

Positivism: A Concept Analysis

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Abstract

The concept of *positivism* is a phenomenon not necessarily utilized in nursing. The idea was promoted first by Auguste Comte but implanted in nursing by many philosophers. In advanced practice nursing, positivism can lead to science as the basis of practice without the inclusion of the art of nursing as a principle of practice. The practice of objective scientific knowledge alone may dehumanize nursing practice with the use only of the researcher and not the influence of the researcher and collected objective data. The analysis of positivism offers advanced practice nurses (APNs) meaningful application to their practice by taking patient care away from the illness-cure model. Conducting a concept analysis of positivism utilized the Walker and Avant eight step methodology. Attributes of the concept of positivism are experience, the system of facts, objective, human, and natural phenomena. Antecedents and consequences of the concept are to further understanding of consciousness. A model, borderline, and contrary case demonstrate positivism in nursing situations.

Developing an understanding of the concept positivism is helpful before conducting the concept analysis. What is positivism? The question originally asked by Auguste Comte, the founder of positivism, who embraced the philosophical and political movement [1]. The positive method came in different forms depending on the science where a positive method was applied; for example, in astronomy, a positive method was regarded as observation, in physics as experimentation, and in biology as a comparison [1]. The term positivism was used to express the scientific approach to the world [2]. Positivism classifies into three categories of identifiable scientific methods, which were understood to be unitary and positivistic [2]. In addition, another characteristic of positivism was the elimination of metaphysics from philosophy [3].

Three basic principles of positivism exist. The first principle indicated that science was the only valid knowledge, and facts were the only possible objects of knowledge. Secondly, philosophy did not possess a method different from science. The third principle specified the task of philosophy was to find the general principles common to all the sciences. The principles of positivism served as a guide for human conduct and as the basis of social organization. Positivism, consequently, denied the existence or intelligibility of forces or substances that went beyond facts and laws ascertained by science. Further, positivism opposed any metaphysics and, in general, any procedures of investigation that were not reducible to a scientific method [3].

With the principles of positivism in mind, the belief followed that metaphysics could not be removed from science. The positivist approach, therefore, expressed the view that all true knowledge was science, and everything was measurable. In addition, associated with positivism was reductionism in the same way that societies related to number and mental events to chemistry. As a result, positivism constituted a negative approach because the positive method focused solely on one identifiable scientific method.

Concept Analysis

Aim of the Concept Analysis

According to Walker and Avant, the purpose of a concept analysis was to examine "the basic elements of a concept which can be useful

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in refining ambiguous concepts in theory" [4, p. 158]. The process also helped to clarify vague ideas in nursing and gave the concept of positivism a clearer meaning [4].

Positivism was not used in nursing for many reasons because positivism presented arbitrary practice and limited nurses to only one science. In the application of positivism, advanced practice nurses (APNs) would have been in a position of assessing their practice through a single method, thereby eliminating the belief that nursing also comprised art. The concept of positivism allowed APNs to have a better understanding of the concept and assisted with utilization in practice. Walker and Avant contended that an individual could "focus attention on exactly what use you intend to make of the results of your effort" or answer the question, "Why am I doing this analysis?" [4, p. 161]. By the process of analyzing positivism, APNs were able to assess the need to accept the process of positivism and apply positivism to practice or eliminate the positive method with supportive facts. Furthermore, "logical positivism had serious consequences for ethics and theology" [5, p. 2], suggesting ethical and religious expressions were not verifiable and therefore regarded as factually meaningless. The term positivism was addressed through observable phenomena and factual knowledge attained through experience because the "world can only be known through observable entities, with demonstrated regularities and general laws verified through their measurement and quantification" [6, p. 37]. Further, expressed as empirical was positivism. With "nursing theoretical basis, analytical mechanistic and reactive, concentrating like medical science on the illness-cure paradigm, and instead champions a more humanistic, person-centered methods, highlighting it's dialogical, interactive and holistic and human perspective within the health-care paradigm" [6, p. 38].

