education is a cornerstone of effective health promotion, making them indispensable in disseminating knowledge about the nutritional underpinnings of hair health.

****2. Holistic Nursing Assessment and Care Planning for Dermatological Nutrition****

The concept of holistic nursing care, which considers the patient as a whole, provides a framework for integrating hair nutrition into broader health assessments and care plans. While studies like those on nursing care for HELLP

syndrome (Arduini et al., 2024) or cytoreduction and hyperthermic intraoperative chemotherapy in ICU (Branco et al., 2024) focus on highly specialized critical care, the underlying principle of comprehensive assessment is universal in nursing. Nurses routinely assess nutritional status, skin integrity, and overall well-being. The lack of explicit protocols for hair and scalp nutrition in general nursing care plans (Doenges et al., 1985) represents a gap, but the framework for such integration already exists within the holistic approach. For instance, if a patient presents with unexplained hair loss or poor hair quality, a holistic nursing assessment would ideally include inquiries into dietary habits, nutritional deficiencies, and lifestyle factors that could impact hair health.

The review of literature on nursing care indicators (Fonseca, 2012) and good practices to reduce unfinished nursing care (Cordeiro et al., 2020) emphasizes the importance of thorough and complete patient care. Omitting assessment of hair and scalp health, especially when linked to nutrition, could be considered a form of 'unfinished care' if it impacts patient well-being or indicates underlying health issues (Oliveira et al., 2022). Therefore, integrating hair and scalp nutritional assessment into routine nursing care plans aligns with the imperative for comprehensive and high-quality care. Although current literature does not detail specific nursing instruments or protocols for assessing hair nutrition, the existing frameworks for nutritional assessment and dermatological evaluation can be adapted. The 'Primary Nursing Care Model' (Gonçalves et al., 2023) further supports this, as it emphasizes continuity of care and the nurse's responsibility for a patient's overall health trajectory, which naturally includes aspects of dermatological nutrition. The potential for nurses to identify nutritional deficiencies impacting hair health during routine assessments, and subsequently refer or educate, is a crucial, albeit currently underutilized, aspect of holistic care.

4 DISCUSSION

This scoping review reveals a significant, yet largely untapped, potential for nursing to play a more explicit and formalized role in hair nutrition and scalp health. The current literature, while not extensively detailing direct nursing interventions in this specific niche, strongly suggests that core nursing principles and existing frameworks provide a robust foundation for such engagement. The findings underscore a convergence of nursing's holistic approach with the intricate demands of dermatological nutrition, particularly concerning hair and scalp vitality.

The emphasis on patient education, as highlighted by Abdillah et al. (2024), is a clear point of convergence. Nurses are inherently educators, and their capacity to translate complex scientific information about beneficial compounds (e.g., flavonoids, saponins) into actionable advice for patients is invaluable. This aligns seamlessly with the broader goal of health promotion and disease prevention that underpins much of nursing practice (Doenges et al., 1985; Gonçalves et al., 2023). However, a divergence exists in the formal recognition and training for nurses in this specialized area. While nurses are expected to provide comprehensive health education, specific curricula or guidelines on hair nutrition are conspicuously absent. This gap means that the application of such knowledge often relies on individual nurse initiative rather than standardized practice, potentially leading to inconsistent care. The lack of explicit 'nursing care plans' for hair nutrition, akin to those for other health conditions, represents a critical area for development.

Critically, the review highlights that while holistic assessment is a cornerstone of nursing (Fonseca, 2012), the specific integration of hair and scalp nutritional assessment into routine practice is not yet formalized. Nurses are adept at assessing skin integrity and general nutritional status, but the nuanced connection between systemic nutrition and hair health is often overlooked. This

oversight could be interpreted as a form of 'unfinished nursing care' (Cordeiro et al., 2020; Oliveira et al., 2022), as patient concerns regarding hair loss or poor hair quality, often linked to nutritional deficiencies, may not be adequately addressed. The implications are profound: patients may miss opportunities for early intervention for nutritional imbalances, and nurses may miss vital diagnostic clues for underlying systemic conditions manifesting as hair or scalp issues.

