

200 years of Florence Nightingale: contributions to the professional practice of nurses in hospitals

200 anos de Florence Nightingale: contribuições para a prática profissional dos enfermeiros nos hospitais
200 años de Florence Nightingale: contribuciones a la práctica profesional de los enfermeros en los hospitales

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ABSTRACT

Objective: Analyze the agreement of nurses, who work in hospital institutions, about Florence Nightingale's conceptions about nursing, people, health and the environment. **Method:** Quantitative, observational and cross-sectional study, with the participation of 3,451 nurses from 36 Portuguese hospitals. Data collection took place from July 2015 to March 2016, using a questionnaire. For analysis, descriptive and analytical statistics were used. **Results:** It was evident that 60% to 70% of participating nurses considered that Florence Nightingale's conceptions of nursing, person, health and environment were partly in agreement or totally in agreement with their practice. The variables that influenced agreement were: service, condition in which they practice the profession, length of professional practice, academic degree and region of the country. **Conclusion:** Florence Nightingale's conceptions continue to contribute to professional nursing practice, with the region and the service significantly influencing this continuity.

Descriptors: Nursing Theory; Nursing; Professional Practice; Nurses; Hospitals.

RESUMO

Objetivo: Analisar a concordância dos enfermeiros, que trabalham em instituições hospitalares, acerca das concepções de Florence Nightingale sobre enfermagem, pessoa, saúde e ambiente. **Método:** Estudo quantitativo, observacional e transversal, com participação de 3.451 enfermeiros de 36 hospitais portugueses. A coleta de dados realizou-se de julho de 2015 a março de 2016, mediante questionário. Para análise, recorreu-se à estatística descritiva e analítica. **Resultados:** Evidenciou-se que 60% a 70% dos enfermeiros participantes consideraram que as concepções de enfermagem, pessoa, saúde e ambiente de Florence Nightingale estão de acordo ou totalmente de acordo com a sua prática. As variáveis que influenciaram a concordância foram: serviço, condição em que exercem a profissão, tempo de exercício profissional, grau acadêmico e região do país. **Conclusão:** As concepções de Florence Nightingale permanecem contribuindo para a prática profissional de enfermagem, sendo que a região e o serviço influenciam essa continuidade de forma significativa.

Descritores: Teoria de Enfermagem; Enfermagem; Prática Profissional; Enfermeiras e Enfermeiros; Hospitais.

RESUMEN

Objetivo: Analizar la concordancia de los enfermeros, que trabajan en instituciones hospitalarias, acerca de las concepciones de Florence Nightingale sobre enfermería, persona, salud y ambiente. **Método:** Estudio cuantitativo, observacional y transversal, con participación de 3.451 enfermeros de 36 hospitales portugueses. La recogida de datos se realizó de julio de 2015 a marzo de 2016, mediante cuestionario. Para análisis, se recurrió a la estadística descriptiva y analítica. **Resultados:** Se evidenció que 60% a 70% de los enfermeros participantes consideraron que las concepciones de enfermería, persona, salud y ambiente de Florence Nightingale están de acuerdo o totalmente de acuerdo con su práctica. Las variables que influenciaron la concordancia han sido: servicio, condición en que ejercen la profesión, tiempo de ejercicio profesional, grado académico y región del país. **Conclusión:** Las concepciones de Florence Nightingale permanecen contribuyendo para la práctica profesional de enfermería, siendo que la región y el servicio influyen esa continuidad de forma significativa.

Descritores: Teoría de Enfermería; Enfermería; Práctica Profesional; Enfermeras y Enfermeros; Hospitales.

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INTRODUCTION

The use of theoretical nursing references is of significant relevance, especially with regard to the foundation of the practice, since it provides the valorization of the profession's body of knowledge and its relationship with the professional practice of nurses⁽¹⁾. In fact, following different "looks", the theoretical references of nursing and their unique concepts allow to explain the phenomena of the nurse's practice and the essence of the profession⁽²⁻³⁾.

