

Clinical Study

Application of Nightingale's Theory in Nursing Practice

Shahina Sabza Ali Pirani*

School of Nursing, The Aga Khan University Hospital, Pakistan

*Corresponding author

Shahina Sabza Ali Pirani, School of Nursing, The Aga Khan University Hospital, Karachi, Pakistan, Email: shahina.sabzali@gmail.com

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Abstract

When nursing practice is guided by a theoretical framework, it serves as an organizing model for a body of knowledge. This paper described a clinical scenario which was analyzed through Florence Nightingale's Environmental theory. Nightingale defined 13 canons of environment and she gave a detailed description of each aspect. Her major canons include: ventilation, light, noise, cleanliness of rooms/walls, bed and bedding, personal cleanliness, and taking food. According to Nightingale, if nurses modify patients environment according to her canons of environment, she can help patient to restore his usual health or bring patient in recovery. This was also reflected in the clinical scenario. Hence, Nightingale provided a basis for providing holistic care to the patients and it is still applicable today. From the scenario, it is recommended that, at community level, people should be given awareness regarding basic environmental hygiene through media and Lady Health Visitors.' At hospital level, if checklist regarding environmental factors is attached in patient's bedside folder then it will compel nurses for its implementation and hence will result in positive effects on patient's condition.

Keywords

- Nightingale
- Environment
- Application
- Nursing Practice

INTRODUCTION**Clinical Scenario**

I still recall the day when I faced the most depressing situation of my clinical practice. I was working in medicine unit of one of the tertiary care hospital in Pakistan. One of my patients, Mr. X was 60 years old, resident of interior Sindh, with the diagnosis of exacerbation of Chronic Obstructive Pulmonary disease (COPD). When I entered in to the patient's room, I observed that patient was sitting in high fowler's position, breathing with 2litre oxygen through nasal prongs. I greet the patient and started conversation. At once I felt that patient was not feeling comfortable to talk because of dyspnea. By profession, my patient belonged to agriculture field. His education background was only primary in local Sindhi language. He was admitted with the complaint of severe shortness of breath, cough and high grade fever. For the past fifteen years, the patient was suffering from COPD. Although the patient was not smoking in the hospital, he used to smoke two packs of cigarette daily for the past twenty years. According to patient, he had increased amount of yellow thick sputum while coughing. He complaint that he was unable to eat properly because of cough and shortness of breath. For sleeping, he used more pillows or sleep on chair instead of bed to avoid shortness of breath. This eventually resulted in increased morning headache. Moreover, patient had increased feeling of fatigue and lack of energy.

Patient was accompanied with his wife and three sons in his room, attendants always used to stay with the patient as they have no other place to live in Karachi. Moreover, patient

was dependent on his family for activities of daily livings. In surrounding, I noticed that room windows were closed because patient thought that outside dust will exacerbate his condition. Further, I observed that patient's food was placed on bedside and used meal tray of attendants were also kept there. Patient's washroom door was slightly opened. When I looked around, I saw a hamper bag with full of soiled linens and small dustbin placed besides patients bed which was filled with used tissues. All these things were making the room untidy. The Patient's vital signs were stable, oxygen saturation of 98% with 2L oxygen through nasal prongs. During my initial visit, at once I removed the used meal tray and soiled linens from his room.

Suddenly at the end of my shift, patient's attendant came out of the room shouting that the patient is complaining of chest tightness and shortness of breath. Immediately patient's oxygen saturation was checked which was dropped to 84%, nebulizer was administered and doctor was informed. Gradually patient's condition became critical and he was transferred to intensive care unit.

Nightingale's Theory of Nursing (1820-1910)

Florence nightingale's theory focused on the environment and she gave a detailed description of each aspect of environment in his theory. Nightingale did not specifically define the four major concepts of nursing theory; however, each component was evolved from her various documents.

