Therapeutic Approach with Therapeutic Technology in Intensive Care Unit

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Abstract:- With all the nursing innovations, it is up to us nurses to balance the demand for technology with the therapeutic touch aspect of nursing. This paper discusses the touch and technology of nursing as they relate to providing nurse care in the critical care unit (ICU). Laying the foundation for nurses' use of technology in the critical care unit is the aim of this evaluation. With the use of cutting-edge technology and a therapeutic touch, nurses must be able to provide excellent care to patients in critical care without compromising their principles. However, the care provided is impacted by the nature of the workplace and psychological factors. This article aims to supply increased talents that are offered by and with mankind at the right time.

Keywords:- Intensive Care Units, Nursing, Technology, Touch.

I. INTRODUCTION

When someone is ill, any aspect of their functioning changes from how it was before, and their coping mechanisms fail. There is a considerable connection between the emotional response to illness and adjustment. The survival of severely sick patients is improved by intensive care units (ICUs), which continually monitor and maintain a patient's vital functions. Careful observation and expert intervention are required for nursing care in an intensive care setting. Along with providing basic nourishment, hygiene, and harm avoidance, it also offers the patient and their loved ones emotional and psychological care[1].

For the whole 24-hour day of the critical care unit, the patient is restricted to the bed, furniture, and ward setting. Using the most latest research and evidence-based medicine, ICU care focuses on treating the life-threatening disease using drugs, technology that supports organ functioning, and monitoring. In an intensive care setting, planning is crucial to ensure efficacy and functioning; vital processes must be easy to handle. Critical care medicine and technology have quickly advanced, putting new demands on the environment. Studies have shown that the atmosphere in critical care units may often be strange and antagonistic to patients, and it may even cause post-traumatic psychological problems.

The physical, social, or symbolic environments are often mentioned when the word "environment" is used. A psychological environment is referred to as the other aspect of the phrase that may be utilised to define it[2]. A person's immediate surrounds, like their house or a hospital room, as well as their broader surroundings, such the actual world they live in, are all included in their physical environment. Although it may be seen of as a resource that gives people the ability to act, the physical environment can also be seen as a source of stress. The social environment is said to consist of people, attitudes, customs, and institutions. It talks about social networks, the challenges they pose, and the direction and control they provide people's lives and activities.

A person's psychological environment serves as a private, emotionally safe setting. It contains the ideas, emotions, and experiences that are intimately linked to the person's personal identity. The safety of the psychological environment is affected by factors such as intelligence, personality, temper, self-confidence, and stress level. In this research material, the psychological environment could not be examined[3].

The most cutting-edge hospital facility for providing treatment for critically ill patients is the intensive care unit. Being attached to multiple equipment, being exposed to noise, lights, being in a room that is too hot or cold, different scents, and being able to view other patients as care objects can all cause physical and mental stress in patients. Short-term noise exposure can have a number of consequences, including as vasoconstriction, changes in heart rate, elevated blood pressure, accelerated breathing, increased adrenaline production, and altered sleep patterns.

Patients adapt to their environment. They have confidence in the expertise of the personnel and take the ward's environment and activities for granted. One loses

control of their own body and the capacity to adapt in everyday routines. One loses control over their own body and the power to alter their own situations in everyday activities. Social situational stress is influenced by a variety of elements, such as shifting personnel, communication problems, being confused about time, place, and what has transpired, as well as being away from loved ones[4].

Despite being constantly observed by specialists, patients think they are invisible to them. Although meticulous surveillance and monitoring are essential from a medical standpoint, they do not make patients feel comfortable. The environment and illness are clearly related; as a disease worsens, the environment becomes more unfriendly and unfamiliar.

One strategy to enhance the high-touch component of healthcare is to include patients in intentional or purposeful encounters. For instance, at one cancer facility, patient satisfaction scores rose whenever nurses sat down and talked with patients by their chairs or beds. Even though nurses were only seen spending no more than 5-7 minutes with each patient, it is interesting to note that when patients were asked how long the nurses sat with them, their responses frequently varied from 10 to 12 minutes. Unexpectedly, nurses expressed more job satisfaction, with many of them claiming that the planned nurse-patient interaction time had restored nursing to its fundamental principles.

➢ *High touch approach in intensive care unit*

When a sudden severe illness strikes, the lives of intensive care patients undergo significant adjustments. In a cold, clinical hospital setting, they may feel anxiety, loneliness, and isolation. The typical length of stay for patients in intensive care is 3 to 4 days. The individual intensive care unit (ICU) nurse sets the bedside standards amidst severe procedural expectations. Prioritization by ICU nurses may be hampered by a lack of time. Organizational settings affect nurses' ability to engage in developing connections with patients and cause ethical issues with communicating nursing errors.

ICU nurses may experience both positive and negative emotions when caring for critically ill patients, which can be difficult over time . During the COVID-19 pandemic, the multiple layers of protective garments prohibit tender skin-to-skin contact. However, the nurse-patient interaction depends on the ICU patient's desire for a caring touch[5].

