

Science, Art, and Nursing

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ABSTRACT

The primary purpose of living things is to maintain their life and generation. In humans, this purpose and motive have turned into a way of maintaining a healthy, happy, productive, and meaningful life over time. Philosophy, science, and art have been the most important guides for people to add meaning to their lives and to lead their lives in a meaningful way. Nursing is defined as the only health profession that deals with the healthy/ill individual as a whole with all his/her dimensions, and the science and art aspects are emphasized in all definitions. Nursing is both an art and a science. A successful caregiver cannot be without the other, and has to embody both. Mastering the powerful combination of the art and the science of nursing takes time and experience. When the art and science of nursing are applied together, it is a force to be reckoned with in healthcare. This is what makes nurses so effective and makes a positive impact on patients in their care. Every day, nurses should strive to consciously combine art and science into patient care to achieve the best possible outcomes. In this article, science and art, which are indispensable in human life, will be briefly explained and the science and art aspects of nursing will be discussed.

Keywords: Science, art, nursing, profession

INTRODUCTION

There is no single definition of science that is accepted by everyone, due to its constant change, development, multi-faceted and complex nature, and the lack of boundaries for the subjects, events, and methods it uses. The Turkish Language Association (2022) defines science as “regular knowledge, science that chooses a part of the universe or events as a subject, and tries to draw conclusions by making use of empirical methods and reality” (1). Bekaroğlu (2) emphasizes the definition of science as “an effort to first explain the phenomena about the universe through observation and reasoning based on observation, and then find the laws that connect these phenomena”; Güngören (3) discussed the concept of science as “Science is human activity in constant motion”. While Einstein approached science from a rational point of view by defining science as an effort to make harmony between sense data devoid of any order and regular logical thinking, Russell talked about the order in nature and the effort of science to find and express this order (4). Although there is no agreed-upon definition of the concept of science, there are some features found in all definitions. According to these features, science is a way to explain the universe. It is

experimental, based on observation and inference, involves imagination and creativity, and can be changed and subjective. It involves exploring, questioning, researching, and problem-solving skills, consists of logical reasoning, is social, and is a part of the cultural structure (2). Science is divided into sub-branches according to the subject and the methods used. These areas are listed below (5):

Natural sciences and sciences, in which natural phenomena and living things are studied. Social sciences study human behavior and social phenomena. Applied sciences where knowledge gained through science is translated into practice. Mathematics, which is similar to and intertwined with both natural sciences and social sciences in some aspects, can be grouped separately. The rapid development and changes in science are among the most important events in world history. For this reason, science has been included in the education programs of schools. The correct and beneficial use of science and scientific knowledge in daily life and in professions has many individual and social contributions (5,6). Knowledge, scientific process skills, and the nature of science are the elements that make up science (5). It is briefly described below as an element of knowledge and science.

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Knowledge and knowing

The Turkish Language Institution (TLI) defined knowledge as “the whole of facts, facts and principles that the human mind can reach, knowledge, knowledge” and “fact, knowledge obtained through learning, research or observation” and stated that it can be used synonymously with science.

Knowledge (knowledge, episteme) is the process of establishing a link between the knower (subject, subject) and the known (object, object) (7). Plato, on the other hand, classified knowledge as knowledge obtained based on appearances (doxa) and knowledge grasped through a dialectical investigation process through reason (8). Today, knowledge is grouped as everyday knowledge (random, empirical knowledge), religious knowledge, art knowledge, philosophical knowledge, technical knowledge, and scientific knowledge (5).

SCIENCE AND NURSING

Nurses having an understanding of science as a concept and having knowledge of its basic features, will provide them with problem-solving skills as well as scientific thinking. The fact that nurses have problem-solving skills within the scope of being critical thinkers is the first condition for accurately identifying and meeting the health needs of the individual and/or their relatives (9).

Although Nursology has an eponymous national journal (Journal of Nursology) and an international website (10) (<https://nursology.net>, created by Peggy Chinn and Jacqueline Fawcett), Parse (2019) continues to debate the term Nursing Science. According to Parse (11), the purpose of the expression Nursology is to change the name of the nursing discipline (which will create more problems), the meaning and content of nursing science have not yet been clarified, and its distinguishing feature from other disciplines has not yet been determined, and education nursing programs, research, practice methodologies are not based on theory. Parse (11) questions whether nurses will also take the name “nursologists” when such a term of science (nursology) is used. According to Fulton (12), Nursology is a given to the nursing discipline.