Seven assumptions of Nightingale's theory were identified, several of them are discussed. Natural Laws; Nightingale defined

a law as the thought of God. Mankind can achieve perfection; Nightingale viewed the role of the nurse was to provide environment in which perfection might be achieved. Nursing is an art and a science; Nightingale indicated that nursing will be practiced by educated individuals using current research and common logic. Further assumptions include; Nursing is distinct and separate from medicine, Nursing is achieved through environmental alteration and requires a specific educational base [1,2].

Analysis

When I assessed the case scenario, keeping in mind the 13 canons of Nightingale's environmental theory, I came to know that few aspects of physical environment was ignored which pushed the patient to critical situation.

When I reflect back to the scenario, I realized that if I had modified the patient's environment during my first interaction, his condition might not have deteriorated. [3] emphasized that, "the most important practical lesson that can be given to nurses is to teach them what to observe-how to observe....which are the evidence of neglect-and of what kind of neglect" (p. 105). From Nightingale's different aspects of environment, my patient's ventilation, food and room cleanliness was adversely affected. Nightingale cited in [1] that when one or more aspects of the environment are out of balance, the patient uses his increased energy to balance it; however, this extra effort drains his energy which put delays in his healing. Patients' with COPD are always instructed to save their energy because, unlike healthy people, breathing for a COPD patient involves a conscious effort which is extremely challenging and consume more energy [4]. I realized that if I could have modified the environment then my patient's energy level could have been saved and it would have helped him in improving his condition.

One of the important concepts of Nightingale theory is cleanliness of room and walls. She pointed out, "greater part of nursing consists in preserving cleanliness" (p. 87). Moreover, Nightingale linked the ventilation with cleanliness. She emphasized, "Without cleanliness, you cannot have all the effect of ventilation; without ventilation, you can have no thorough cleanliness" (3, p. 92). In current scenario, patient's room was crowded and windows were closed so there was no proper ventilation which made my patient sick. At that time I could have opened the windows for certain period of time and then closed it. As [5] stated that ventilation of the sick room means

open the windows with the alternative intervals and closed them after intervals of time so that room should be adequately fresh aired. Other than that, I could have limited the attendants and gave teaching to patient and his family members regarding importance of proper ventilation. [3] believed that the person who repeatedly breathed his or her own air would become sick or remain sick.

Another concern of my patient was his limited food intake. Patient was unable to take his food due to dyspnea. According to Nightingale, "let the food come at the right time, and be taken away, eaten or uneaten, at the right time" ([3], p. 65). Though I noticed that patient's meal tray was having more than half food left, I thought that when patient will feel better he will take it. Nightingale cited in [1], "Chronically ill patients may be starved to death because their incapacitation can make them unable to feed themselves and attention is not given to what will enhance their ability to eat" (p. 49). I feel that if I had given attention to patient's diet then he might have eaten some food. Nightingale also instructed nurses that, "have a rule of thought about your patient's diet; consider, remember how much he has had, and how much he ought to have today" ([3], p. 68). May be if I had considered my patient's food preferences then it might have worked as Nightingale emphasized that patient desire a different pattern of taking foods like eating breakfast food at lunch time.

Unclean room was another important factor which has affected the patient's health. Patient was suffering from COPD and had severe cough so in that situation dust acts as allergen which has exacerbated the patient's condition. Patient did not open his windows because he thought that dust from outside will affect negative on his health; however, he was not aware of inside dust. [3] addressed that proper arrangement of sunlight in the room is beneficial for both health and recovery. Moreover, a small dustbin was placed beside patient's bed which was full of garbage. That was also a source of infection and irritant for the patient. I could have given awareness on importance of environmental hygiene to patient and especially the family members because patient was dependent on them.

[1] stated that Nightingale has emphasized the importance of looking beyond the individual to the social environment in which he lived. My patient belongs to interior part of Sindh where literacy rate is very low and economical condition is poor. According to Sindh Education Foundation [6], in rural Sindh, the reasons for low literacy rate are lack of access, social attitudes

Table 1: The Nightingale's four major concepts of nursing theory.