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Theory Related to Practice

Before a nurse became an APN, the nurse built his or her knowledge and experience as a registered nurse (RN). The RNs used theories learned from undergraduate studies that aligned with their beliefs of nursing practice. The combination of theory and practice regarding positivism provided a base upon which a nurse practiced as an APN. For example, an RN applied one of Jean Watson's [7] theory of human caring's carative factors, such as developing and maintaining a helpful and trusting relationship with the patient. The RN decided doing so was compatible with his or her beliefs and values to build this relationship to facilitate communication, patient learning, and patient compliance with treatment. Afterward, a positivist approach was adopted as the RN gathered positive data from experience. The positive data validated the nurse's experience with Watson's theory, which could apply to his or her advanced nursing practice.

Use of the Concept in Theories

Although the role positivism presented in the previous RN example was to guide APN practice, actual nursing theories mention the concept of positivism. Theorist Margaret Newman [8] alluded to positivism in the creation of her theory of health as an expanding consciousness. While Newman researched for her theory, she "pursued a positivist approach for a while" but "became increasingly dissatisfied with the results of this type of research" (p. 23) [8]. The reason being that Newman felt the concept of positivism as a research method was incompatible based on the paradigm in her theory.

Dictionary Definitions

Positivism defined in a variety of sources including the *Encyclopædia Britannica*, the *Merriam-Webster Online Dictionary*, and the *Stanford Encyclopedia of Philosophy*. The *Encyclopædia Britannica* [2] for instance, defined positivism as a system that confined itself to data of an experience and did not include a relation to deductive or metaphysical beliefs. *Merriam-Webster* [9] defined positivism in two ways. The first definition defined the concept as a theory that declared theology and metaphysics as flawed areas of knowledge, and positive knowledge was founded "on natural phenomena and their properties and relations as verified by the empirical sciences" (def. 1). The meaning was similar to *Britannica's* [2] in that both sources recognized the idea as a system or theory that disapproved of theology and metaphysics and instead focused on an experience. *Merriam-Webster* [9], however, included that empirical science must verify positivism. The second definition from *Merriam-Webster* completely differed from the other definitions and was based on the feeling or "quality or state of being positive" (def. 2) [9].

Positivism was recognized in the discipline of law and defined in the *Stanford Encyclopedia of Philosophy* as well. Legal positivism stated as a theory in which the existence and subject of law depended on social facts and not on the qualities of being good or worthy [10]. The legal meaning reflected previous definitions with existence and subject of law comparable to knowledge, social facts equivalent to an experience, and rejection of qualities of worthiness relative to abstract beliefs. Three of the four definitions corresponded to one another regarding the principal elements of theory, criticism of theology and metaphysics, knowledge, and experience.

Integrated Literature Review of Nursing

Positivism was found present in a literature review of nursing about evidence-based management (EBM). Young [11] wondered if health care management had been or even could be studied using evidence-based practice (EBP). Young learned positivism played a role in criticism as the opposed and favored approach to EBP. The definition of the concept of positivism in Young's review was most similar to *Merriam-Webster's* [9] first meaning in that all theories had to be "scientifically or mathematically proven through experimental processes" [11, p. 147]. APNs have been expected to manage either business responsibilities, employees, or both. The literature review brought forth differing opinions but ultimately favored EBP as the ideal research method for examining practices in healthcare management [12].

Attributes

According to Walker and Avant, "determining the defining attributes of a concept is the heart of concept analysis" [4, p. 162]. For appropriate characterization of the concept, the attributes needed to be related to the concept of positivism. After review of the literature and the desired use of the concept, the identification of six attributes included experience, system of facts, objective, empirical knowledge, human, and natural phenomena.

Definition of attributes originated from the *Merriam-Webster Online Dictionary*. The definition of *experience* was as "the fact or state of having been affected by or gained knowledge through direct observation or participation" [36]. The *systems of facts* also known as theory, which "relates to the analysis of a set of facts in their relation to one another" [37] whereas facts are "a collection of factual knowledge about something" [22]. The definition of *objective* was "expressing or dealing with facts or conditions as perceived without distortion by personal feelings, prejudices, or interpretations" [38].

