Evidence of nursing patterns of knowing communicated by the brazilian press before Florence Nightingale’s model

Indícios de padrões de conhecimento de enfermagem comunicados pela imprensa brasileira antes do modelo nightingaleano

Indicaciones de normas de conocimiento de enfermería comunicadas por la prensa brasileña antes del modelo de Florence Nightingale

ABSTRACT

Objective: to identify evidence of nursing patterns of knowing disseminated by the Brazilian press before the implementation of Florence Nightingale's model in Brazil and categorize topics of journalistic articles according to Carper's and White's patterns of knowing. Methods: categorical content analysis of materials related to Florence Nightingale, published in Brazil between 1850 and 1919, collected at Hemeroteca Digital. Four analysts identified themes of journalistic article, performing classification in patterns of knowing. Results: there was a predominance of evidence of the sociopolitical pattern followed by the empirical pattern. In the analyses per decade, ethical and aesthetic patterns showed predominance between 1860 and 1870, respectively. Conclusion: White's classification by nursing patterns of knowing was useful in understanding precursor themes of professional/disciplinary knowledge that spread in Brazil, linked to Nightingale's character, in addition to the repercussions of her actions and her expanded sociopolitical perspective.

Descriptors: Knowledge; Communication; Nursing; Philosophy; History.

RESUMEN

Objetivo: identificar indicios de patrones de conocimiento de enfermería difundidos por la prensa brasileña antes de la implementación del modelo noctingaleano en Brasil, y categorizar temas de las matérias periodísticas en función de los patrones de conocimiento de Carpe y de White. Métodos: análisis de contenido categorial de materias alusivas a Florence Nightingale, publicadas en Brasil entre los años de 1850 y 1919, coletadas en la Hemeroteca Digital. Cuatro analistas identificaron temas temáticos de las materias, realizando una clasificación en patrones de conocimiento. Resultados: se verificó una predominancia de indicios de los patrones sociopolítico seguido del empírico. En las análises por década, los patrones ético e estético demostraron predominancia entre 1860 y 1870, respectivamente. Conclusión: la clasificación por patrones de conocimiento de enfermería de White fue útil para el entendimiento de los temas precursores del conocimiento profesional/disciplinar, que se difundieron en Brasil, ligados al carácter de Nightingale, además de las repercusiones de sus acciones y de su visión sociopolítica ampliada.

Descritores: Conocimiento; Comunicación; Enfermería; Filosofía; Historia.

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INTRODUCTION

In modern Western nursing, Florence Nightingale (1820-1910) is recognized as the first thinker of influence who outlined values and beliefs for the profession\(^\text{[1]}\). Her main contributions were to identify the role of nurses by differentiating it from those exercised by physicians, establish a training model and produce writings of a theorizing nature from actions in practice. Her answer to the question “what is and what is not nursing?” offered philosophical underpinnings directed to values oriented to what should be nursing and, consequently, knowledge of practice discipline\(^\text{[2]}\). In her writings, she established a tacit structure of what would later become a multidimensional knowledge of nursing. She emphasized the use of experimentation, a typical aspect of British empiricism, valued statistics, highlighting observation and its accurate record, postulated statements about the process of action of nature in people’s health and their relations with environment handling.

Nightingale, recognizing that rationalist elements would not be sufficient to constitute what should be the training of nurses, she incorporated into the nurse’s training process a certain ethical and moral disposition and the observance of particular personal features, in addition to a sociopolitical concern about the context in which a modern nursing was inserted and, the ability required to practice artistically\(^\text{[3]}\). Her family, with strong Unitarian devotion, affiliated with the ideals of religion: respect for human dignity; use of intellectual reason to illuminate consciousness; act guided by religious convictions to promote life; compliance with scientific advances; and chase of social justice\(^\text{[4]}\). Such assumptions would interfere in the multifaceted view of reality and knowledge, possibly due to the roots of their formation, belief system and values and personal trajectory in living with human suffering.

At its birth, Nightingalean nursing moves away from the basilar aspect of August Comte’s positivism of the mid-nineteenth century, of valuing an objective science and axiological neutrality, pointing to a knowledge generated by inductive logic based on the experiences of professional practice to be taught systematically and formally in nursing schools. Thus, a knowledge emerged filled with values derived from the practice of nurses and of presumed and experienced models of how women who would be nurses should be and act.