The name comes from the Latin *natrix* (nurse) and the Greek *logos* (science). Nursology encompasses nursing knowledge, research and practice methodology, and phenomena that concern nurses. The word Nursology was first proposed by Paterson (13) to denote the development of nursing theory, and Roper (14) used Nursology to name the discipline of nursing. Fulton (12) suggests that nursing practice and nursing science/knowledge should be separated as expressions like other disciplines. While these discussions continue, it should be accepted that nursing is a science and it is to continue to develop according to the elements of science (knowledge, scientific process skills, and the nature of science) (15).

Nursing-specific knowledge; has been significantly improved by studies such as synthesizing concepts-phenomena-paradigms related to nursing according to nursing philosophy, creating conceptual frameworks/models/theories, developing nursing

terminology and classification systems in this context, creating-application-evaluation of nursing evidence. The most important indicators of the relationship between nursing and scientific process skills are the nursing process and research (16). The World Health Organization (WHO) defines the Nursing Process as “the systematic use of the scientific problem-solving method in nursing care practices for the benefit of the healthy/ill individual” (17). On the subject of nursing research, although it is mentioned that the research is insufficient in terms of quality and quantity (17), it should be taken into account that nursing, which is a young science, has made serious progress in this regard.

The purpose and result of acquiring nursing knowledge requires knowing nursing. Knowing is a dynamic process, its antecedents being experience, awareness, and reflection. Personal reflection and reflection while living and interacting, want to understand and find meaning as a result of transformation. Nursing cognition is a unique, idiosyncratic type of self-knowledge that consists of objective knowledge that interfaces with subjective perspectives on personal experiences. (18). Knowledge in nursing was classified separately as empirical, aesthetic, personal, and ethical. Chinn and Kramer (10) also included liberating knowledge in these four types of knowing. The types of knowledge in nursing are explained briefly below (9,7,15,19):

1. Empirical Knowledge: It is systematically organized according to scientific principles and represents the knowledge obtained by observations or measurements made according to research methodology.

2. Ethical Knowledge: It covers the necessary information when making decisions about right and wrong, good and bad, desirable and undesirable, and morals expressed through rules and ethical knowledge.

3. Self-Knowledge: It represents knowledge that focuses on self-awareness and empathy, and is related to one’s self, originality, and uniqueness.

4. Aesthetic Knowledge: In interaction with the individual in need of health, meaningfulness is the perception of what is important and it is related to the artistic aspect of nursing.

5. Independent Knowledge: The potential of a person is his awareness of his social, cultural, and political situation and his level of critical thinking. The nurse, who has the liberating consciousness of knowing, becomes aware of injustices and inequalities and takes responsibility for their creation and implementation.

As a result, the knowledge acquired through different ways of knowing is used to meet the nursing care needs of the individual. “Spiritual knowledge” has been added to the types of knowledge listed above and it is stated that it will make an important contribution to the provision of care by taking into account the spiritual nature of the human being (15,19). The Turkish Nurses Association (1981) defines nursing as “a

health discipline consisting of science and art responsible for the planning, organization, implementation, evaluation, and education of nursing services to protect, develop and improve the health and well-being of the individual, family, and society” (20). In this section, the scientific aspect of nursing has been discussed. In the following, aesthetics, and the art aspect of nursing will be explained.

AESTHETICS AND ART

The concept of aesthetics, which derives from the suffix “aisthētá” and “ikos”, meaning things that can be perceived with the sense organs in Ancient Greek, is used as “aesthetisch” in German, in the meaning of beauty theory, and “*esthétique*” in French. Aesthetics, in its Turkish form and its origin from the Turkish word “bedii” meaning beautiful, beauty, was used as “bediyat ve ilm-i bedayi” in the sense of the science of beauty. According to TLI (1), aesthetics; is “the theoretical science of beauty in art and life with the general laws of artistic creation, beautiful sense, beauty, beauty”, “related to the sense of beauty”, “appropriate to the sense of beauty” and “the branch of philosophy that deals with beauty and the effects of beauty on human memory and emotions as subjects” is defined as “good sense”(21).

Aesthetics consists of two parts: the philosophy of aesthetics (aesthetic subject and object, aesthetic judgment, aesthetic value, aesthetic attitude) and art as the philosophy of aesthetic phenomena or phenomena, the scope of artistic creativity, and the philosophy of art that focuses on the status of the work of art (22). The first part, the ontology of aesthetics, consists of the aesthetic judgment given after the aesthetic subject, who has a certain sense of taste, turns to the aesthetic object with a certain aesthetic value, with a special attitude or approach called aesthetic (22).