Empirical knowledge was knowledge gained "based on testing or experience" [13]. The definition of *human* was "of, relating to, or affecting people" [14]. The attribute of *natural phenomena* defined as two words indicating the medical definition of natural as "of or relating to nature as an object of study and research" [39]. The definition of phenomena as "an observable fact or event," which further clarified as "natural phenomena like lightning and earthquakes" [40]. Defining the determined attributes of the concept positivism facilitated communication and expanded individual understanding necessary for the researchers to solidify antecedents and consequences for the concept positivism.

Antecedents

The concept of positivism antecedents gathered from various definitions of the concept, and the antecedents preceded positivism attributes. First, a source of knowledge, or understanding, received from undergraduate and graduate studies was necessary to lay a fundamental foundation for the APN to "assess, diagnose, manage patient problems, order tests, and prescribe medications" [15]. Pure logic was required for rational thinking and connecting objective information; however, the term *pure logic* defined as two words: (a) pure and (b) logic. *Pure* meant "being thus and no other" [16] and *logic* was the "science that studies the formal processes used in thinking and reasoning" [17].

The next antecedent used the definition of pure but combined pure with *mathematics*, “the science of numbers, quantities, and shapes and the relations between them” [18]. The role of pure mathematics was to permit the use of numbers for further analysis and confirmation of data, such as the number of sick days. Similarly, knowledge of the self, *self-awareness*, or the “awareness of one’s own personality or individuality” [19] confirmed the role and importance of being a patient’s APN. Qualitative information, such as label or description, was received in the form of the patient’s reason for an appointment [20]. Furthermore, the patient believed his or her illness existed, so the illness was now in a state of *being* [21]. Additionally, the sickness that emerged would be assessed scientifically using a “system of knowledge concerned with the physical world and its phenomena” [22]. Along with those factors, the interaction happened in an already present *environment*, or “conditions that surround someone or something” [23]; thus, the clinical setting was defined as the environment. The *social* characteristic referred to concepts related to society and observed interactions that happened before the appearance of the disease or leading up to the disease [24]. Similarly, *language* presented before hand for effective communication or verbalization of a personal opinion related to the experience. Finally, the use of the antecedent of language regarded “the system of words or signs that people use to express thoughts and feelings to each other” [25].

Consequences

Consequences of the concept of positivism included various actions that resulted from the concept. One outcome was *perception*, “the way you think about or understand someone or something” [26] regarding the natural phenomena that occurred. After having interacted with the patient, personal perspective, or diagnosis, was validated or shifted to rejection or adaptation dependent on the system of facts gathered. A *treatment plan*, or “roadmap that a patient will follow on his or her journey through treatment” followed after consideration [27, p. 75]. The patient’s symptoms would have *improved* or become better and so would have the APN’s knowledge and assessment skills [28]. The APN practiced *self-reflection*, “careful thought about your own behavior and beliefs” [29] to gain insight into his or herself, practice, and patients.

Model Case

Walker and Avant stated that “A model case is an example of the concept that demonstrates all of the defining attributes of the concept” (p. 163) [4]. Therefore, described next is a pure exemplar of the concept positivism, which demonstrates the six identified attributes of experience, systems of facts, objective, empirical knowledge, human, and natural phenomena.

The APN, Nancy, stood outside of the door that led to her next patient. A lock of hair had fallen from behind her ear, so using her fingers, Nancy placed the hair behind her ear. Nancy knocked on the door, entered the room, and greeted the patient. An antibacterial foam dispenser was in the room, so Nancy placed foam in her hands, rubbed together with her hands, allowed her hands to dry, and proceeded to the patient assessment.