Traditionally, it is agreed that it was from Florence Nightingale that the concern with theoretical aspects emerged in nursing^(2,4-5). Most scholars, in addition to naming it as the first modern nursing theorist⁽⁶⁻⁸⁾, see in their book "Notes on Nursing: What it is and What it is not" a theoretical model that they call environmentalist theory^(1,4). Although some authors believe that environmental theory does not stand up to rigorous critical analysis⁽⁹⁾, following an evaluation carried out based on the criteria of the Johnson and Webber model, the researchers concluded that, in addition to the theoretical precepts serving as a reference today, this theory contributes to a surprising difference in nursing practice⁽¹⁾.

Despite the controversies of some scholars, who intend to undo the myth of Florence Nightingale, their contributions to the scientific practice of nursing, to the curriculum development of nursing education and, consequently, to the emergence of modern nursing worldwide, are irrefutable⁽⁸⁾. The representativeness of this personality is as such, that many of her works continue, even after a century of her death, to have an influence on the professional performance of nurses^(1,7). An example of this is the book "Notes on Nursing", which was a decisive step in the professionalization and autonomy of nursing as a discipline⁽⁹⁾.

From the perspective of some authors, Florence Nightingale's contributions constitute an indisputable landmark of division in the history of nursing^(1,8). In fact, and as with everything that is striking, there is always a before and an after⁽¹⁰⁾. And the truth is that after this theory, nursing knowledge — reflection on what this profession is and what nurses do — never stopped⁽¹⁰⁾. Over more than one hundred years, several authors have presented theories and models in order to describe and define nursing and, thus, guide the practice of professionals in this area^(7,11).

In the 1980s, several scholars identified that, in the various theories and models already known, four concepts prevailed — nursing, person, health and environment —, that were formalized by Fawcett in 1984 as "nursing metaparadigm"^(7,11). In this context, when it is intended to identify the theoretical nursing references that best support the practice, it is important to know the nurses' agreement regarding the contributions of the respective conceptions of nursing, person, health and environment within the scope of their professional practice^(3,5,11-12).

Although Florence Nightingale did not clearly define the four metaparadigmatic concepts, countless scholars, based on her works, were presenting her conceptions regarding each of the concepts⁽⁷⁾. It should be noted that the legacy left by her has the environment as a fundamental concept for professional nursing practice^(1,4,13). In this context, seeking to know the relevance of Florence's conceptions today was an important challenge for the profession and for the understanding of practices, especially in

the hospital context, markedly influenced by scientific advances and new technologies, among other complex influences.

Thus, integrated in a national investigation, entitled "Contexts of hospital practice and nurses' conceptions", this study intends to answer the following question: In the current context, what is the agreement of nurses, who work in hospital institutions, with Florence Nightingale's conceptions about nursing, people, health and environment?

OBJECTIVE

Analyze the agreement of nurses, who work in hospital institutions, about Florence Nightingale's conceptions about nursing, people, health and the environment.

METHODS

Ethical aspects

In line with ethical and legal requirements, national and international standards for conducting research involving human beings were considered. Since this study is part of a national investigation, it was initially approved by the Health Ethics Committee of a Hospital Center in Northern Portugal, under number 98-15. Subsequently, it was approved by the ethics committees and the boards of directors of the 36 hospital institutions involved. All nurses who agreed to participate in the research were asked to sign the informed consent, ensuring confidentiality and anonymity in the use of the information collected.

Study design, period and location

This is an observational, cross-sectional study with a quantitative approach, guided by the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE). Data collection was carried out between the months of July 2015 and March 2016, by the researchers in the services of the 36 hospitals in mainland Portugal, framed in the management model of the Public Business Entity.

Population and sample; inclusion and exclusion criteria

In the services of the 36 hospitals, where the study was authorized, 10,013 nurses were eligible. Although a probabilistic sampling technique was initially thought of, the particularities inherent to the authorizations of the different hospitals determined the use of non-probabilistic sampling for convenience⁽¹⁴⁾. The following inclusion criteria were used: working in the hospital within a time span of six months or more, in the departments of medicine (medical clinic, in Brazil), surgery or intensive medicine and urgency. Professionals on leave for any reason during the period of data collection were excluded.