With greater or lesser formalism, nursing knowledge has been submitted to descriptions and classifications of which the most widespread are the patterns of knowing proposed in 1978 by Carper, and later updated by White\(^\text{[5,6]}\). Nightingale’s writings were submitted to analysis to verify whether patterns of knowing would be valid as a system of description and classification of the material\(^\text{[7]}\). From this analysis, it was verified that the author’s works presented all five patterns: empiric, aesthetic, ethical, personal, and sociopolitical. Afterwards, the works allowed the proposition of a new pattern called “unknowing”\(^\text{[8]}\). Therefore, it was verified that there were already indications of nursing patterns of knowing in Florence’s works before Carper’s categorical system was proposed\(^\text{[9]}\).

However, it has not yet been investigated which evidence of nursing patterns of knowing were also communicated outside Nightingale’s works, more specifically by the press in journalistic articles, during the time period in which the systematization of her knowledge was initiated. This issue is particularly interesting to study the basic conditions of circulation of information that communicates nursing knowledge to society through non-specialized channels. It is launched a perspective of communication of the nascent profession before the Nightingalean professional model reached maturity, distinction and diffusion. In Brazil, a model of nursing training of this type was only formalized from the 1920s\(^\text{[10]}\). Previously, training of nurses was developed by physicians, without organization, formal control or selection and ascension on merit\(^\text{[11]}\).

The central questions were: what evidence of nursing patterns of knowing associated with the journalistic articles concerning Florence Nightingale circulated through Brazilian newspapers before the implementation of the Nightingalean model in the country? And, which themes of the journalistic articles of the time expressed such evidence of nursing patterns of knowing?

OBJECTIVE

To identify evidence of nursing patterns of knowing disseminated by the Brazilian press before the implementation of Florence Nightingale’s model in Brazil, and categorize themes of journalistic articles according to Carper’s and White’s patterns of knowing.

METHODS

Ethical aspects

The study used the process of textual content analysis of journalistic articles published in the second half of the 19th century and in the first decade of the 20th century. Ethical procedures of studies with human beings were dispensed.

Theoretical-methodological framework

The historical models of nursing education and the nursing patterns of knowing proposed by Carper\(^\text{[4]}\) and updated by White formed the theoretical framework for categories\(^\text{[5]}\). In the historical model, we used the conception of the implementation of the Nightingalean model of specific education for Brazilian nurses in Brazil from the 1920s, with the sanitary reform. In the epistemological model of categorization of nursing knowledge, the five patterns of knowledge were used, according to the classification of Carper\(^\text{[4]}\) updated by White\(^\text{[5]}\): empiric, ethical, personal, aesthetic, and sociopolitical\(^\text{[4-5,9]}\).

The empirical pattern refers to systematically organized, empiric, factual, descriptive knowledge and understandings. The ethics, linked to the moral component, focused on issues of obligation and what should be done, incorporating values, codes, and patterns that guide the morally correct, sense of being responsible for the world. It also focused on the social and moral good, advocating in an existential way and valuing the moral idea of care. The personal related to the ‘self’; reflections on personal responses to life and the world, self-knowledge, performance of potentialities and realities of being, ability to use art, poetry, and literature to better understand the person. The aesthetic referred to the art of nursing, which is visible by action, empathy, piety, sympathy, consolation and mercy, interpersonal engagement, perception of the whole of a situation. The sociopolitical context linked to the social and political...
context of people and the profession, to society’s understanding of nursing, to the understanding of nursing about society and its policies, cultural identity, on historical issues of connection with its land and inheritances\(^{[4-6]}\).

**Type of study**

This is a study of the mixed type of content analysis. The deductive categorical process was used to classify message segments as evidence of patterns of knowing in nursing journalistic articles. Inductive content analysis was also applied to categorize themes emerging from messages\(^{[10]}\). Writing was generically guided by the Equator “Guidelines for conducting and reporting mixed research in the field of counseling and beyond”\(^{[11]}\) due to the particularities of the study in combining deductive (quantitative) and inductive (qualitative) processes. However, adaptations were indispensable considering the particularities of content analysis processes.

