

A Review of the Nursing Paradigm

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Abstract

Background: Paradigm is the set of acceptability of agents in a field, which provide a framework in which context the scientists' research to solve scientific problems and regulate the series of studies in the field. **Aim:** The purpose of this paper is a review of the nursing paradigm. **Method:** This review was undertaken by library studies using databases such as CINHALL, MEDLINE, Web of Sciences by key words Paradigm, Mono paradigm, Multi Paradigm, Nursing, Nursing Sciences, separately and in combination in the title, abstract and keywords. **Result:** Nursing paradigm determines the goals and boundaries like a foundation of a building. Nursing as a moving profession from integrated and continual roles, and the integrated and holistic nursing is in circulation as a new paradigm. The nursing science has come to existence since only a few years ago, and we can say in certain that it is a young and new science but with a good progress. As it is a new science and because of dealing with human being, it has faced numerous scientific developments, and several paradigms are simultaneously created due to multidimensional nature of the human being. **Conclusion:** However, considering the work of theorists in recent years, the nursing is gradually leaving the multi-paradigmatic state and progressing to become a single paradigm.

Keywords

Paradigm, Nursing, Nursing Sciences, Multi paradigm, Mono Paradigm

1. Introduction

Paradigm comes from the Greek word "Paradigma", meaning instance, example and template or model, which is

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derived from the verb of “Paradeiknumi”, meaning to display, to provide and to be exposed to. “Para” means “alongside” and “close”, while “deiknumi” means to point out and to show. The Greek word of “Paradigm” has been used by Plato in Greek texts as a model or pattern used by the Demiurge (God) to create the universe and the cosmos [1]. In the Oxford English Dictionary, paradigm is defined as a pattern, model and example. Also, in some dictionaries, the term refers to a set of specific elements and set of all forms inflected based on a stem or theme and is synonymous with Mold, Standard, Ideal, Paragon and Touchstone [2].

The modern use of the term in theoretical ideas was begun by Thomas Kuhn’s, the American writer, in 1962 [3]. He has known the “paradigm” as a scientific revolution based on unprecedented and attractive achievements, which are able to attract the group sufficiently. Kuhn believes that paradigm is a scientific achievement that provides a framework for academic performance and is a model for explanation [4]. He sees it as a reflecting of opinions and defines it as the scientific community or a society of people having the same discipline [5]. From the view of Kuhn, paradigm in the natural sciences represents a series of simulated tests and experiments that direct different types of questions relating to a particular topic and makes answering to those questions purposeful. In fact, according to Kuhn’s opinion, paradigm in the natural sciences shows how to conduct an experiment and the necessary equipments for them. Also, Nursing is used in Kuhn’s definition of paradigm in defining the paradigm of nursing and defining paradigm isn’t independent [6]. Paradigm involves public symbols (ideas and concepts), rules, and shared opinions [7]. Although the historian of science (Kuhn) founded a new, different and influencing approach in the history of science by formulation of the theory of paradigm, he has not provided a unique definition for paradigm either and has been subject to some sort of confusion [8].

However, the most complete definition of all these definitions of Cohen’s can be expressed as follows: Paradigm is the set of acceptability of agents in a field, which provide a framework in which context the scientists research to solve scientific problems and regulate the series of studies in the field [9]. Kuhn believes that scattered and various activities done before the formation of a science will be finally accepted and regulated by the scientific community after converting into a paradigm. Researchers working within a paradigm are busy with something that Kuhn calls it a normal or normative science, and the efforts of ordinary scientists to explain and match the behavior of some of the related forms in the nature with the help of experimental results are revealed and details and develops the paradigm. Working on this, the scientists will face some issues and problems, which lead to revocation of some previous statements. If the new sayings, findings and problems are not the kind to be solved and the dominant paradigm is not capable of responding them, the critical situation will occur. Then, the crisis will end with the emergence of a new paradigm or a new conceptual model that can answer to the previous unanswered questions and is supported by a community of scientists. In this case, the previously problematic paradigm is rejected. Such a change and variation between the two paradigms shapes a scientific revolution.