According to selection criteria, from an accessible population of 10,013 nurses, a sample of 3,451 nurses was obtained, which corresponded to 34.5% of the population.

Study protocol

As a data collection instrument, a questionnaire composed of two parts was used: one related to sociodemographic and professional characterization; and another, referring to nurses' conceptions. In this instrument, built by the researchers, within the scope of the national investigation, the second part contemplated the conceptions of 13 nursing theorists for the metaparadigmatic concepts: nursing, person, health and environment⁽¹¹⁾. In view of the objective of this study, attention was focused on the conceptions of Florence Nightingale. When nurses participated, they were asked to express their degree of agreement with the theoretical conceptions about nursing, people, health and the environment. On a Likert-type scale, responses ranged from 1 to 5, where 1 corresponded to is totally contrary to my practice"; 2, "is contrary to my practice"; 3, "I have no opinion"; 4, "is in accordance with my practice"; and 5, "is totally accordance with my practice".

Since Florence Nightingale did not clearly define the four concepts, for the purposes of this study, two of her best known works "Notes on Hospital" were used as primary sources.⁽¹⁵⁾ and "Notes on Nursing: What it is and What it is not"⁽¹⁶⁾; and, as secondary sources, publications were used, which contain analyzes and reflections made by nursing scholars^(7,17). Following these supports, it was agreed that, for this author, *nursing* is a service to humanity, which consists of putting the sick or healthy person in the best possible conditions, so that nature can restore or preserve health; the *person*, while sick, is made up of physical, intellectual, emotional, social and spiritual aspects; *health* is characterized by the absence of disease and the ability to make full use of the resources you have; and, finally, the *environment* refers to the external factors that affect the person and their health process: air, water, light, heat, cleanliness, tranquillity, adequate diet.

Analysis of results and statistics

For the treatment of the data, the Statistical Package for the Social Sciences (SPSS), version 22.0. Descriptive and analytical analyzes were performed, considering a significance level of 0.05 and a confidence level of 0.95. Thus, a *p*-value less than 0.05 was considered statistically significant.

In analyzing the data, to test whether two independent samples had the same location or, on the contrary, one of the samples assumed values generally lower (or higher) than the other, the Wilcoxon-Mann-Whitney test was used. To compare the location of two distributions with independent samples, the Kruskal-Wallis test was used. In this case, using the chi-square distribution, given the high values of the test statistic, it was concluded that there were differences in the location of the distributions. The use of the Kruskal-Wallis test allowed the identification of differences in the degree of agreement of nurses with the concepts of nursing, person, health and environment, in the five regions of mainland Portugal.

Since the participants' degree of agreement is an ordinal qualitative variable, which could assume five ordered categories, in order to identify which characterization attributes affected the degree of agreement, ordinal regression models or logistic regression models were used accumulated for ordinal responses⁽¹⁸⁾. It is important to mention that, with the use of these models, from the estimation of accumulated probabilities, it was possible to identify which explanatory variables influenced the explained

variable (degree of agreement with each conception) and in what sense. The explanatory variables of the model, called "regressors", are the attributes of characterization, that is, the service, the condition in which they practice the profession, the length of professional practice, the academic degree and the region of the country. Subsequently, for the selection of the explanatory variables to be retained in the model, the variables whose estimated parameter was not statistically significant were eliminated, making a backward selection based on the Wald test. In this sense, the procedure was always started with the complete model, and the removal of its variables was done based on the significance of the Wald test in the respective estimated parameters.

RESULTS

3,451 nurses participated in the study, mostly women (77.1%), with an average age of 36.4 years and standard deviation of 8.3. Regarding marital status: married/domestic partnership (61.1%), single (33.8%), divorced (4.7%) and widowed (0.3%). With regards to the academic level: degree (88.0%), master's degree (10.7%), bachelor's degree (1.1%) and doctoral degree (0.2%). Regarding the distribution of nurses by the regions where the respective hospitals are located, 43.2% are from the North; 24.0%, from Lisbon and Tagus Valley (TV); 22.3%, from the Center; 6.2%, from Alentejo; and 4.2%, from the Algarve. Regarding the services where they perform functions, medicine (44.2%), surgery (33.7%) and intensive care and emergency medicine (22.1%) prevailed.