ICU nurses' tender touches on patients' skin have been characterised as non-procedural, non-task focused, expressive, protective, tactile, and affective massage. The nurturing touch of the nurse may have a good and consoling effect on the patient. The patient may, however, link a general touch with discomfort, unpleasant memories, and unfavorable presence. The clinical effectiveness of touch, such as massage to reduce pain, has received the majority of attention in earlier studies on ICU patients and nurses. However, in this instance, the nurse's focus is on fostering the nurse-patient relationship, identifying shared goals and objectives, and improving the patient's well-being. Touching is an indication that one is sensitive to the sensitivity, dignity, and general circumstances of another person. Being employed for one's job but also reaching out to another person out of respect for that person's dignity, concern, obligation, and conscience is what is meant by a caring touch.

A person is admitted to a cutting-edge hospital and given the required medical care. In the middle of a feeling of hopelessness, loving care that arises without a purpose but from an open compassionate wish to offer human dignity can inspire hope. However, in order to move forward and make oneself available in the situation, the surplus must be aware of this obligation.

"Each interaction a nurse has with a patient under her care has the potential to be a first step in developing a human-to-human bond. This is particularly true if the nurse deliberately makes an effort during each contact to get to know the person receiving her care and determine and meet their requirements.

➢ *High tech approach in intensive care unit*

World Health Day emphasizes the current situation of nursing and midwifery internationally during this International Year of the Nurse and Midwife. In the world, there are 27.9 million nurses, 19.3 million of whom are licensed. Unfortunately, there isn't enough nursing talent in the world to achieve both universal health coverage and Sustainable Development Goal.

The State of the World's Nursing Report 2020 was just released by the World Health Organization (WHO), and it makes the case for using its findings to create an agenda that would hasten and sustain change through 2030[6]. The report will inspire the federal government and other interested parties to adopt new technology and create integrated health and social care delivery models. Technology is continually being employed in nursing education and practice, according to a WHO survey. Technology is used to improve health care services, empower patients, and assist clinical decisions. It is also used for telemedicine, training, consulting, and access promotion. The report claims that nurses must adhere to the course on the digital determinants of health, which takes into account their level of digital literacy, technological resources, and Internet.

It's likely that there are unethical justifications for utilizing technology in nursing care. Protecting privacy is a top priority when using electronic documents and exchanging patient data between different healthcare facilities. The laws governing patient privacy must be understood by everybody who interacts with electronic patient data. Additionally, healthcare service providers must have a system in place to monitor the adoption of privacy in their industry. Technology can result in

unequal treatment in nursing. For instance, different jurisdictions offer people different services, therefore some patients might not be able to use the same technology owing to a lack of knowledge or suitable equipment.

A common outcome was a reduction in the workload for nurses. Shorter takeover times were the result of better access to their patients' health information due to the introduction of electronic medical records. Another study found that the use of technology expedites nursing tasks, hence lessening nurse effort and tiredness . Computer technology, according to nurses, makes their tasks simpler. It has an impact on, among other things, time management, documenting, producing less paperwork, and easily changing patient health records.

The fact that nurses think information technology improves their work efficiency is one of the main reasons they employ information systems. Information technology is a useful tool and a key component impacting the workflow, processes, and flow of information among nurses and other health care professionals in clinical settings, according to various studies.

Only 25.8% of participants think that nurses who work in critical care units who use technology experience stress and burnout. Additionally, most nurses have a positive outlook on cutting-edge technologies.

The employment of technology by nurses in their line of work may leave them with unfavorable emotions. Due to their lack of expertise, nurses feel inept and uneasy. Lack of technical support can cause nurses to lose motivation. Defective equipment and coworkers who abuse current devices can undermine nurses' sense of job satisfaction. Tension will arise if the team members do not adhere to the same standards when using technology.

According to polls, a lot of nurses think there are problems and risks with using technology.

Issues arise as a result of poor equipment and a lack of necessary services. Significant factors included technical support and appropriate training for using the equipment . Patients will be put at risk if technological systems are managed incorrectly or if staff members fail to correctly interpret data from the devices.

➢ *Quality of care*
Quality of Care (QoC) is defined by the World Health Organization (WHO) as "the extent to which health care services are provided to individuals and patient populations to enhance desired health outcomes." To do this, health care must be patient-centered, effective, timely, safe, and efficient . Touch between people can have neuroendocrine benefits and reduce stress. Interpersonal contact is thus a component of quality of care[7].

II. DISCUSSION

In the nurse-patient interaction, interpersonal touch is utilised to convey needs, offer warmth, ease tension, and display affection, all of which are beneficial to both the patient and the nurse. The demand for human interaction is ubiquitous across patients, from newborns in the Neonatal Intensive Care Unit (NICU) to elderly patients nearing death in the medical/surgical ICU . Numerous studies show that giving ICU patients and their families high touch and high tech nursing care has a major impact on them in three areas: 1) strengthening the physical and psychological well-being of patients and their loved ones; 2) enhancing the physical and psychological comfort of patients in distress; and 3) increasing family satisfaction with treatment given and ICU decision-making .

