

Review Article

Patient Well-Being: Applying Environmental Theory in Nursing Practice

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Abstract

Theoretical framework plays an essential role in guiding advanced nursing practices. The theoretical foundation of nursing discipline is based on various grand and middle range theories. Despite of progressive change in nursing knowledge and care; nightingale model of care is still the basis of all nursing practice. This paper aims to discuss the implications of nightingale theory in clinical setting through a clinical scenario. It will discuss the significance of 13 canons of nightingale theory with the significance in today's advanced care. Nightingale's theory is purely applicable in clinical setting and it guides health care professional to increase patient's wellbeing and restore health by making alteration in the surrounding.

INTRODUCTION

A 71 year old female patient was received in post anaesthesia care unit (PACU). The patient was living alone with her care taker, partially dependant on caregiver, with a superficial background in education i.e. up to primary level. She had diabetes, hypertension and asthma. She was diagnosed with intestinal obstruction and procedure laprotomy and end to end anastomosis was performed. Patient was presented in the hospital with the complaint of abdominal pain and an inability to defecate for two days. In PACU she was breathing on 5 litres of oxygen via facemask, was semi-conscious, cold and shivering and had multiple invasive lines. She had central venous catheter (CVC), arterial line and other peripheral lines along with an epidural catheter. Immediately blanket was given to keep the patient warm. Patient had the surgical site on abdomen and an abdominal binder was applied. As soon as the patient was received in PACU, the nurse made sure to start pain killers as early as possible to decrease patient's pain. Patient was irritable due to pain and noise in the surrounding. The nurse administered the drugs for pain and also started pain killer via epidural catheter. The patient was hypertensive and was still complaining about pain. The nurse wondered that why patient is not comfortable even after administration of all analgesics. She asked the on-call resident to assess the patient. Finally they came to know that the abdominal binder was so tight that it was irritating her. The nurse immediately loose the binder and then patient reported less pain on her surgical site.

The nurse was then relaxed and thought that the patient will be calm now. But unfortunately, she was shouting continuously and asking everyone not to talk so loud. She stated that "why everyone is talking so much here? Is this a hospital or a market?" The nurse then realized that the patient needs a quiet place where she can rest peacefully. Nurse also noticed the foul smell in her area. When she checked the patient, she came to know that patient has passed stool. She decided to clean the patient and thought that it would make her condition better but the nurse received another patient and got busy. After a while she managed the time, changed patient's bed sheets, patient's dress and covered the patient with neat and clean sheets. Dustbin near the patient was full with the soiled cotton balls and a diaper. Nurse sprayed the room freshener in patient's area. She just forgot that the patient is asthmatic and she didn't even realize the consequences of her action. Soon after the spray, the patient started coughing and complained about shortness of breath. As the PACU is a close room setting so it was a challenge to tackle this situation. Nurse increased the rate of flow of oxygen and gave her assurance that she will be fine. After all of the nursing care, she assumed that now patient will feel better but again the patient was not satisfied. Patient had an x-ray for the placement of CVC and it showed that the catheter is placed deeply. Nurse informed the resident and he ordered to arrange the things to pull out the catheter. This situation created more anxiety in the patient. The resident was continuously talking to his fellow while performing

the procedure. It increased further anxiety and irritability in the patient.

Her blood pressures were on higher side. Certain antihypertensive medicines were administered to the patient; her blood pressures were stable for some time but again it increased. Patient's vital signs were deteriorating. She was persistently hypertensive with blood pressure of 190/102 mmHg, heart rate was 99 bpm, respiratory rate was 32 bpm. By the time the shift came to an end, patient had gradually slipped out of the hands. Even after tireless efforts of the nurse, patient's condition worsened, her recovery stay was prolonged and it was decided to shift the patient to special care after extended recovery stay.

According to a study conducted in Quetta, Pakistan from June 2007 to July 2009. 252 patients were treated for bowel obstruction. The study reported that 84.1% patients presented with constipation as a clinical manifestation of bowel obstruction [2].