Regarding the condition with which they practice the profession, 76.3% are nurses, 19.9% are specialist nurses and 3.8% are manager nurses. Regarding professional practice time, the average time for nurses was 12.2 years, with a standard deviation of 7.7, with a maximum of 39 years and a minimum of 1 year. In specialist nurses, the average time was 15.7 years, with a standard deviation of 7.2, with a maximum of 37 years and a minimum of 1 year. In the case of nurse managers, the average time was 27.2 years, with a standard deviation of 6.2, with a maximum of 38 years and a minimum of 11 years.

The conceptions of nursing, person, health and environment

In order to organize the results of the study, the hospitals were distributed across the five regions of mainland Portugal, to which the respective Regional Health Administrations correspond, and then the nurses' responses regarding Florence Nightingale's conceptions about nursing are presented, people, health and environment (Table 1).

Following the data presented in Table 1, we found that, in the four conceptions, "is in accordance with my practice" was the most frequent answer in all regions. When assessing the degree of global agreement based on the set of responses "is in accordance with my practice" and "is totally in accordance with my practice", with regard to the nursing conception of Florence Nightingale, it was found that the region in which the nurses showed the greatest agreement was Lisbon and Tagus Valley (76.5% answered "is in accordance with my practice" or "is totally in accordance with my practice"), followed by Alentejo (76.5%), the Algarve (73.3%), the North (65.3%) and, finally, the Center (62.0%).

Table 1 – Nurses’ agreement with Florence Nightingale’s conceptions about nursing, people, health and environment, in the five regions of the country (N = 3451), Porto, Portugal, 2017

Conceptions	Totally contrary to my practice		Contrary to my practice		No opinion		In accordance with my practice		Totally in accordance with my practice		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Nursing												
North	15	1.0	292	19.6	211	14.1	650	43.6	324	21.7	1.492	100
Center	4	0.5	104	13.5	185	24.0	312	40.5	166	21.5	771	100
Lisbon and TV	13	1.6	69	8.3	113	13.6	434	52.4	200	24.1	829	100
Alentejo	0	0.0	11	5.2	39	18.3	110	51.6	53	24.9	213	100
Algarve	1	0.7	20	13.7	18	12.3	66	45.2	41	28.1	146	100
Person												
North	6	0.4	294	19.7	224	15.0	566	37.9	402	26.9	1.492	100
Center	2	0.3	51	6.6	136	17.6	366	47.5	216	28.0	771	100
Lisbon and TV	2	0.2	44	5.3	85	10.3	411	49.6	287	34.6	829	100
Alentejo	0	0.0	13	6.1	17	8.0	105	49.3	78	36.6	213	100
Algarve	2	1.4	6	4.1	21	14.4	64	43.8	53	36.3	146	100
Health												
North	44	2.9	289	19.4	237	15.9	655	43.9	267	17.9	1.492	100
Center	11	1.4	135	17.5	141	18.3	347	45.0	137	17.8	771	100
Lisbon and TV	20	2.4	113	13.6	139	16.8	390	47.0	167	20.1	829	100
Alentejo	4	1.9	19	8.9	37	17.4	95	44.6	58	27.2	213	100
Algarve	5	3.4	25	17.1	25	17.1	70	47.9	21	14.4	146	100
Environment												
North	16	1.1	254	17.0	230	15.4	753	50.5	239	16.0	1.492	100
Center	6	0.8	107	13.9	146	18.9	377	48.9	135	17.5	771	100
Lisboa and TV	8	1.0	70	8.4	126	15.2	460	55.5	165	19.9	829	100
Alentejo	2	0.9	11	5.2	42	19.7	97	45.5	61	28.6	213	100
Algarve	4	2.7	14	9.6	19	13.0	80	54.8	29	19.9	146	100