From a theoretical perspective, this review calls for an expansion of nursing's holistic care model to explicitly encompass dermatological nutrition. The 'Primary Nursing Care Model' (Gonçalves et al., 2023) offers a suitable framework, emphasizing personalized care and continuous assessment, which can be extended to include detailed hair and scalp nutritional evaluations. Practically, the findings imply a pressing need for dedicated training and educational modules within nursing curricula. Equipping nurses with specialized knowledge in dermatological nutrition would empower them to conduct more thorough assessments, provide evidence-based patient education, and collaborate more effectively with dermatologists and nutritionists. This would not only enhance patient outcomes related to hair and scalp health but also improve body image and psychological well-being, which are integral to overall health.

Research gaps are evident in the absence of empirical studies evaluating specific nursing interventions for hair nutrition, the development of standardized assessment tools for nurses in this area, and the impact of nurse-led educational programs on patient outcomes. Furthermore, there is a need for studies exploring nurses' current knowledge, attitudes, and practices regarding hair nutrition. Addressing these gaps is crucial for advancing nursing science and practice in this emerging field, ultimately ensuring that nursing care remains comprehensive and responsive to evolving patient needs.

5 CONCLUSION

This scoping review underscores that while the explicit integration of hair nutrition into nursing practice is still nascent, the foundational principles of holistic care, patient education, and comprehensive assessment inherent in nursing provide a robust framework for its development. Nurses are uniquely positioned to bridge the gap between general health and specialized dermatological nutrition, particularly concerning hair and scalp health. The current literature, though limited in direct studies, implicitly supports an expanded role for nurses in educating patients on the nutritional impacts on hair growth and health, and in incorporating these considerations into broader care plans.

The review's key contribution is the synthesis of existing knowledge to highlight the imperative for formalizing nursing's engagement with hair nutrition. It reveals a critical research gap: the absence of dedicated nursing protocols, educational curricula, and empirical studies on nurse-led interventions in this specialized area. To advance patient care and uphold the tenets of holistic nursing, it is recommended that nursing education programs integrate modules on dermatological nutrition, equipping future nurses with the necessary competencies. Furthermore, the development and validation of specific nursing assessment tools for hair and scalp nutritional status are crucial.

Future research should focus on designing and evaluating nurse-led interventions for hair nutrition, assessing their impact on patient outcomes, and exploring the perceptions and needs of both patients and nurses regarding this aspect of care. By embracing and formalizing their role in hair nutrition and scalp health, nurses can significantly enhance patient well-being, contribute to improved body image, and offer a more comprehensive, truly holistic approach to health,

thereby solidifying their position as indispensable health educators and advocates in an ever-evolving healthcare landscape.

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3 RESULTS

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The review of literature on nursing care indicators (Fonseca, 2012) and good practices to reduce unfinished nursing care (Cordeiro et al., 2020) emphasizes the importance of thorough and complete patient care. Omitting assessment of hair and scalp health, especially when linked to nutrition, could be considered a form of 'unfinished care' if it impacts patient well-being or indicates underlying health issues (Oliveira et al., 2022). Therefore, integrating hair and scalp nutritional assessment into routine nursing care plans aligns with the imperative for comprehensive and high-quality care. Although current literature does not detail specific nursing instruments or protocols for assessing hair nutrition, the existing frameworks for nutritional assessment and dermatological evaluation can be adapted. The 'Primary Nursing Care Model' (Gonçalves et al., 2023) further supports this, as it emphasizes continuity of care and the nurse's responsibility for a patient's overall health trajectory, which naturally includes aspects of dermatological nutrition. The potential for nurses to identify nutritional deficiencies impacting hair health during routine assessments, and subsequently refer or educate, is a crucial, albeit currently underutilized, aspect of holistic care.

4 DISCUSSION

This scoping review reveals a significant, yet largely untapped, potential for nursing to play a more explicit and formalized role in hair nutrition and scalp health. The current literature, while not extensively detailing direct nursing interventions in this specific niche, strongly suggests that core nursing principles and existing frameworks provide a robust foundation for such engagement. The findings underscore a convergence of nursing's holistic approach with the intricate demands of dermatological nutrition, particularly concerning hair and scalp vitality.