The urge for interpersonal interaction is embedded in nurses' DNA. Regardless of age, degree of treatment, or length of stay, nurses admit that some ICU nursing procedures, such as infusion therapy or suctioning, may be scary for some patients. Human touch, whether it be a nurse's hands on the patient or making eye contact, may do a lot to ease anxiety and regulate body temperature.

All nursing jobs, from direct care providers to administrators, educators, and researchers, make a difference in the lives of patients, other nurses, and the community. Professionals may connect "beyond words" by touching, which at its root shows compassion. Touch may be prepared to help anxious individuals when verbal communication is scarce, ineffective, or unnecessary .

Personal protective equipment (PPE) is a must for all healthcare workers because to the significance of infection control practises when providing treatment to patients. Special attention will be paid to ensuring that the patient can participate and comprehend what is being stated while providing education and directives[8].

The impact of ICU noise on patients must also be taken into account by nurses.

Even while limiting individual visits to the patient's room might help prevent the transmission of viruses, the patient could still feel alone as a result of it. Hospital visitor policy have evolved over time, but when patients are permitted to have visitors, only medical professionals should be contacted. Recently, tablets or cell phones have been utilised to aid in patient communication.

The American Nurses Association's Public Policy Statement on the Scope of Nursing Practise , which defines nursing as the "diagnosis and treatment of human responses to highly technological procedures, conditions, and systems used in the delivery of healthcare,". Being ill and the potential for technological isolation are direct threats to some of the most desirable characteristics. Despite the strength of people's responses varying, some are so common that they may really be categorised as human responses.

Nurses' familiarity with technology is something that patients' families both desire and expect in healthcare settings. However, they also hope that nurses would act as a kind intermediary between technology and the patient. Indeed, a number of recent developments inspire nurses to think about fresh and creative methods for practising nursing. Nurses concur that human interaction is necessary for healing, if not directly then at least indirectly through the nurse bearing witness to the patient's experience in our presence.

Nurses may tell they are really present with patients when they express that they feel heard and cherished. It is crucial that nurses address the personal aspect while taking into account the inherent risks of technology's potentially dehumanising effects.

Nurses can be seen concentrating on computer screens while recording vital signs and other clinical information, evaluating pertinent test results, and reading physician orders while one walks along a hospital hallway. Some claim that nurses must choose between the humanistic side of nursing and modern technology in an either-or situation. However, technology is the most practical method for tying patients and families together , but humanism seems to be in opposition.

ICU nursing services in the pandemic age are without a doubt heavily reliant on advanced technology. ICU nurses are accustomed to using technology in the form of cutting-edge life support equipment on a regular basis. To overcome the obstacles in patient and family connections , nurses must now engage with technology more. The more frequently nurses deal with technology, such as when using video calls for family education, the less time they spend in direct touch with patients. We emphasise the nurse's position at the centre of the technology-humanism split, yet nurturing the fusion of these ideas is challenging. It demands awareness and compassion, and it is supported by administrative assistance, clinical practise, research, and education.

The function of licenced nurses as therapeutic agents is important. As a result, the job demands a connection and emotional commitment from both the nurse and the patient.

This dedication is known as real human caring, which refers to a nurse's concern, feeling of duty, and eagerness to assist the patients. Humanistic, professional, and scientific forms of care are all available for nurses. Aside from the fact that nursing treatment is a combination of interventions, providing nursing care must be done constantly by a number of nurses seven days a week, 24 hours a day. So, a licenced nurse who will be in charge of all nursing care supplied must be involved in the delivery of nursing treatment. Through the use of partnership, closeness, and reciprocity, this nursing therapy aims to alter the patient's and their family's conduct so that they behave more independently. As a result, nursing therapy is a special type of intervention carried out by nurses.

A number of issues, including terms of service, education, and technology, have prevented professional nursing therapy from being completely given in the field. The conditions of service include issues with unsustainable nursing care, unequal empowerment between nurses and vocational graduates, and inadequate nurse needs. Nursing graduates that are not adequately qualified to provide nursing therapy are the issue from an educational standpoint. Currently, because the patient has not had professional nursing therapy, the nursing care performed in the field is not completely recognised as professional nursing care[9].

Guidelines for Incorporating Technology into Professional Nursing Education have been created by the American Association of Colleges of Nursing to address the importance of nurses gaining the knowledge and abilities necessary to utilise technology sensibly and securely. Nursing education must also take ethical considerations into account when gathering data and providing care. The task of designing settings that support patient-centered and technologically proficient nursing care falls to nurse managers and administrators. Systems that include humanistic ideals of respect, trust, and autonomy in interactions between management and employees would be beneficial to the nurse-patient collaboration. For nurses to grow and maintain their confidence in the technology, as well as better comprehend and satisfy the emotional requirements of their patients, they need continual training[10].

III. CONCLUSION

Nursing research on technology and nursing practise has to place a strong emphasis on the value of actual technological experience. In addition, the usage of technology is driven by the patient's wellbeing.

While using advanced technology, nurses must be able to deliver proper care without losing sight of the importance of nursing itself, which is expressed in the form of therapeutic touch.

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