Legend: Tagus Valley (TV)
 Source: data of the survey, 2017⁽¹⁹⁾

Regarding Florence Nightingale’s conception of a person, the region in which nurses showed the greatest agreement was the Alentejo (85.9%), followed by Lisbon and Tagus Valley (84.2%), the Algarve (80.1%), the Center (75.5%) and, finally, the North (64.8%). Regarding Florence Nightingale’s conception of health, the region in which nurses showed the greatest agreement was the Alentejo

(71.8%), followed by Lisbon and Tagus Valley (67.1%), the Center (62.8%), the Algarve (62.3%) and, finally, the North (61.8%). Finally, in Florence Nightingale’s conception of environment, the region in which nurses showed the greatest agreement was Lisbon and Tagus Valley (75.4%), followed by the Algarve (74.7%), Alentejo (74.1%), the North (66.5%) and, finally, the Center (66.4%).

Table 2 – Comparisons between different pairs of regions in relation to Florence Nightingale’s conceptions of nursing, person, health and environment (N = 3451), Porto, Portugal, 2017

Conceptions	Center		Lisbon and TV		Alentejo		Algarve	
	Sta*	p*	Sta*	p*	Sta*	p*	Sta*	p*
Nursing								
North	573449.5	0.902	547187	< 0.001	136717.5	< 0.001	97011.5	0.021
Center			280146.5	< 0.001	69933.5	< 0.001	49993.0	0.024
Lisbon and TV					86696.0	0.658	60503.5	0.996
Alentejo							15862.5	0.727
People								
North	512273.0	< 0.001	492916.0	< 0.001	123370.0	< 0.001	88185.0	< 0.001
Center			284489.0	< 0.001	71034.5	0.001	50911.0	0.049
Lisbon and TV					85959.0	0.515	61162.0	0.823
Alentejo							16105.5	0.531
Health								
North	563434.0	0.400	575474.5	0.003	133365.5	< 0.001	110368.5	0.779
Center			303172.5	0.059	70206.5	0.001	58176.0	0.494
Lisbon and TV					79987.0	0.024	65663.5	0.080
Alentejo							18234.0	0.002
Environment								
North	563045.0	0.376	548631.5	< 0.000	131294.0	< 0.000	98560.5	0.040
Center			289606.5	< 0.000	69429.5	< 0.000	51985.5	0.115
Lisbon and TV					82539.5	0.108	61368.5	0.764
Alentejo							16770.5	0.173

Legend: Tagus Valley (TV)
 Source: data of a survey, 2017⁽¹⁹⁾
 Nota: *Est – Estatística do teste. *p – Significância.

In addition to the descriptive analysis, with the application of the Kruskal-Wallis test, the existence of significant associations between the regions in which nurses work and the concept of nursing was confirmed (Test statistics = 39.2; $p < 0.001$), the concept of person (Test statistics = 98.5; $p < 0.001$), the concept of health (Test statistics = 22.8; $p < 0.001$) and the concept of environment (Test statistics = 39.7; $p < 0.001$). Due to the differences found, it became necessary to carry out multiple comparisons, in which all pairs of regions were compared, using the Wilcoxon-Mann-Whitney test with the Bonferroni correction, which resulted in a level of significance corrected from 0.005 (Table 2).

The findings presented in Table 2 allowed to identify that, in relation to the concept of nursing, there are two distinct groups: the group constituted by the regions of Lisbon and Tagus Valley and Alentejo, in which this conception is more in line with the nurses' practice, than in the group formed by the North and Center regions. With regards to the Algarve region, an intermediate position between the two groups was evidenced, and it is not possible to say that this conception is more or less in line with the practice of nurses in that region than in the others.

As for the concept of person, it was found that it is less in accordance with the practice of nurses in the North than in any other region; and in the Center than in Lisbon and Tagus Valley and than the Alentejo. Regarding the concept of health, it was found that it is less in line with the practice of nurses in the North than in Lisbon and Tagus Valley and more in line with the practice of nurses in the Alentejo than in the North, Center and Algarve. With regards to the conception of the environment, it was confirmed that it is less in line with the practice of nurses in the North and Center than in Lisbon and Tagus Valley and Alentejo.