The presented model case included all critical attributes of positivism. The humans were the APN and the patient. A system of facts, or theory, was exhibited by the APN’s use during the healthcare encounter of the complexity integration nursing theory (CINT)

involving the theory of nursing knowledge/wisdom and nursing praxis, [30]. The entire healthcare encounter and the attribute of the APN’s experience symbolized nursing essence (NE) [30]. The APN used scientific information from her Nursing Foundation (NF), a component of her Nursing Knowledge (NK), to dictate the use of foam on her hands to decrease the risk of infection, and Nancy allowed the patient to feel at ease from having seen the hand-washing action [30]. In addition, Nancy completed a patient assessment for differential diagnosis, which was a problem-solving methodology (M) [30], another component of her Nursing Knowledge (NK). The APN used curiosity, or disciplined inquiry (DI), to assess the patient and determine the evidence-based best practice for inclusion in the treatment plan [30]. The natural phenomena that occurred were the existence and transfer of bacteria when the APN touched her hair and skin. The action when Nancy rubbed her hands together with foam displayed empirical knowledge. The APN knew her hands were clean after she spread the foam throughout her hands and allowed her hands to dry. Finally, when Nancy performed the patient assessment, she was objective about the patient’s condition. The model case was a pure exemplar of the concept positivism.

Borderline Case

Borderline cases exemplified those that have most of the attributes of the concept being examined [4]. The following was an example of a borderline case for the concept of positivism.

An APN, Mary, came to the clinic in the morning and looked at her schedule that consisted mainly of patients coming for annual physicals. Mary collected the patient’s data such as age, gender, and medical history to predetermine any issue she could come across during their visit. The first patient was a 40-year-old woman who lived with her husband and two children. The patient was unemployed with self-paid insurance that had limited coverage. During the exam, the APN noticed a lump on the patient’s breast. Mary automatically referred the patient for a mammogram with the clinic associated with the APN’s practice. The patient started to cry.

Mary continued with her assessment by collecting more information. The patient expressed to the APN that she did not have the money needed to pay an insurance deductible to have the mammogram. Mary ignored what the patient said and continued with formulating a diagnosis from her research and data. A generalization of the patient’s visit occurred without the patient’s involvement. The same day, Mary remembered that every Thursday in the month of October, a mammogram truck was available to do free mammograms. The APN called the patient and gave her the information. The patient was very grateful and agreed to have the mammogram study. The borderline case depicted systems of facts which are objective with the use of empirical knowledge based on human as natural phenomena.

Contrary Case

Walker and Avant [4] noted: “contrary cases are clear examples of ‘not the concept’ and discovering what a concept is not helps us see in what ways the concept being analyzed is different from the contrary case” (p. 166). Discussed next is an example of a contrary case for the concept of positivism.

An APN, Joan, saw a 19-year-old woman, Emily, who visited for her annual physical examination. As Joan examined Emily, the APN noticed a small lump on Emily’s breast with a characteristic that the

APN felt needed further evaluation with a mammogram. The APN reviewed the patient's and her family's past medical history along with diet as well as the past and current medications, which would isolate a reason for concern. Joan used her intuition and advised the patient to have a mammogram. As the patient heard the recommendation, she started to cry. Joan held Emily's hand and comforted the patient with warm words and therapeutic touch. The contrary case depicted the approach of practice by the ANP using the science and art of nursing. The warmth of human touch allowed the energy to flow to the patient with the non-verbal expression of empathy. Missing from the contrary case were the attributes of the positivism concept.

Empirical Referents for Critical Attributes

Empirical referents described as "phenomena that by their existence demonstrate the occurrence of the concept itself" (p. 168) [4]. Education, certification, and licensure support the human, or APN, and his or her experience, nursing foundation, and nursing knowledge [15]. The system of facts represented by healthcare encounters and the use of theory by the APN; in this case, the theory applied was the CINT metatheory of nursing knowledge/wisdom of nursing praxis [30]. The formula, "NF + M + NE + DI = NK," was demonstrated in the model case (p. 26) [30]. Objectivity was shown through the APN's patient assessment and was endorsed by the Objective Structured Clinical Examination (OSCE) used to validate clinical competence (p. 186) [31].

Joseph Lister was known for founding antiseptic medicine and was an early pioneer in preventive medicine [32]. Lister experimented with hand washing, but results were difficult to isolate. Many years later, Godoy et al. [33] conducted a study on the effects of hand washing in prevention of influenza that helped support Lister's idea that hand washing was part of preventive medicine. Both Lister's efforts [32] and Godoy et al.'s [33] study provided empirical evidence, supporting the concept of positivism. The natural phenomena that occurred were the presence of bacteria and their ability to invade the body [34]. The phenomenon of bacteria was first employed in medicine by Louis Pasteur, Lister, and Robert Koch and was known as the germ theory [34].