**Methodological procedures for data collection and organization**

The search tool selection was carried out through “advanced search at Hemeroteca” of the Brazilian Hemeroteca Digital of the Brazilian National Library Foundation (Fundação Biblioteca Nacional do Brasil). The journal portal was chosen according to its reputation, universal and open access and its historical scope of inclusion of journals since 1808. The advanced search tool was chosen for cutting the search for decades.

All journals available between the 1850s and 1910s were selected for search and inclusion. The time interval chosen was the one that covered two events of notoriety in Florence Nightingale’s life: her acting in caring for the wounded in the Crimean War in the 1850s and her death on August 13, 1910. In the search procedure, the root term “Nightingal” and the word “Nightingale” were used as keywords, considering that the system distinguishes between the root term “Nightingal” and the word “Nightingale” were used as keywords, considering that the system distinguishes between terms. The decade filter was triggered for each search procedure.

Google Sheets® was used for constructing and sharing of the database among encoders. We incorporated a number for cutting the search for decades.

All journals from 1850 to 1910 were selected, in a distribution for decades as follows: 431 publications from 1850 to 1859; 599 publications from 1860 to 1869; 945 publications from 1870 to 1879; 1495 publications of 1880-1889; 1279 publications from 1890 to 1899; 773 publications from 1900 to 1909; and 736 publications from 1910 to 1919.

**Data analysis and encoding**

Analysis was oriented to identify by deductive inference evidence of nursing patterns of knowing in the articles. At the primary level of analysis, all journalistic articles were fully read by two researchers (a nurse and a historian) who entered the data in the spreadsheet. At the secondary level of analysis, categorical coding of the content of journalistic articles by patterns of knowing was performed by four researchers, three nurses and a historian. When the analyst verified the presence of text (evidence) of more than one category in the same article, the identified patterns were placed in descending order of preponderance in the semantics of the message, from the analyst’s opinion.

Inductive analysis considered themes and subjects emerging from the texts into units of meaning. The subsequent content classification by patterns of knowing was performed independently by the analysts to verify classificatory discrepancies. To increase the analytical process reliability, the Kappa coefficient was applied to measure the agreement among coders and decide to perform a new classification round, if necessary. Considering theoretical construct classification, it was defined that a new classification round would be necessary when the general Kappa value of encoders indicated an agreement below the moderate level (0.41-0.60), under statistical significance (p<0.05)\(^{[12]}\). Kappa value was calculated using the software Prisma 8°.

**RESULTS**

**Tendencies in patterns of knowing over time**

In a first classification round of content elements compatible with patterns of knowing, the overall Kappa value was 0.455 (0.391-0.519) for a 95% confidence interval, being considered moderate, however, without obtaining statistical significance. According to the methodological criterion, a new classification round by analysts was carried out. In the new classification, the overall Kappa value increased to 0.522 (0.457-0.586), moderate, and p<0.05. Thus, the classification adopted in the study was the one established in the second round.

Seventy-one journalistic articles were identified in 45 different journals from 12 states of the country and from two foreign countries that circulated in Brazil at the time. The findings showed a homogeneous behavior in the number of articles ranging from 6 to 8 until 1900, and between 1910 and 1919, expanding to 28 articles, as can be seen in Figure 1.

Although a given article could contain segments of texts that indicated simultaneous existence of the five patterns of knowing, it was commonly verified up to two distinct patterns per article with an average of 1.45 (SD=0.15) patterns/article. Values among the averages of the four analysts did not differ substantially, being them: Encoder A=1.51 patterns/article; Encoder B=1.73 patterns/article; Encoder C=1.39 patterns/article; Encoder D=1.31 patterns/article.

In all journalistic articles, textual segments compatible with at least one nursing pattern of knowing were identified. In total, 422 textual segments were coded by four analysts, and they were assigned a categorization according to the prevailing pattern of knowing. There was a predominance of the sociopolitical pattern that represented the majority of classified textual segments, followed by empiric, aesthetic, ethical, and personal, respectively. Figure 2 shows the percentage distribution of this classification.