Influence of characterization attributes on the degree of agreement with the conceptions

As previously mentioned, the nurses' degree of agreement regarding the conceptions can assume five categories, which means that this is an ordinal qualitative variable. In this sense, adjusting an ordinal regression model for each of the four conceptions, it was possible to identify, among the various characterization attributes, which significantly affect the degree of agreement. In all conceptions, the explanatory variables whose estimated parameters have a p -value lower than the significance level of 0.05 were retained in the model, showing that they are statistically significant (Table 3).

As shown in Table 3, in the nursing conception, the explanatory variables that affected the degree of agreement and that, for this reason, were retained in the model were the region of the country and the service. Concerning the region, the agreement of nurses working in Lisbon and Tagus Valley was higher, followed by those working in Alentejo. Regarding the service, nurses who work in intensive medicine and urgency have a higher agreement, followed by those who work in surgery.

In the person's conception, the explanatory variables retained in the model were the region of the country, the service and the condition in which they exercise the profession. Nurses working in the Alentejo showed a higher agreement, followed by those working in Lisbon and Tagus Valley, in the Algarve and in the Center. Nurses who work in intensive medicine and urgency are those with the highest agreement, as well as specialist nurses.

Table 3 – Influence of characterization attributes on the degree of agreement with the conceptions: model estimation results (N = 3451), Porto, Portugal, 2017

Conceptions	Estimate	Estimated parameter		Razão	Odds Ratio	
		p value*	CI 95%*		CI 95%*	
Nursing						
Lisbon and Tagus Valley	0.448	< 0.001	[0.301;0.596]	1.565	[1.351;1.815]	
Alentejo	0.436	0.001	[0.185;0.690]	1.547	[1.203;1.994]	
Surgery	0.259	< 0.001	[0.117;0.400]	1.295	[1.124;1.492]	
Intensive medicine and urgency	0.431	< 0.001	[0.269;0.593]	1.539	[1.309;1.810]	
Person						
Centro	0.408	< 0.001	[0.248;0.569]	1.504	[1.281;1.767]	
Lisbon and Tagus Valley	0.775	< 0.001	[0.615;0.936]	2.171	[1.850;2.549]	
Alentejo	0.821	< 0.001	[0.556;1.086]	2.272	[1.744;2.963]	
Algarve	0.708	< 0.001	[0.393;1.025]	2.029	[1.482;2.788]	
Intensive medicine and urgency	0.354	< 0.001	[0.205;0.504]	1.425	[1.227;1.656]	
Specialist nurse	0.176	0.026	[0.021;0.331]	1.192	[1.021;1.392]	
Health						
Lisbon and Tagus Valley	0.247	0.001	[0.101;0.394]	1.280	[1.106;1.482]	
Alentejo	0.499	< 0.001	[0.240;0.760]	1.647	[1.271;2.138]	
Surgery	0.235	0.001	[0.094;0.377]	1.265	[1.099;1.458]	
Intensive medicine and urgency	0.214	0.011	[0.050;0.379]	1.239	[1.051;1.461]	
Specialist nurse	-0.173	0.043	[-0.340;-0.005]	0.841	[0.712;0.995]	
Professional practice time	0.011	0.004	[0.004;0.019]	1.011	[1.004;1.019]	
Masters' degree	-0.299	0.006	[-0.511;-0.085]	0.742	[0.600;0.918]	
Environment						
Lisbon and Tagus Valley	0.402	< 0.001	[0.252;0.552]	1.494	[1.286;1.737]	
Alentejo	0.598	< 0.001	[0.330;0.868]	1.819	[1.391;2.383]	
Algarve	0.352	0.030	[0.035;0.670]	1.422	[1.036;1.954]	
Intensive medicine and urgency	0.194	0.014	[0.042;0.346]	1.214	[1.042;1.413]	
Professional practice time	0.008	0.035	[0.001;0.016]	1.008	[1.001;1.016]	

Source: data from the search, 2017⁽¹⁹⁾

Note: * $p < 0,05$. CI 95% = Confidence interval de 95%.