Impact of Positivism

Present day use in Advanced Nursing Practice

Positivism has had an immense impact on how APNs provided care with a base of objectivity, empiricism, and natural phenomena, directing APN practice towards scientific methods instead of a humanistic approach. Furthermore, APNs came across the "division between the art and science of nursing as humanistic and mechanistic" [35]. The nursing process consisted of systematic delivery of care in a logical, sequential manner to promote individuals with unique needs and participate in a joint process. In contrast to positivism, humanism consisted of holistic, individualistic care and a person-centered approach. The application of positivism by APNs had the potential to reform practice into the "day-to-day practice, based on [an] emphatic empowering relationship; it promotes a detachment and coldness in the quest of objective scientific knowledge" (p. 982) [35]. Based on the present concept analysis of positivism, advanced practice nursing cannot have occurred only in a scientific approach, but APNs must conduct their practice with roots in the humanistic approach of objectivism and with qualitative research methods.

Present Day Use in Nursing Research

Although the positivist approach has been around for hundreds of years, present technology has highly advanced positivism. The positivist approach along with image recording devices has been used together in nursing research. Since an experience or natural phenomenon was central in the definition of positivism, researchers witnessed and obtained information objectively in a natural setting without having been physically present as long as a recording device was near. The experience was able to be observed repeatedly and sufficiently analyzed without the risk of a faulty memory or delusional findings. The recording permitted other researchers to witness the same phenomenon because physical presence became an option.

A variety of perspectives multiplied through nursing research, which could be positive or negative regarding support of the research; however, the Health Insurance Portability and Accountability Act (HIPAA) required that patient's health information be protected. If consenting patients are needed and are not available research is hindered. Overall, a present-day twist in the positivist approach had the potential to be useful in nursing research by gathering data for improved techniques, finding increased effectiveness of patient interactions, and increasing observable evidence for research.

Concept Model

Refer to Figure 1. Positivism: A Concept Model, for an illustration of the idea of positivism. Inside the black circle, represents each attribute or the environment, where the attributes usually occurred. The small blue circle symbolizes natural phenomena, the essence of the concept. The blue five outer curved lines that surround the blue circle stand for the defining positivism attributes: (a) experience, (b) a system of facts, (c) objectivity, (d) empirical knowledge, and (e) a human. The lines were curved to show how each attribute changed depending on the associated phenomenon. The two corners of the oval represent the factors leading up to the phenomena of positivism and the consequences of the concept of positivism. The curved line connecting the two corners surround the environment and show how change depends on the phenomena and also the connection to the specific phenomenon.

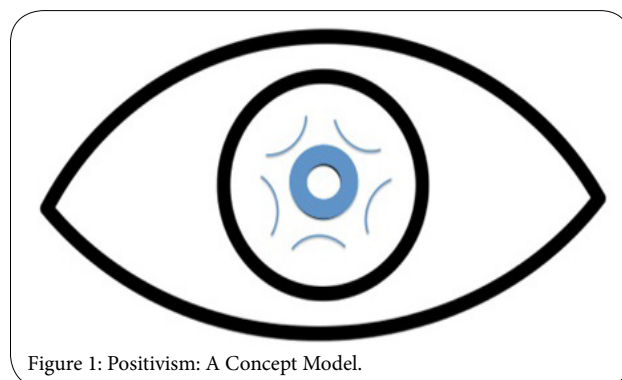


Figure 1: Positivism: A Concept Model.

Discussion

Positivism was an idea that originated centuries ago but continued today subtly woven into the science of nursing. The use of the positivistic approach applied to nursing research and practice was best used not alone, but combined with the art of nursing. The integration of positivism and the art of nursing provide a more thoroughly educated APN.

Competing Interests

The authors, Pawlikowski and Rico declare that they have no competing interests.

Dr. Van Sell declares she is co-author of the e-book *The Evolving Essence of the Science of Nursing: The Complexity Integration Nursing Theory*.

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