Nightingale's assumptions

There are seven Nightingale's assumptions which led to the development of her theory. According to Selanders (2010) following are the factual assertions of Nightingale's theory:

Natural laws; mankind can achieve perfection; nursing is a calling; nursing is an art and a science; nursing is achieved through environmental alteration; nursing requires a specific educational base; and nursing is distinct and separate from medicine (pp. 83-84).

In the scenario given above, patient's disease process was a natural law. This according to Nightingale is a "reparative process" [5]. Nurses are the significant contributors of speeding up patient's recovery by making changes in the environment. Referring back to the scenario, the nurse uses her skills as well as her knowledge while taking care of the patient analysing every aspect of patient care.

There are four major concepts in her theory that are human being, environment, health and nursing. She didn't clearly define health and human being but she related them with the environment. The main focus of the theory is environment. She believed that a patient can heal more when nursing care is given and environment is modified. She believed that healthy environment is an essential factor of patient's early recovery and healing. In the scenario above, nurse and the patient both can be viewed from the concept of human being. Patient was an individual surrounded by her social, emotional, psychological factors that had an influence on her health while the nurse has her own mind-set. In PACU, a nurse usually focuses on the early recovery and shifting of the patient in designated units. In doing their job, they become so task oriented that they fail to pick cues from patient and their surroundings.

Nightingale's 13 canons

The 13 canons (sub-concepts) of Nightingale's environmental theory are closely associated with the environmental factors in the aforementioned clinical scenario. Following are the canons of Nightingale (1860):

Ventilation and warming, health of houses, petty management, noise, variety, taking food, what food, bed and bedding, light, cleanliness of rooms and walls, personal cleanliness, chattering hopes and advices and observation of the sick (p. 5).

The environment in the case mentioned above had many pitfalls due to which patient's condition deteriorated. On receiving the patient, it was observed by the nurse that the patient is cold and shivering. In operating room the temperature is very low due to which usually patient become hypothermic. Nightingale beautifully described the concept of warming in her canon. According to her, ill patients have more tendencies to lose the vital heat of their body so a nurse should be more vigilant in looking after sick patients. In the scenario, immediate intervention was performed and patient was covered by blanket to restore the essential heat of the body. The heat in a body acts like the power. It has two important functions, to restore health and to perform functions of daily living smoothly.

In the beginning, the patient was complaining about noise in the surrounding. Apart from the surgical pain which the patient was facing, the noise was the factor that worsened her condition. According to Nightingale, unnecessary noise has harmful impact on patient's health. A study was conducted to see the impact of noise reduction in hospital setting and it also proved that reduction of noise is directly proportional to the patient's satisfaction rate [7]. Another factor that affected her health is the bed and bedding. On reflecting back to the scenario, the patient had passed stool. The nurse failed to pick the basic hygiene, the reason behind patient's irritability and decreased pain threshold. Due to delay in identifying this problem, the patient remained unstable. Therefore, a nurse should be a keen observer so that chances of negligence could be avoided and effective care can be delivered to the patient.

Petty management is one of the canons of Nightingale's theory. This canon covers many aspects of nursing practice. In particular to my scenario, dustbin near my patient's area was full of soiled items. According to Nightingale (1860) such things are pool of polluted air and it can pollute the entire house (patient area). Furthermore, a nurse should inform the patient whenever he or she is not around. In the scenario, the nurse was busy with another patient and she didn't inform the patient. This led to increase anxiety in the patient and ultimately it impacted on the patient's health.

The structure of PACU is a close room setting. There is only one door through which everyone enters or exits the room. There is no window in the setting through which sunlight can enter in the area. For ventilation purpose, there is only centralized air conditioner which assists the process of ventilation. The patient was in recovery room for an extended time period and she was irritated by the plain white painted walls with no source to connect with external environment. She was irritable by room spray and due to close setting of PACU it was a challenge to immediately remove the odour from the room. These issues are very well explained in the canons of variety, ventilation and light. These are the factors that were neglected in patient care and it delayed patient's recovery.

