

Compiling an Index to, and a Thesaurus of, "Notes on Nursing" by Florence Nightingale: Its Significance in the Field of Nursing

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Abstract

Aim: The Aim of this study was to compile an index of "Notes on Nursing", the first edition (1859), and also to create a thesaurus of its principal concepts, sub concepts, and a relationship between the two. As a result, the study offered a unique and penetrating analysis of Nightingale's thoughts on nursing.

Methods: The method of research used in this study was a bibliographical design that mainly aims towards clarifying the structural peculiarities of the document. By using a bibliographical method I have analyzed the concepts about nursing in "Notes on Nursing" and thus I could examine Nightingale's ideology of nursing and its structure.

Results: In both the index and thesaurus compiled during this study, the words which most frequently appeared are "patient" and "the sick". This signifies Nightingale's point of view that nursing's main concern was the sick; (although the most commonly used term is "nursing human being"). Another frequently used word is "I". Nightingale was the first person who wrote about her own experiences in the present perfect tense. She saw the essence of nursing as an art, rather than science. It has been generally accepted that the environment was the central concept throughout "Notes on Nursing". Instead of using the word "environment", she described and explained the importance of the patients' surroundings and how things surrounding the patients affected their condition. However, the environment was not her primary concern. Her primary concern was the patients themselves, and she described what nurses should do in order to create the best environment for the patient.

Conclusion: The analysis of the contents and structure of "Notes on Nursing" has yielded several new facts about nursing. The present study will serve to provide an academic basis when interpreting Nightingale's philosophy of nursing in the context of contemporary nursing.

Introduction

The book "Notes on Nursing (1859)" is the most important work of Florence Nightingale, and it can also be regarded as the most valuable classic in the history of nursing [1]. In spite of its bibliographical importance, so far no attempts have been made to create an index and thesaurus of this book in its original language or in a Japanese translation. In order for "Notes on Nursing" to be used for academic purposes, it is essential that an index and thesaurus of its contents be made readily available.

Bibliographical research is a form of scientific information processing that is very recognized today; it is also the oldest method of analyzing documents in Japan. I have deconstructed the original text of Nightingale's "Notes on Nursing" into paragraphs, sentences, sections, phrases and words. By doing this I could identify the concepts within the text; ideas and thoughts that may not be visible to the average reader. The purpose of this essay is to reveal those hidden concepts. This can be considered one step towards building a scientific basis that would enable Nightingale's ideology of nursing to be fully used in the nursing of today.

Method

Bibliographical design

The method of research used in this study is a bibliographical design that mainly aims towards clarifying the structural peculiarities of the document.

The process of compiling the complete database, sentence by sentence in "Notes on Nursing"

1. Considering the original text of the first edition of "Notes on Nursing" (a reprint by Lippincott Company publishing house,

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1992) [1] as my source text, I have compiled the A group of cards for every sentence: they contain a 'Position Indicating Number' made up of the chapter number, paragraph number and the number of the sentence (for example, the first sentence of the first paragraph in the first chapter will be marked I.1-1.). I input the data with the OCR -Optical Character Reader and using a personal computer. I then manually edited the data.

2. I applied the process mentioned in point 1 to all of the original text and compiled the complete database, sentence by sentence (Figure 1 and Figure 2).

Results

Results: The Index to "Notes on Nursing"

Based on the original text of the first edition of "Notes on Nursing", I made the classified index of the basic concepts and the alphabetical index of noun phrases, adjectives, adverbs and verbs, focusing on nouns. Among the entry terms of the alphabetical index, 1234 were nouns and 1010 were other parts of speech (Table 1).

Results: The Thesaurus to "Notes on Nursing"

Based on the original text of the first edition of "Notes on Nursing", I have created a thesaurus. The thesaurus was created by extracting 13 major topics related to nursing.