Tendency due to predominance of patterns over time was also investigated. For this, an index of the relationship between the total number of classifications of a given pattern in the decade by the number of articles in journals identified in the same decade. Figure 3 shows the curves for the different patterns.
The empirical pattern was the one that showed greater homogeneity in the curve in most decades of the time interval, followed by the personal pattern. Apiculate patterns were accentuated to sociopolitical, ethical, and aesthetic patterns.

**Figure 1** - Distribution chart of 71 articles in journals mentioning Nightingale, depending on the decades

**Figure 2** - Percentage distribution of expressions of patterns of knowing identified in journals mentioning Nightingale

**Figure 3** - Index of the number of classifications of the pattern of knowing by the number of articles in journals dealing with Nightingale in the decade (1850 to 1919)

**Categories of themes contained in journalistic articles**

The content analysis process identified themes and subjects that were aligned with patterns of knowing. Chart 1 presents coding by themes and subjects.

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**Chart 1** - Themes and subjects of the articles in journals distributed according to patterns of knowing

| Pattern of knowing | Theme/Subject |
|--------------------|---------------|
| Sociopolitical     | Honors and tributes received by Nightingale; Projection and international prestige of uniqueness in caring for the sick and wounded; Prestige with the authorities and population of the British Empire; Strategic actions to gain support for their work and give visibility to it (financial donations received to create the School of Nurses and donations of their writings to the Emperor of Brazil); Character model and action for women; Triggering influences of Nightingale’s mission; Influential figure in the creation of the Red Cross; Social political engagement in humanitarian defense of prostitutes (Ladies National Association for the Repeal of the Contagious Diseases Acts); Social position assumed according to its origin and cognitive skills; Leadership in the education of nurses; Primacy in systematic instruction education for nurses; Notes on death; Not acceptance of the creation of protestant service by some Catholic priests, who questioned the actions and services of non-charitable nurses, saying that the sisters of charity for their celibacy and vow of chastity would more masterfully perform the functions in the field of works of mercy; Sociopolitical action against the exploitation of Indian farmers; Defense of the cause of workers for better wages. |
| Empiric            | Technical and scientific opinions and recommendations for the construction of fixed and temporary hospitals; Report to be submitted to the British parliament on the state of the British army in India, which points to a precise opinion by Nightingale on administration errors; Description of recommendations for military installations, emphasizing sanitary measures to reduce mortality; Composition of the nursing service; Mention of Nightingale’s position in the training of nurses and foundation of Training School for Nurses-Saint Thomas Hospital; Reproduction of how to deal with babies and children (behaviors, hygiene care, food, hydration, relationship with parents, and affection) and with the environment; Measures of organization of laundry in temporary hospitals; Measures of organization of the hospital kitchen; Defense of the need for a hygienic and food treatment for tuberculosis, mentioned Nightingale’s hygienic self-treatment consisting of field free air and good food; Recommendations to care for the sick. |
| Aesthetic          | Philanthropy; Demonstration of dedication to work; Dealing with those most in need; Empathy; Solidarity; Collaboration; Charity/love for others. |
| Ethical            | Nightingale’s moral nature; Behaviors and decision-making by Nightingale; Responsibility and care for their patients; Sense of justice for all classes. |
| Personal           | Nightingale’s self-appreciation of her person, inclinations and weaknesses; Nightingale’s quest to satisfy her intellectual need, which led to her choice to give up marriage; Nightingale’s recognition that her work was greater than her individual aspirations; Description of her scientific, intellectual and moral nature. |
DISCUSSION

The data from this research indicate that the Brazilian press reported the performance of Florence Nightingale during the period she was in the Crimean War. Biographical publications and studies on her legacy leave no doubt that her national and international notoriety is derived from the 20-month period in which she was involved in caring for British soldiers in this confrontation that lasted between 1854 and 1856\(^{[13]}\).

There was predominance of evidence of the sociopolitical pattern of knowing, strongly associated with actions seen as heroism in caring for wounded and sick soldiers, circulated in the press of Brazil, repeating the British communication pattern. She designed a model of character, sense of duty, availability and courage that marked a high-reputation social pattern for women of the time. After leading together with her nurses the Campaign Hospital during the Crimean War (1853 to 1856), Nightingale performed care actions for the wounded, participated in the organization of hospitals and the defense of the need for hygienic treatment, which had an impact in Europe and gradually was widespread to other countries, which ultimately led to its international notoriety\(^{[14]}\).