In the philosophy of art, which is the second main division of aesthetics; instead of the aesthetic experience of natural products, concepts and problems related to works of art are discussed (22). Aristotle stated that art emerged concerning one of three different types of activity in human beings. These activities are (1) understanding, learning, or knowing (theoria), (2) acting (praxis), (3) creating or producing something (poiesis). In the production activity, either useful things (crafts) with a use value or beautiful things (art) with aesthetic value are created (22). The equivalents of craft and art concepts in ancient Greece are “tekhne” and “ars”.

Tekhne is “the power to do, ability, talent, craft; the regular way of doing something; cunning, ingenuity, trickery, a means of doing or obtaining something, means, procedure, style, custom, tool; art is defined as a skill, craft, profession, a product or work of art, while ars is defined as “method, method, means; art, craft; mastery, talent, skill (in any art); work of art, moral quality virtue, play, trickery, deceit, cunning. In this period, tekhné and ars could not be separated from each other with certain boundaries and expressed the ability of people to manufacture and perform. Another important point here is that talented people as craftsmen or artists are also gracious people (23).

In TLI, art is defined as “All of the methods used in the expression of a feeling, design, beauty, etc. or the superior creativity that emerges as a result of this expression”, “Expression created by the understanding and taste standards of a certain civilization or community”, “Demonstrated in doing something”. while “mastery” was defined as “all the rules to be followed in a profession”, it was stated that it could be used synonymously with craft.

Craft, on the other hand, is defined as “work, art, and craft that requires experience, skill and mastery along with learning, done to meet people’s material needs”, and “works that require handcraft” (1). The issue of nursing as a science is discussed as well as being an art. However, while defining Tekhne and ars in Ancient Greece, examples such as the art of military service and the art of medicine were given. In this context, the use of the expression “nursing art” would not be wrong, considering the definition of art in TLI. In addition, the definition of nursing as a craft has been criticized from time to time and it has been emphasized that it is an art. To contribute to these discussions, the relationship between aesthetics, art, and nursing is explained below (24).

AESTHETICS, ART, AND NURSING

As the philosophy of aesthetic phenomena or phenomena, the elements of aesthetics are subject and object, judgment, value, and attitude (22). In terms of the nursing profession, the aesthetic subject is the human, colleagues, healthcare team members, and society who need nursing care, while the aesthetic object is care. Aesthetic judgment, on the other hand, is what emerges as a result of the communication and interaction of the aesthetic subject and object. The attitude toward aesthetic values in the nursing care process represents the nurses’ willingness to fulfill their roles and responsibilities and their desire to achieve the best in their work (24).

In the philosophy of art, which is the other dimension of aesthetics, concepts, and problems related to works of art are discussed. The nature of nursing art is explained with the concepts of care, compassion, and communication. It requires personal wisdom and intuition and is seen as the product of an aesthetic lived experience. It can also be healing, transformative, and empowering for the healthy/sick individual. The expected results of the art of nursing are the results of the individual who needs health care such as safety and satisfaction (25). According to the systematic compilation study by Johnson (26), the themes that represent the art of nursing are listed below:

- Nurse’s ability to comprehend the meaning of encounters with healthy/ill individuals.
- Nurse’s ability to establish a meaningful bond with the healthy/healthy/ill individual.
- Nurse’s ability to perform nursing activities skillfully.
- Nurse’s ability to rationally determine nursing actions.
- Nurse’s ability to conduct nursing practice morally.

The acrostic classification made by Brunt (21) to explain the scope of nursing art is given below:

N “Nurturing”: Nurses support individuals and/or their relatives and their relatives in need of health care, and their skills in this regard are developed through nursing education and practice.

U “Understanding”: The nurse understands the beliefs and values, ideals, feelings, and thoughts of healthy/sick individuals and their relatives, and gives the individual and their relatives an understanding of what is going on. Effective communication skills are essential in developing understanding.

R “Respect”: Nurses respect the healthy/sick individual’s autonomy and the right to be informed, the right to refuse care and treatment, and undertake their advocacy when necessary.

S “Synthesis and self-care”: Nurses synthesize information from nursing and other disciplines to provide optimal care that the individual needs. The synthesis of this information and the development of nursing intuition, play an important role in the diagnosis and care of the individual with experience. In addition to maximizing the health of the healthy/ill individual, the nurse should adopt a healthy lifestyle and in this context, eat well, exercise, pay attention to sleep patterns, get medical help when necessary, and be a role model in the area of health.

I “Independent thinking and judgment”: The roles and responsibilities of nurses are increasing and therefore they need to make more independent and clinical decisions. As a result of this situation, nurses use assessment, evaluation, and critical thinking skills more. Nurses spend more time with patients than any other discipline. Therefore, nurses are in an ideal position to detect cues and changes in a patient’s condition and take appropriate action to cope with these changes.