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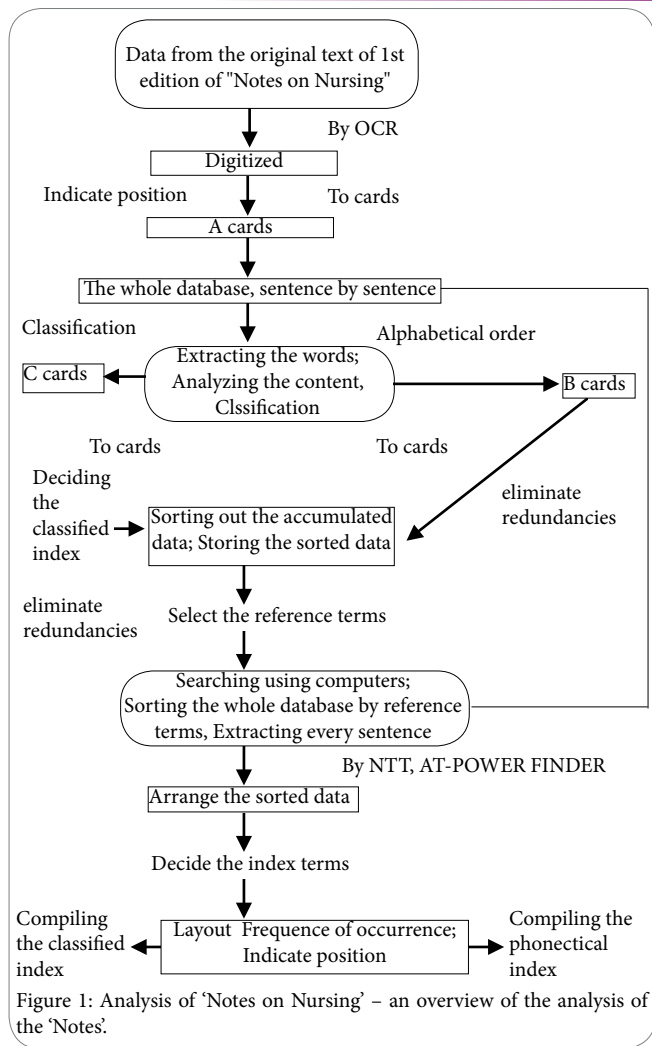


Figure 1: Analysis of 'Notes on Nursing' - an overview of the analysis of the 'Notes'.

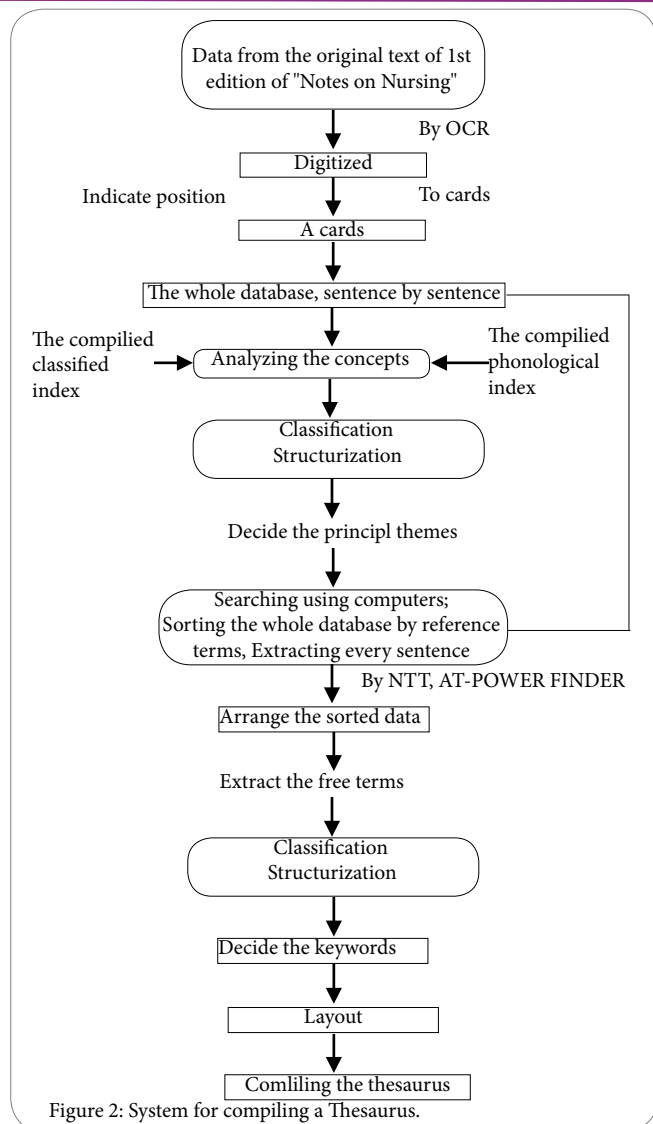


Figure 2: System for compiling a Thesaurus.