This generated visibility and repercussions that were perpetuated. The recognition for going to war returned to Nightingale in the form of honors and tributes, speeches and prestige in British society, which was presented to Brazilian society as a pattern to be followed by women of the country in the engagement of care to the wounded and sick.

In the 1860s, the peak of journalistic articles with evidence of the ethical pattern of knowing addressed Florence's high Christian morality when acting in aid and for the benefit of those under her care, even without describing her contributions in the construction of norms and ethical conduct for nurses under her leadership. The ethical pattern in Nightingale's works involved not only the dimension of “doing the right thing”, associated with her relief mission linked to her vocational mystique, but the daily decisions on how to conduct care, in a responsible way, focused on the client and making accurate decisions for the benefit of patients\(^{[15]}\).

However, the Brazilian press was concerned with highlighting the moral trait of society to the detriment of emphasizing the need for norms and a set of conduct for the practice of non-Nightingalean nurses who worked in the country. The content of the analyzed materials allows us to infer a relationship between the ethical pattern communicated with the monopolistic period, with predominance of influence of the Roman Catholic Church, which tended to associate care with Christian charitable issues and the need for related-moral values.

Textual segments with evidence of the aesthetic pattern of knowing peaked in the 1870s. In general, the aesthetic pattern is mainly related to empathy, the ability to participate or experience the feeling of the other\(^{[16]}\). In the messages, the themes highlighted charity or philanthropy both directly associating with Nightingale and the sisters of charity or other nurses of history. On the other hand, this pattern was almost always followed by the sociopolitical pattern in themes about solidarity, care for the most needy and unassisted, and Nightingale's nonconformism with social injustices and inequities. Two articles are illustrative of this last feature: one from 1876 that mentions Nightingale's political and social engagement in the humanitarian defense of prostitutes with Ladies National Association for the Repeal of the Contagious Diseases Acts, and one from 1878 pointing out Nightingale's analyses of official documents and her experience, which indicated that the British did not care for the people of India at the British colony time. Therefore, it can be inferred that patterns of knowing allow us to construct a distinct categorical classification, however, it is incorrect to understand it as fragmented in excluding and independent classes.

The categorical system proved useful to identify the complexity and diversity of nursing knowledge\(^{[17]}\). Therefore, it is not surprising that the analytical task was complex and can produce appreciations of junctions of different patterns such as those observed in the 1870s. It can be affirmed that the notoriety of Nightingale's actions and her ability to explore this condition projected the preponderance of a figure with qualities that would guide the desirable attributes for a nurse. In fact, Nightingale was very demanding with the establishment of moral education, that pointed to virtues that should be exercised as a willingness to act correctly and not only by duty or obligation\(^{[18]}\).

In the material of the 1880s to 1900s are recurrent the characteristic news of previous decades, except for the appearance of a series of biographies on Nightingale; more detail on the principles of care for sick people; Catholic-Roman and Protestant views on Florence's work and her influence as an inspiring personality of the Red Cross.

Also, in this period, the personal pattern of knowing classifications are intensified in relation to the issues concerning the mention of Nightingale's awareness of her mission to serve others. The personal pattern of knowing refers to self-knowledge, being considered essential for establishing the relationship with the other\(^{[19]}\). Mentions of biographical clippings about a more reflective dimension of Nightingale also appear in the articles, not only in relation to her call to the humanitarian service, but also to her self-appreciation about weaknesses, inclinations and personal features, which clearly conforms as a nurse's personal pattern of knowing.

Some subjects contained a romanticized view of Nightingale exacerbating "very high virtues" by presenting her as a sacralized figure. Some biographies point out different character traits of Florence's sacralized vision, highlighting, for example, her severity in dealing with friends and her intransigence with views that were different from her\(^{[17,19]}\). The precursor of the profession was not free from other human limits making mistakes and, even more, acting with actions not always considered as satisfactory results or unanimity.

Since 1910, there has been a new growth in the sociopolitical pattern, probably related to Nightingale's death in 1910 and the boom of news about the creation of Red Cross units, whose name Florence is strongly associated by the Brazilian press.