N “Negotiation”: The nurse frequently uses the interview method to determine the health needs of the individual, obtain informed consent about the care, and determine the level of knowledge about the treatment, monitoring, and evaluation of the care and treatment.

G “Giving of oneself and caring”: The essence of nursing is care. When nurses develop a caring relationship by considering cultural values and beliefs, their interactions with individuals and their relatives increase. Health, human care, and improvement will come to the fore in the future of nursing. Nurses often use their feelings of compassion during care, and with this compassion, love, and care, they can make a significant difference in people’s lives.

CONCLUSION

The roles and responsibilities of nurses are constantly changing, and accordingly, nursing practices are becoming more complex. New theories, techniques, skills, and tools must be developed and used in practice to meet the nursing care needs of a highly technological, complex, and dynamic society. To achieve this, nursing must be recognized as a science and an art.

Thus, nursing will be analyzed according to the elements of both science and art and its development will be continued appropriately.

REFERENCES

1. Turkish Language Association Contemporary Turkish Dictionary. (20.09.2022). <https://sozluk.gov.tr/>
2. Bekaroğlu E. Scientific thought and its properties.2021. https://acikders.ankara.edu.tr/pluginfile.php/88146/mod_resource/content/1/COG129.Hafta%203.Bilimsel%20Dusunce%20ve%20Ozellikleri.pdf
3. Güngören SÇ. Development and importance of scientific thinking in early childhood. In Aksut P, eds. Science Education in Early Childhood. Nobel Publishing; 2019. pp. 23-58.
4. Arı Ü. Examining the views of pre-service science teachers and primary school teachers about the nature of science. Master Thesis, Elazığ: Firat University, 2010.
5. Soslu Ö. The Nature of Science in Science Teaching. In Dalkılıç M, eds. INSAC Advances in Social and Education Sciences. 2021. pp.217-36.
6. Bora ND. Investigating science teachers’ and high school students’ views on the nature of science in Turkey, PhD Thesis, Ankara: Gazi Univ., 2005.
7. Yıldırım A. Aesthetic knowing and nursing. Balikesir Health Sciences Journal 2013;2(1):69-76.
8. Eker Hİ. The way towards critique of art in plato’s philosophy or the possibility to call shadow as shadow. Mavi Atlas 2021;9(1):171-77.
9. Vicdan AK. The ways of knowing in nursing. Journal of Education and Research in Nursing 2020;17:110-4.
10. Chinn PL, Kramer MK. Nursing’s Fundamental Patterns of Knowing. In Integrated Theory and Knowledge Development in Nursing. St. Louis: Elsevier Mosby; 2011.
11. Parse RR. What’s in a name? Nursing Science Quarterly 2019;32(2):93-4.
12. Fulton JS. Nursology? Clin Nurse Spec 2019;33(5):201-2.
13. Paterson JG. From a philosophy of clinical nursing to a method of nursology. Nurs Res 1971;20(2):143-6.
14. Roper N. A model for nursing and nursology. J Adv Nurs 1976;1(3):219-27.
15. Danacı E, Özbudak E, Ağaçdiken S. Ways of knowing in nursing; spiritual knowing
16. E-Journal of Dokuz Eylül University Nursing Faculty 2022;15(4): 557-67.
17. Kocaçal E, Aktan GG, Eşer İ. Development of nursing process and care plans in historical process. Journal of Nursology 2021;24(2):284-90.
18. Karabulut N, Gürçayır D, Aktaş, YY. History of research in nursing. Acıbadem University Health Sciences Journal 2019;(2):121-8.
19. Bonis SA. Knowing in nursing: a concept analysis. J Adv Nurs 2009;65(6):1328-41.
20. Willis DG, Leone-Sheehan DM. Spiritual knowing: Another pattern of knowing in the discipline. ANS Adv Nurs Sci 2019;42(1):58-68.
21. Ünsal A. Four basic concepts of nursing: human, environment, health disease, nursing. Kırşehir Ahi Evran University Journal of Health Sciences, 2017;1(1):11-28.

22. Brunt B. Nursing: The finest art. *Medsurg Nursing* 2006;15(1):1-15.
23. Cevizci A. Philosophy. Eskisehir: T.C. Anadolu University Publication; 2012, pp. 163-78.
24. Yılmaz M. Art as a procedure of signification. *Archives of Philosophy*, 2019; (50):1-7.
25. Benner P. The wisdom of our practice. *Am J Nurs* 2000;100(10):99-105.
26. Weaver AE. The art of nursing: A concept analysis. *Int J Hum Caring* 2021;25(1):16-21.
27. Johnson LJ. A dialectical examination of nursing art. *J Adv Nurs* 1994;17:1-14.