1. **Nursing** - keywords (8) nursing, the word nursing, elements of nursing, art of nursing, knowledge of nursing, fault of nursing, handicraft of nursing.
2. **Disease** - keywords (6) disease, all disease is a reparative process, every disease as a matter of course, infectious disease, latter stages of disease, physiognomy of disease.
3. **Nurse** - keywords (14) the term nurse, every woman is a nurse, what is a nurse to do, duty of every nurse, education of a nurse, nurse should never, experienced nurse, nurse's observation, good nurse, why is a nurse there?, silly or universal question, I would say to the nurse, half do the work, nurse calling.
4. **Patient** - keywords (9) patient, first rule with the sick, real patient, craving of sick, do a patient more harm, shyness of patient, the sick man cannot, sick and children, case of children.
5. **Private nursing** - keywords (4) private nursing, private house than elsewhere, both in private house and institution, household hygiene.
6. **The well** - keywords (3) the well, common error among the well, sick or well.
7. **Hospital** - keywords (2) management of a hospital, ward.
8. **To be in charge** - keywords (1) to be in charge.

The name of the disease	State of the disease
medical utensils	Body
Food & drink	Animals
Color	Science
Name of person	Place name
Daily utensils	Occupation
Name of magazine	Name of essay
Name of song	Abbreviation
Symbol	Race
Archaisms	Latin
Capital letters	Italic letters
Starts with a capital letter	Quotation
Small heading	

Table 1: Classified Index Headings.

The groups of sentences that could not be included within these 13 categories were grouped into the 14th category called "the subject of these notes". For each of these 14 categories, I have chosen a keyword for the headline, and after arranging the free terms in order from the higher rank concept terms to lower rank concept terms, I composed the thesaurus. I have shown below the keywords for each category:

9. **Round a sick person** - keywords (2) round a sick person, your business as their visitor.
10. **Pathology** - keywords (4) pathology, medical man, science, professional.
11. **Nature** - keywords (1) effort of nature.
12. **God** - keywords (1) God's work.
13. **Mother** - keywords (3) mothers to be always accompanied by doctors, amateur females, men and women.
14. **Subject of these notes** - keywords (9) subject of these notes, not fancy but fact, human beings, cure, vital powers, sacrifice, effort, attendant, best.

The keywords amounted to 67, and the free terms 804. I also made a few minor changes, for example; changing the pronoun with the noun it originally related to, if needed. In the lower part of the thesaurus thus formed, I have arranged the sentences that contain the free terms extracted as thesauri in order of occurrence and I conveniently underlined the free terms.

Considerations

In the index I compiled to "Notes on Nursing", one of the most rewarding results to the nursing field was the seven main concepts extracted on nursing from words with a high frequency of occurrence, the 14 themes on nursing in the thesaurus, 67 keywords, and 804 free terms. I then studied the seven main concepts.

Concept 1: The meaning of "nature" through the concept of "disease"

Nightingale defines the "disease" as "*an effort of nature to remedy a process of poisoning or of decay*", and places this definition as a "general principle" [1]. Since Nightingale does not regard the "disease" as a result, but as "reparative process" in which nature makes efforts to remedy, she defines disease not as negative but as positive concept [1].

If nurses decide to consider "disease" to be a fluid and one round process, we can see the ideas concerning the boundary between health and sickness. Sometime on the course of this "fluid and one round process", the healthy stage must exist [1]. This is the stage when humans are either healthy or sick, and this way of thinking points to exactly the same concept explained by "The Theory of the Four Fluids" in Hippocrates's work "The natural side of humans"[2].