Nursing	Person	Health	Environment
<ul style="list-style-type: none"> Lisboa and Tagus Valley Intensive medicine and urgency 	<ul style="list-style-type: none"> Alentejo Intensive medicine and urgency Specialist nurses 	<ul style="list-style-type: none"> Alentejo Nurses Manager nurses Surgery Longer professional time Nurses with bachelor's, master's and doctoral degrees 	<ul style="list-style-type: none"> Alentejo Intensive medicine and urgency Longer professional time

Figure 1 – Characterization attributes that reflect greater agreement with Florence Nightingale's conceptions of nursing, person, health and environment, Porto, Portugal, 2017

In the concept of health, the explanatory variables retained in the model were the region of the country, the service, the condition in which the participants exercise their profession, the length of professional practice and the academic level. Regarding the region, the agreement of nurses working in Alentejo is the highest, followed by those working in Lisbon and Tagus Valley. Regarding the service, nurses who work in surgery showed a higher agreement, followed by those who work in intensive medicine and urgency. Regarding the condition in which they practice the profession, the experts showed a lower agreement. Concerning professional practice time, agreement grows as professional practice time increases. Finally, regarding the academic degree, nurses with master's degrees are the ones who show less agreement.

Regarding the conception of the environment, again the region of the country, the service and professional practice time were significant. Regarding the region, the agreement of nurses working in Alentejo is higher, followed by those working in Lisbon and Tagus Valley and in the Algarve. Nurses who work in intensive care and emergency medicine are the ones with the highest agreement. As for professional practice time, agreement increases as professional practice time increases.

In Figure 1, the characterization attributes that reflect greater agreement with Florence Nightingale's conceptions are explained.

DISCUSSION

With the conviction that the professional practice of nurses is influenced by the theoretical frameworks with which these professionals are most identified⁽¹¹⁾, the results of this study suggest that, even after a century of her death, Nightingalean assumptions continue to inspire and influence the professional performance of nurses^(3,13), simultaneously, facilitating the knowledge of the scientific roots of the profession⁽²⁰⁾.

The fact that the works of Florence Nightingale, as well as the environmental theory itself, were written more or less 150 years ago can now be considered as a limitation, namely with regard to the fragile consistency of the concepts he enunciated⁽¹⁾. Despite this, the author had a "care philosophy", which, although based on simple elements, showed efficacy⁽⁹⁾ and that even today continues to make sense in the professional practice of nurses. With a special focus on the hospital context, even before the appearance of microbiology, she warned of the relationship between environmental determinants, professional behaviors

and the spread of infection, thus demarcating fundamental concepts for teaching, practices and the discipline of nursing^(3-4,15).

In a survey conducted in Poland⁽²¹⁾, it was found that the contributions of Florence Nightingale, Dorothea Orem and Virginia Henderson are decisive in the professional practice of nurses in the country, and the theory with the greatest relevance in the development of contemporary nursing remains Nightingale⁽²¹⁾. In our study, examining the agreement of nurses who work in hospitals in relation to the concepts of nursing, person, health and environment, it was

found, right at the stage of descriptive analysis, that there were differences between the five regions of the country. After validating that the differences were significant, with the comparisons made between pairs of regions, it was found that the author's conceptions are more in line with the practice of nurses working in Lisbon and Tagus Valley and in Alentejo, being less according to the practice of those working in the North and Center.

In a study carried out in order to analyze the participants' perception of the relevance of using theoretical nursing frameworks to support their professional practice in the hospital context, knowledge about these frameworks was identified as a determining factor for their full integration⁽²²⁾. It should also be noted that, from the perspective of the participants in this study, the educational institution in which the training took place seems to be decisive, and may justify some of the differences found in the five regions of the country.

The aforementioned had already been verified by other authors, since, even following the national guidelines regarding the contents of the curricular units, there is diversity in the operationalization of the curricula by the educational institutions, which is reflected in the selection and diversity of approaches to theoretical nursing frameworks^(20,23-25). As a consequence, the relevance that nursing students and nurses attribute to a theoretical nursing framework and the agreement regarding its contribution to their professional practice can be influenced by previous training experiences.