There are social, psychological and cultural determinants

that always impact on patient's health. In the scenario, the patient was living alone. Nobody from the family was there to give social support. She was living with her care giver. Due to lack of family support, it was difficult for her to fight alone. She had a major surgical procedure and at that time everyone wants their loved ones to be with them. A child and an elderly patient always need someone who can reassure them that they are fine. They want their immediate family member to hold their hands at their crucial times. These were the social factors that indirectly impacted on patient's health. Ageing is another factor that impact on a family. Ageing in a population leads to increase the generations in the family ultimately it increases the burden on the family due to elderly dependant family members. This is the reason that nowadays in south Asia people tend to have nuclear family. Most of the people migrate out of Pakistan for better employment, leaving their old parents [4]. Psychological factors also play a vital role in improving one's wellbeing. Mental peace, internal satisfaction, happiness are the key factors. In the scenario the psychological needs of the patient were not met and it affected her recovery.

PREPOSITIONS AND RECOMMENDATION

Following are the hypotheses which are derived from the environmental theory. These hypotheses are made on the basis of interventions that can be done to increase patient's recovery in hospital setting.

(A) If bair huggers (forced air warmers) are use intra-operatively then it can decrease post-operative hypothermia.

(B) If rectal probe is use intra-operatively to check the temperature then it can prevent the chances of hypothermia.

(C) If the abdominal binder is adjusted when it is applied then the patient can report less pain.

(D) If the silence boards are placed in recovery room then it can decrease the noise in patient's area.

(E) If soaked cotton balls of peppermint oil are placed in the area instead of doing room spray then it can decrease irritability in asthmatic patients.

According to De Brito, Galvao & Aparecida Spadoti (2009) elderly and neonates with prolong surgical procedure are at high risk of developing perioperative hypothermia. The study also mentioned that elderly patients of 70 years and above end up in hypothermia and it take prolong time to recover from it. Hence patient should be warm enough to preserve heat of the body. Bair hugger is equipment that helps in keeping the patients warm. Also, the use of rectal probe during the surgery can

prevent hypothermia. In PACU, such equipment is not available so if the temperature is monitored continuously during the procedure then it can reduce the chances of hypothermia. Health care professionals apply abdominal binder soon after the surgery and it is not adjusted at that time. It should be tied loosely so that patient can report less pain. Silence boards can provide awareness to the health care professional and it can lessen the noise in patient care area. At last, peppermint oil can be used. It's a unique and completely new intervention that can be followed in clinical area. Aromatherapy is used for multipurpose. Peppermint is one of the aroma therapies through which a patient becomes relax and clam. It has many properties that are it acts as decongestant, antiseptic and anti-inflammatory [1]. Hence it can be beneficial for the health of patients.

CONCLUSION

In a nut shell, this paper writing was a practical implication of theory into practice. It was a staggering experience to philosophize the concepts learned from the theory. The theory has an ability can transform many nursing practice. Florence Nightingale's theory is purely applicable in clinical setting and it guides health care professional to increase patient's wellbeing and restore health by making alteration in the surrounding. Nurses are the change agents who can make a difference in patient's health.

REFERENCES

1. Ali B, Al-Wabel NA, Shams S, Ahamad A, Khan SA, Anwar F. Essential oils used in aromatherapy: A systemic review. *Asian Pacific Journal of Tropical Biomedicine*. 2015; 8: 601-611.
2. Baloch NA, Mohammad D, Qureshi SA. Current pattern of mechanical intestinal obstruction in adults. *Journal of Surgery Pakistan*. 2011; 16: 38-40.
3. De Brito PV, Galvao CM, Aparecida Spadoti DR. Intraoperative hypothermia in patients undergoing elective surgery. *ActaPaulista de Enfermagem*. 2009; 22: 361-366.
4. De Silva I. Demographic and social trends affecting families in the south and central Asian region. *Major trends affecting families: A background document*. 2003.
5. Nightingle F. *Notes on Nursing: What it is and What it is Not*. 1860; New York: Dover Publications.
6. Selanders LC. The Power of Environmental Adaptation: Florence Nightingale's Original Theory for Nursing Practice. *Journal of Holistic Nursing*. 2010; 28: 81-88.
7. Tailor-Ford R, Catlin A, LaPlant M, Weinke C. Effects of a noise reduction program on a medical surgical unit. *Clinical Nursing Research*. 2008; 17: 74-86.

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