Nightingale considers that disease is a condition under the control of people, and from my experience I see that disease is an adjective. "Nature", with a capital letter, is a determined noun, whereas "nature", with a small letter, can be regarded to express rather an adjectival condition than a substantial one. For Nightingale, the concept of process is contained not only in the idea of "disease", but also in that of "nature", with a small letter, and it expresses the condition, being in a kind of corresponding relationship [1].

Nightingale sustains that "nature" is the one who "cures, heals", while the "surgery, medicine" undergone by man is just something that "assists" nature in its work [1]. Let us emphasize that the one that "cures" or "heals" is "nature" spelled with a small letter. It is not "God" or "Nature", but "nature", that is a process which, being fluid, can assist either "surgery" or "medicine" [1].

Concept 2: Cure

In the field of nursing, usually "cure" is a word often used in contrast with "care", but in Nightingale's book the word "cure" is compared

with "*the healing effort of medicine or surgery*" [1]. Moreover, she considers "nursing" as a vital element that has to accompany both "surgery" and "medicine". "Cure and nursing" come together in an attempt to assist the healing effort of nature. For her, "Cure and nursing" ought not to be in contrast, but they should work together [1].

One cannot talk about Nightingale's concept of nursing without taking into account her concept of disease. Since for her, disease is an effort of nature to heal, nursing must help the healing effort of nature "*for nature to act upon him*" [1].

It is typical of Nightingale to use the expression "watching disease" instead of "watching the patient" [1]. It is actually impossible to watch disease all the time. But only when you manage to see through the disease to the core of it, can you judge whether those symptoms are due to that disease or not. Moreover, it is believed that the suffering is due to "something quite different" [1]. Suffering is caused by nothing other than the insufficient number of nurses.

The insufficiency of nurses either hinders the process of recovering from a disease or interrupts it. In order to actualize the process of recovery from a disease, nurses must put the patient into the best condition which enables nature to act. That is precisely the duty of the nurse [1].

Nature is assisted by "healing", and because the nurse can put the patient in such a condition in which "nature" could do its work, the "vital powers" of the patient were relieved and thus the process of recovering from the disease started to function. It is precisely this relief of "vital powers" that makes the work of "nature". This is mirrored in Peplau's words: "Perhaps something inside the human being" [2]. It is not God who heals, but the fundamental "vital powers" inside us, and this is a work of "nature". Disease is a "reparative process" of these "vital powers", and thus one can rephrase this by: "healing and nursing are to help the natural condition inside the human being itself, that is to say, the "vital powers" [2].

Concept 3: Patient, the Sick

According to my research, the word with the highest number of occurrences is "patient" (395 times) [1]. The next most frequently used word is "sick" (211 times); the noun phrase "the sick" occurred 132 times and the adjectival phrase "sick person" 79 times. Phrases like "sick person" and "sick people" are the synonyms of "patient" from a semiological point of view, and due to their broad meaning I have decided to include them in the thesaurus.

Now, if nurses consider disease to be a "fluid round process", we necessarily come to think about the boundary between the well and the sick. Somewhere on the way of the "fluid round process", there must exist the state of "the well" and of "the sick" [3]. This is the condition under "a fluid round process" of the human being to be both healthy and unhealthy. This way of thinking does not consider the sick to be separated from the well, but takes the sick to be a fluid round process towards the well.

The 13th term that begins in the chapter entitled "ventilation and warming" of Nightingale's "Notes on Nursing" contains the 'laws of health', 'the laws of nursing' and 'the laws of life' [1]. She has arranged the content using some other 195 small headings and thus enabled us to grasp the logics of her "Notes on Nursing" by reading these in order. She presents the fluid round process of the well and the sick as an individual and real problem [1].

Introductory.12-3

The breaking of them produces only a less violent consequence among the former than among the latter, - and this sometimes, not always [1].

IV.7-2

For, in all these remarks, the sick are only mentioned as suffering in a greater proportion than the well from precisely the same causes [1].