S.No.	Four major concepts	Explanation by Nightingale
1	Environment	Physical components of the environment include ventilation and warming, health of houses, light, noise, bed and bedding, cleanliness of rooms and walls, personal cleanliness, taking food and what food. Social and psychological environment addressed as chattering hopes and advices, petty management, observations of the sick and variety [1].
2	Person	Person is the individual who receives the nursing care. Although Nightingale did not define the person specifically, she did conceptualize person as holistic [2].
3	Health	Health does not mean to be well only but to be able to use every power the individual has. Nightingale believed "nature alone cures" [1].
4	Nursing	Nursing is viewed in two arenas. The first is defined as general nursing; she carry out the activities mentioned in canons of environment and another one is proper nursing who are educated in the art and the science of nursing. They are able to apply nursing process [2].

and poor quality of the physical infrastructure and educational services. Although my patient was financially well off but they did not have awareness of basic health precautions. Their social context does not include things which can help them realize the importance of basic environmental aspects in human lives. Further, most of the people belong to agriculture field and they spent their childhood to adulthood in this profession. Another important aspect is that they do not have access to primary health care centre which deprived them from environment health care awareness.

In addition, because of poor economic condition their education levels were limited to primary or secondary and were unable to access to higher education. In my patient scenario, patient's family background including his sons who were not educated because their social environment does not permit them to give importance to education. When I requested family members to limit attendant, they started arguments and were not ready to separate. They were thinking that if they remain with patient then it will help patient to improve his health. They did not understand that COPD patients should avoid crowd because it precipitates his condition. It has been found by [7] that 71 in 100,000 die yearly due to COPD in Pakistan, making it the fourth leading cause of death. In my patient's scenario the cause of COPD was smoking. A study shows that approximately 85 to 90 percent of COPD deaths are caused by smoking [8]. I think there was an urgent need to aware the patient regarding importance of environment in the management of COPD.

RECOMMENDATIONS

The basic problem was the lack of awareness regarding environmental hygiene. If awareness regarding basic health precaution (environmental factors such as ventilation, cleanliness and hygienic food) is given through lady health visitors' (LHVs) and media then it will decrease the number of patients with respiratory problems. At community level, I suggest that LHV network could play a pivotal role with the help of local health centers at the district levels. LHVs are the ones who directly interact with the local people and know their basic life styles. If those LHVs could be called on at the district levels at-least once every quarter than it could serve two major purposes; (a) LHVs could identify and report the core requirements/deficiencies amongst people livings in their respective areas and; (b) the capacity development of those LHVs could be done keeping in mind the local needs. The health needs which those LHVs provide could also be addressed through television programs which should be in a local language. If people have limited access to television programs than, radio could also be used with daily transmission on health awareness programs. The basic idea is

to introduce the principals of environmental hygiene in peoples' daily routine and convince them on the idea of "prevention is better than cure". At hospital level, if checklist regarding environmental factors is attached in patient's bedside folder then it will compel the nurse for its implementation and hence will result in positive effects on patient's condition. At the end of each shift nurse should evaluate and document the effect of favorable or unfavorable environment effects on patient's health. In this way, nurse would be able to monitor the patient's environmental.

CONCLUSION

Nursing theories assist health care professionals to provide unique contribution in caring for their patients. In this paper, a clinical scenario was described and analyzed through Florence Nightingale's Environmental theory. Florence Nightingale emphasized on manipulation of physical environment as a basic component of nursing care. Nightingale defined 13 canons of environment and she gave a detailed description of each aspect. Her major canons include: ventilation, light, noise, cleanliness of rooms/walls, bed and bedding, personal cleanliness, and taking food. According to Nightingale, if nurses modify patients environment according to her 13 canons, she can help patient to restore his usual health or bring patient in recovery. Hence, Nightingale provided a basis for providing holistic care to the patients and it is still applicable today. It is recommended that awareness regarding basic environmental hygiene should be given at community and hospital level.

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