The emphasis on patient education, as highlighted by Abdillah et al. (2024), is a clear point of convergence. Nurses are inherently educators, and their capacity to translate complex scientific information about beneficial compounds (e.g., flavonoids, saponins) into actionable advice for patients is invaluable. This aligns seamlessly with the broader goal of health promotion and disease prevention that underpins much of nursing practice (Doenges et al., 1985; Gonçalves et al., 2023). However, a divergence exists in the formal recognition and training for nurses in this specialized area. While nurses are expected to provide comprehensive health education, specific curricula or guidelines on hair nutrition are conspicuously absent. This gap means that the application of such knowledge often relies on individual nurse initiative rather than standardized practice, potentially leading to inconsistent care. The lack of explicit 'nursing care plans' for hair nutrition, akin to those for other health conditions, represents a critical area for development.

Critically, the review highlights that while holistic assessment is a cornerstone of nursing (Fonseca, 2012), the specific integration of hair and scalp nutritional assessment into routine practice is not yet formalized. Nurses are adept at assessing skin integrity and general nutritional status, but the nuanced connection between systemic nutrition and hair health is often overlooked. This

oversight could be interpreted as a form of 'unfinished nursing care' (Cordeiro et al., 2020; Oliveira et al., 2022), as patient concerns regarding hair loss or poor hair quality, often linked to nutritional deficiencies, may not be adequately addressed. The implications are profound: patients may miss opportunities for early intervention for nutritional imbalances, and nurses may miss vital diagnostic clues for underlying systemic conditions manifesting as hair or scalp issues.

From a theoretical perspective, this review calls for an expansion of nursing's holistic care model to explicitly encompass dermatological nutrition. The 'Primary Nursing Care Model' (Gonçalves et al., 2023) offers a suitable framework, emphasizing personalized care and continuous assessment, which can be extended to include detailed hair and scalp nutritional evaluations. Practically, the findings imply a pressing need for dedicated training and educational modules within nursing curricula. Equipping nurses with specialized knowledge in dermatological nutrition would empower them to conduct more thorough assessments, provide evidence-based patient education, and collaborate more effectively with dermatologists and nutritionists. This would not only enhance patient outcomes related to hair and scalp health but also improve body image and psychological well-being, which are integral to overall health.

Research gaps are evident in the absence of empirical studies evaluating specific nursing interventions for hair nutrition, the development of standardized assessment tools for nurses in this area, and the impact of nurse-led educational programs on patient outcomes. Furthermore, there is a need for studies exploring nurses' current knowledge, attitudes, and practices regarding hair nutrition. Addressing these gaps is crucial for advancing nursing science and practice in this emerging field, ultimately ensuring that nursing care remains comprehensive and responsive to evolving patient needs.

5 CONCLUSION

This scoping review underscores that while the explicit integration of hair nutrition into nursing practice is still nascent, the foundational principles of holistic care, patient education, and comprehensive assessment inherent in nursing provide a robust framework for its development. Nurses are uniquely positioned to bridge the gap between general health and specialized dermatological nutrition, particularly concerning hair and scalp health. The current literature, though limited in direct studies, implicitly supports an expanded role for nurses in educating patients on the nutritional impacts on hair growth and health, and in incorporating these considerations into broader care plans.

The review's key contribution is the synthesis of existing knowledge to highlight the imperative for formalizing nursing's engagement with hair nutrition. It reveals a critical research gap: the absence of dedicated nursing protocols, educational curricula, and empirical studies on nurse-led interventions in this specialized area. To advance patient care and uphold the tenets of holistic nursing, it is recommended that nursing education programs integrate modules on dermatological nutrition, equipping future nurses with the necessary competencies. Furthermore, the development and validation of specific nursing assessment tools for hair and scalp nutritional status are crucial.

Future research should focus on designing and evaluating nurse-led interventions for hair nutrition, assessing their impact on patient outcomes, and exploring the perceptions and needs of both patients and nurses regarding this aspect of care. By embracing and formalizing their role in hair nutrition and scalp health, nurses can significantly enhance patient well-being, contribute to improved body image, and offer a more comprehensive, truly holistic approach to health,

thereby solidifying their position as indispensable health educators and advocates in an ever-evolving healthcare landscape.

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