"The well" and "the sick" are two continuous concepts, and they both belong to the same fluid round process, both receive the influence of the same factors, they both are harmed by the same causes [4]. But once the rules of health, that is also the rules of nursing, are broken, while the well does not suffer great damage, a "violent consequence" is produced on the sick [5].

Concept 4: The difference between "knowledge of nursing" and "medical knowledge" or between "art of nursing" and "scientific knowledge"

Nightingale explains concretely the difference between "medical" and "nursing" knowledge in the following:

She asserts that the difference between nursing and medical knowledge relies on the fact that knowledge "everyone ought to have", although the latter "only a profession can have". If nurses took into account only this single sentence, we might get the impression that for Nightingale nursing is not a profession.

The word "professional ~" can be found in six locations and among them in five locations, it modifies the word "nurse". I also found one location where the work of a nurse is defined as a "professional practice" [1]. I have thus proven that the word "profession" is used not only in "medical profession" but also together with "nurse". Even in the days of 1859, when the work of a nurse was considered to be menial manual work, Nightingale already called it a "profession". However, the expression "nursing profession" is not to be found in "Notes on Nursing". Later, in 1900, in a letter sent to the apprentices at St. Thomas Hospital, Nightingale said that "*Nursing is becoming a profession*". [1] One can thus understand that she used words extremely rigorously.

"Medical knowledge" is a kind of knowledge that only someone whose "profession" is in the medical field can have, whereas "knowledge of nursing" is a kind of knowledge that not only a medical professional can have, but also that "everyone ought to have". This statement is not in any way a contradiction with the concept of "profession". For instance, law is a kind of knowledge that the profession called a "lawyer" ought to have, but at the same time is something that everybody should study a little. Within the wide field of "law", the lawyers are just expected to have a far more developed professional knowledge than common people. This holds true also in the case of nursing. However, the sentence above shows that "medical knowledge" is something only someone whose "profession" is in the medical field can have, a type of knowledge for an extremely limited number of people [1].

The history of nursing is very old. To begin with, nursing is one of the universal occupations of human beings; it is a technique that anybody can acquire by experience and by receiving practical guidance; it is in the nature of humans. Nurses can consider that Nightingale's definition of the concept "knowledge of nursing" points to the breadth of the field of nursing that differs from medicine, and to a discipline which is widely opened to common people [1].

Concept 5: Art vs. Science

Nightingale brings into discussion "art" versus "science".

XIII.44-2

Vast has been the increase of knowledge in pathology - that science which teaches us the final change produced by disease on the human frame- scarce any in the art of observing the signs of the change while in progress [1].

Nightingale defines the knowledge of nursing as an "art" that observes the signs of the change while it is developing, whereas she considers the common "knowledge in pathology" to be a "science" that tells us the final changes within the human body. These two concepts are presented in contradiction.

In "Notes on Nursing", the word "art" appears in 10 places, and among these in 3 locations I found "art of nursing". In these, "art" is used with the same meaning of "skill, technique" [1]

II 17.*2-1

I was brought up, both by scientific men and ignorant women, distinctly to believe that small-pox, for instance, was a thing of which there was once a first specimen in the world, which went on propagating itself, in a perpetual chain of descent, just as much as that there was a first dog, (or a first pair of dogs) and that small-pox would not begin itself any more than a new dog would begin without there having a parent dog [1].

For her, science was not almighty, and she draws her attention towards the art of nursing which was scornfully considered manual work. It is to be stressed that during Nightingale's time, the "scientific" way of thinking was wide spread due to the ideas of Pasteur and Darwin.

Nightingale's main intention was to pass on to everybody the knowledge of the art called "nursing", which is based on experience and observation, as opposed to the "science" of medicine. She attempted this in a world in which medicine was dominated by "science". There is no chance to do that with medical knowledge that "only a profession can have", whereas nursing, the knowledge that "everyone ought to have", is open to everybody; anybody can learn it; anybody can make the best use of this knowledge in their daily life [1]. As opposed to the medical knowledge that is meant for the specialists that adopt scientism, nursing was an open type of knowledge where even a novice could obtain a broad perspective and to an effective skill.