The empirical pattern of knowing arises from the 1860s by linking to ideas and empiricism that made Florence a prestigious woman in society. Innovative concepts of hospital construction were attributed to it, as well as measures for the organization of the environment. Nightingale was reported as able to analyze reality and point to the British Parliament errors of administration and disregard in which soldiers were left in India. The foundation
of Training School for Nurses-Saint Thomas Hospital was associated by the press as traces of their conduct, authority and knowledge. The way in which she made a point of emphasizing the need for an open, airy and healthy environment was related to her environmental philosophy. In the integration of the empirical pattern with the aesthetic and personal knowledge, her zeal in the recommendation of how to deal with babies was reported and even when she was faced with the need to look for a place with fresh air to try to cure tuberculosis, which afflicted her. Nightingalean nursing was the logic of an “evidence-based (empirical)” health and was gradually constructed with the use of reason and judicious documentation of the application of environmental precepts, through the action of a woman questioning the patterns of oppression of the time and who militated to prevent nursing from being bound by traditions, forming a “stereotyped mediocrity”.

The empirical trait and high ethical, aesthetic and sociopolitical patterns coordinated for an emancipatory practice would prove that nursing, along the lines of Florence, would leave a legacy in England that, after spreading to North America, would arrive in Brazil in 1923. All this converges to the idea that Florence acted creating a first scientific disciplinary revolution of nursing by modifying the existing paradigm with the incorporation of elements of empiricist science, which recognized the influence of the environment on people, and was able to reduce the mortality rates of soldiers by introducing a sanitary science.

The present study brings unpublished aspects about information that circulated about modern nursing in Brazil from 1850 to 1919 and that would be communicating to Brazilian society elements of a multidimensional knowledge that Nightingale was building in England and its colonies and spreading to other countries. The contribution brought by the research is the recognition that elements of nursing knowledge were disseminated in Brazil before the establishment of the first nursing school in Nightingalean model and how such elements were related to journalistic themes and subjects.

### Study limitations

However, the study is not free of limitations. After analysis, it was verified that including another pattern of knowing, emancipatory, could have refined the categorization of part of the content classified as sociopolitical. For contextualist aspects to be better explored, it is necessary to deepen the inductive analysis of messages, which would lead to a new analytical study that considers more closely the historiography of nursing in Brazil until the 1920s, and produces interpretation of the news both from the perspective of the authorship of the journalistic articles and the relations with the political and social context of the country at the time.

### Contributions to the field

Current contributions to the field relate to the detailing of the origin of knowledge of the profession in a pre-Nightingalean society. In countries where the Florence-based nursing model has become the hegemonic pattern, such as Brazil, it becomes an unusual activity to imagine that in London hospitals in the first half of the 19th century there was no room for the development of nursing patterns of knowing. This is because the activities of female nurses were basically female domestic activities, somewhat understood as servants and not as health care workers. Finally, Florence’s notoriety in England can be attributed in some way to the strong projection that the press gave its action in the Crimean War, as it was the first time in the United Kingdom’s history that a war received wide coverage, often sensationalized. Analysis seems to have demonstrated the same tendency to highlight attributes that could draw the reader’s attention, which tends to generate narratives that may be overreacted about Florence’s influence requiring that nursing knowledge be understood in the construction of actions of other nurses.

### CONCLUSION

Classification system by nursing patterns of knowing can be applied to journalistic material to understand precursor elements of professional/disciplinary knowledge. Patterns of knowing were present in all analyzed articles, with predominance of the sociopolitical classification. It can be verified that Florence Nightingale’s notoriety was highlighted to the point of allowing her ideas, conforming the knowledge of the nascent profession, could be communicated to Brazilian society, even before the establishment of modern nursing in Brazil.

The Nightingale portrayed by the Brazilian press had traces of altruism, heroism, technical competence, high moral and humanitarian patterns, discipline in command, leadership capacity, sociopolitical, contextual and expanded view of reality, being presented as the protagonist of her own history, an example to be followed by women. At least partially, the figure of Florence managed to cross the line imposed by the social logic of domination of women that prevailed in the country. Her features, ideas and actions were reported in Brazil in the range of all patterns of knowing, including in the perspective of a knowledge better characterized as emancipatory, somewhat surprising evidence given the predominant social structure of the period.

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