Other authors add that the current divergence between what nursing theories propose and the practice of professionals can be related to three factors: decrease in the content taught on nursing theories, lack of attribution of meanings from theoretical concepts to professional practice and the organization of nursing care with a focus on the biomedical model^(2,20). In addition, the fact that nurses' knowledge about theoretical frameworks is often centered on the precursor theoreticians of modern nursing and the models they formulate⁽²²⁾ can explain nurses' high agreement with Florence Nightingale's conceptions of nursing, person, health and environment.

In continuation of the aforementioned, authors clarify that the writings of this theory, even supporting several current actions, present some aspects that require updating⁽¹⁾, mainly when observing their contribution to the professional practice of nurses in some care contexts. Considering that the use of theoretical nursing references must reflect and contemplate the demands of the work scenario⁽²⁾, nurses, when familiar with

the metaparadigmatic concepts and their meanings, are able to select the references that best suit their context^(7,20).

In this study, when evaluating the attributes that influence the degree of agreement with Nightingale's conceptions, it was identified that, in all concepts, the two attributes related to the environment stood out: the region of the country and the work context. Regarding contributions to the environment, she considered that it refers to external factors that affect the person and their health status, and the role of nursing is to put the person in the best possible conditions so that nature can restore or preserve health and prevent or cure disease⁽⁷⁾. The fact that, in intensive medicine and urgency services, the environment that involves the person can be controlled according to their clinical evolution may justify the higher agreement of nurses who practice the profession in these contexts. In addition, constant vigilance for the early identification of problems, as well as for a more effective management of the signs and symptoms that emerge, is an aspect already highlighted by Florence Nightingale throughout her experience in the hospital context⁽⁶⁾.

In line with the findings of this study and the literature, it is understood that reflecting on the past of the profession is a starting point to understand the particularities of nursing development and understand its influence at the present time^(3,6,8). In this sense, the fact that 60% to 70% of nurses consider that Florence Nightingale's conceptions are in agreement or totally in agreement with their practice may explain why the professional practice of Portuguese nurses remains focused on preventing complications and on management of disease signs and symptoms⁽²⁶⁾.

Although the scientific production on theoretical nursing references and their use in practice contexts is small^(12,21), having hindered the discussion of the findings, it is expected that this study will stimulate reflection on the contribution of Florence Nightingale not only to professionalization, but essentially to the one who was the beginning of the development of the nursing discipline.

Study limitations

As a limitation of the study, it is pointed out the fact that the quantitative approach was exclusively considered, since, within the scope of this theme, a qualitative research can allow understanding the perception of nurses about the real contribution

of Florence Nightingale to the development of the profession and nursing discipline.

Contributions to the area of Nursing, Health or Public Policy

In recent years, it has been reflected that, in order to assert the relevance of theoretical nursing frameworks for the support of nurses' professional practice, it is necessary, on the one hand, to strengthen the approaches to these frameworks in the theoretical component of nurses in undergraduate and post-graduate courses; and, on the other hand, take advantage of the practical component to give meaning to the concepts inherent to these references.

In this sense, the most relevant contribution of this research was to identify the nurses' current agreement regarding the adequacy of the nursing concepts, person, health and environment of Florence Nightingale within the scope of her professional practice. In addition, it is expected that the results obtained in this study, promote reflection on the contribution of the theoretical framework of Florence Nightingale in the adoption of nursing care models, especially those that are visibly focused on the prevention of complications.

CONCLUSION

Considering, in professional practice, the contributions of theoretical nursing references is guaranteed to be a way of strengthening the scientificity of the profession. From this perspective, although today the nursing paradigm focuses on human responses to the transitions experienced throughout its life cycle, care contexts exist in which Florence Nightingale's contributions still assume particular relevance.

Nurses' high agreement with this author's conceptions was evidenced, despite its limits. Thus, from the findings emerges the need to rethink the foundation and orientation of nursing practices, enriching Florence Nightingale's view with the contributions of other theoretical nursing references. Since the region of the country and the service where nurses perform their duties influenced the agreement with all metaparadigmatic concepts, it is urgent to reflect on the strategies that have been used in the academic and professional context in order to provide professionals with the necessary skills for reference selection that will better support ones professional practice.

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