In my essay, which completely dissects "Notes on Nursing", I would like to limit this only to the conclusion, that is "art" and "science" are opposite concepts. As far as Nightingale's basic problem of "art versus science" is concerned, nurses ought to search from the beginning in all of her literary work.

Concept 6: The Origin of Nursing Lies in "the Woman, the Mother"

In the preface of "Notes on Nursing", one can find the following sentences:

PREFACE.1-1

The following notes are by no means intended as a rule of thought by which nurses can teach themselves to nurse, still less as a manual to teach nurses to nurse [1].

PREFACE.1-2

They are meant simply to give hints for thought to women who have personal charge of the health of others [1].

Nightingale assumed the readers of her notes to be not "nurses" but "women".

PREFACE.1-3

Every woman, or at least almost every woman, in England has, at one time or another of her life, charge of the personal health of somebody, whether child or invalid, -in other words, every woman is a nurse.

The corresponding concept to the knowledge of nursing which is "everyone ought to have" is that "every woman is a nurse" [1]. These two concepts are complementary to each other and they form the main concept of "Notes on Nursing". The knowledge of nursing might be something "everyone ought to have", but Nightingale considered that it is first something that should exist for women. And this is because "every woman will someday have personal charge of the health of others" [1].

Introductory.14.*2-1

Again women, and the best women, are woefully deficient in sanitary knowledge; although it is to women that we must look, first and last, for its application, as far as household hygiene is concerned [1].

She thought the best use of the knowledge of nursing also in the area of the daily taking care of the sick of any household. All the 13 chapters of "Notes on Nursing", overflow with concrete information or hints on household hygiene. Nightingale thought women observe the human being either sick or sound through the life of the household, and also by acquiring experience, day by day they can master the knowledge of nursing.

"Notes on Nursing" was written for women or mothers and the phrase "every woman is a nurse" has become extremely famous [1]. This is why Peplau, for example, writes that "Nightingale denies men the attribute of nursing. If we trace back history for several centuries, we will find military or religious organizations in which men engaged in nursing. But the lack of recognition of male nurses has led to the fact that presently the employment of male nurses goes ahead very slow"[2].

However, military nursing organizations operated by males existed even during Nightingale's times, and she included in her "Notes on Nursing" the word "hospital sergeant" (i.e. a male nurse) found in two locations. She also writes about "regimental hospital" (2), "military hospital"(2), "war hospital"(2) [5].

Among the amateur nurses in the households, there are the mothers of families who "take temporary charge of a sick person". The broad knowledge of nursing was not meant to belong only to the specialists, but the open range of nursing included households [7].

Nightingale emphasizes the fact that the knowledge of nursing "everyone ought to have", that the laws of health, was not correctly understood by mothers, but it was confused with medical knowledge that "only a profession can have" and mothers did not even try to learn it by themselves since they believed it to be somebody else's concern [5].

Even a "woman", even a "mother" does not try to learn the knowledge "to preserve their children's health", "the daily common

sense about hygiene", "the knowledge of nursing". They mistake the knowledge of nursing, opened to everybody, for the medical knowledge meant only for specialists and had given up the attempt to learn it from the beginning. Since doctors have devoted themselves totally to science, people could not throw in any words to comment on medical treatment and entrusted specialists with even their own treatment and nursing [6]. This situation shows also the problem we, modern people, encounter: we consider medical treatment to be something closed, where we cannot choose or decide anything [7]. However as Nightingale shows, any mother or woman will someday be in charge of somebody's health, and this way there is a reason to why "every woman" must be "a nurse" [1].

Concept 7: surroundings, circumstances

Up to present day, Nightingale has been called "Nursing's first environment theorist" [3] and "Notes on Nursing" has been considered an "environmental theory of nursing" [3]. Nevertheless, she did not use the word "environment" anywhere in her "Notes on Nursing". Below I have extracted the synonyms for "environment" she used:

surroundings(1), circumstances(8)

V.7-1

People say the effect is only on the mind [1]

V.7-3

The effect is on the body, too [1]

V.11-1

Volumes are now written and spoken upon the effect of the mind upon the body [1]

V.11-3

But I wish a little more was thought of the effect of the body on the mind. [1]

As shown above, she confronts the "mind" and the "body" and she furthermore researches by adopting the opposite way of thinking. She asserts that the condition of the surroundings of the patient cures the "mind", and then the cured "mind" cures the "body", and this leads to the recovery of the sick person. For her, science was not almighty, and she draws her attention towards the art of nursing which was scornfully considered manual work. It is to be stressed that during Nightingale's time, the "scientific" way of thinking was wide spread due to the ideas of Pasteur and Darwin.

CON.17-11

And what nursing has to do in either case, is to put the patient in the best condition for nature to act upon him [1].

Nightingale's belief lied in the disclosure of the fact that nursing the patient was equally important as healing the patient. Also, the most important thing nursing has to achieve is "to put the patient in the best condition for nature to act upon him" [1]. That being said, she did not explain the idea of "environment", but rather the concept of how nursing should put the patients in the "best condition". For her, the same way the sick and the healthy are on the same continuous line, hospital nursing and home nursing are adjacent in their attempt to preserve health In Japan, until now, we have usually made a clear

difference between nurses working in a hospital and nurses visiting people's homes. Also, we have made distinctions between the work of hospital and home care nurses.

Conclusion

From the result of the compiling an index and a thesaurus of "Notes on Nursing", I could obtain the following information about Nightingale's ideas on nursing:

1. For Nightingale, the concept of disease and health is a fluid, round process. Disease and health do not exist separately but rather in an adjectival existence which is under the control of man.
2. "Nature" is not "God"; but the "vital powers" inside man. Disease is the "reparative process" of man's "vital powers".
3. "cure" does not stand in contrast with "nursing", but they join forces in an attempt to assist the healing work of nature. That is, they help the "vital powers".
4. Nightingale does not consider the sick people and the healthy ones separately but rather thinks of them as existing on the same line. Both receive the influences of the same factors and are damaged by the same. Once the rules of health, that is, the rules of nursing are infringed, even though the healthy people are not influenced a lot, the sick ones are extremely damaged. It by themselves since they believed it to be somebody else's concern [5].
5. The concept about "knowledge of nursing" which everyone ought to know has a bigger range of expansion than the "medical knowledge" which only a profession can have, and it has a scientific meaning in the fact that it is the knowledge opened to people.
6. She considers the essence of nursing to be the knowledge of art obtained by experience and observation rather than the scientific knowledge.
7. The concept of "every woman is a nurse" is the one that answers to the idea of the "knowledge of nursing" which everyone ought to know. These are two main concepts mutually complementary.
8. In the concept of "every woman is a nurse" there lies one of the origins of nursing - which is also the way of being a mother.
9. Until now it has been said that the main concept of "Notes on Nursing" was the environment, but she does not even once use the word "environment". She actually talks about how to take care of a sick person in order to put him in the "best condition" through the circumstances around the sick person.
10. It was said that adjusting the environment is an extravagance and selfish "fancies" for the sound. In many cases, the concept is hardly understood.
11. The numerous personal pronouns "I" that point to Nightingale herself express the concepts on nursing she had built up by personal experience and observation.
12. The first edition of "Notes on Nursing" does not belong only to professionals, but is a common asset of everybody; something that should exist in our lives, the concepts of nursing that surpass ages and are universal in any human society.

This study was originally presented as a Nursing Science PHD Thesis, 1997 in Japan Red Cross Nursing University, Graduate School of Nursing Science. By using a bibliographical method whose main goal

was to disclose the structural peculiarities of the document, I have analyzed the concepts about nursing in "Notes on Nursing" and thus I could examine Nightingale's ideology of nursing and its structure. I hope to use this research method in future and to contribute to build up the scientific bases of nursing. Through this type of historical research of searching of facts in past data, it will be possible for us to investigate both new and old pieces of information from various texts about nursing that are related to the future. I express my profound gratitude to former Professor Kazuko Kodama of the Japan Red Cross Nursing University for her support, guidance and encouragements throughout this research.

Competing Interests

The author declare that she has no competing interests.

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