The new paradigm contains new points, and apparently has not the previous issues and problems and conducts the current and future scientific activities. When this reference framework faces with new problems and questions not able to answer them, then, a new crisis forms and another revolution happens in science. The science, which is engaged in the development, is supervised and controlled by a single and dominant paradigm, and defines the allowed standards of practice and research within the science that it observes and engaged in its conducting. It also makes relations between the scientists working in a scientific domain and guides and coordinates them [10].

According to Kuhn, what separates the science from non-science is the presence of this paradigm that preserves and sustains the scientific prevailing tradition. Although Kuhn believes that its nature is such that cannot be precisely defined, but it is possible to describe the important components and main constituents, which stabilize the concept of paradigm. The laws and theoretical assumptions of accepted and customary practices conforming fundamental laws to various conditions or some general principles of metaphysics directing the study of paradigm period are as such. According to Kuhn, the normal science is solving the paradigm problems, which are theoretically experimental [11]. Every branch of science has a framework that determines and limits the subject of that science and defines the study methodology and program in that subject as well. In the underlying layers of this program, which was called by Kuhn paradigm since 1962, the philosophy of that science lies. In such an underlying layer, different sciences can be analyzed and compared together. Different factors including historical and social conditions as well as its nature and subject form this philosophy.

Kuhn believes that the development of science is non-cumulative in the sense that the perspectives used by a theory are not added up to the competing theory for more use. Thus, the competition between paradigms does

not involve the cooperation of other paradigms, and only a single paradigm can be at the top. In other words, the paradigm emerged would shadow the whole science. Kuhn believes that the development of discipline occurs as convergence. The convergence of a paradigm as one target of discipline leads to progress. The convergence process is a closed process and unable to interact. In his later writings, Kuhn has replaced the paradigm word with “Disciplinary Matrix”, which is similar to paradigm in terms of definition, with the difference that since in the Disciplinary Matrix, as the content boundaries of a paradigm are not entirely clear, they appear to be implicit. Thus, examples and instances are used to explain the science. Kuhn’s theory has been criticized and even venerated as well. Some scientists believe that without such a theory, the development and progress of science has become almost impossible. However, some theorists like Larry Laudan oppose to the Kuhn’s theory. Larry believes that the rival’s plans will not leave the field by winning of a science; however, they stay and make some coexistence, which would not be perhaps as strong as the main paradigm, but still having an undeniable role [12].

2. Method

In the present review research, which was done systematically, the information published in the databases of Medline, Elsevier, Proquest, Google, Google Scholar, SID, Magiran was collected, reviewed, organized, and then compared without any time limit. Keywords such as Paradigm, Mono paradigm, Multi Paradigm, Nursing, Nursing Sciences, separately and in combination in the title, abstract and keywords were used for researching.

The criteria for being included in the research were: using the terms specified in the title, research design, quantitative or qualitative methods of research, and the criteria of exclusion were the studies limited to abstracts and the ones which had a language other than English or Persian. The repeated researches were excluded by software Endnote.

3. Discussion

Nursing Paradigm

Nursing paradigm determines the goals and boundaries like a foundation of a building [13]. How we think and give reason for human experiences can help us in making the paradigm. Theories of Nursing, in their turn, lead to the formation of knowledge, methods and problem-solving activities with international agreement and by the help of a certain discipline. In nursing, the paradigm is based on sharing the values and presuppositions of key concepts, such as person, health, environment and nursing. The boundaries for our key concepts are reflected from the nursing culture or training, working experiences and values influencing our observations of events and situations. They are our basis to make key nursing concepts [14].

Margaret Newman knows nursing as a moving profession from integrated and continual roles, and the integrated and holistic nursing is in circulation as a new paradigm [15].

Allgood believes that if we accept the paradigm involves a matrix leading to the transfer of knowledge, philosophy, theory and teaching experiences, practical knowledge and research methodology with a certain discipline between scientific societies, thus, the paradigm can conduct the activities of a discipline [16] and its main core [17].

Paradigm is accepted by the majority individuals of a discipline. They believe the nursing literature contains many references regarding conceptual models that can be considered synonymous with the paradigm. Tomey and Allgood agree with Supp & Jacox that conceptual models are paradigm, and knew the paradigm a place in which theories can be developed and tested. They have known paradigm an environment that is a suitable context for theories planning, and believe in such an environment different theories try and compete with each other, and ultimately, one among them develops and will be proposed as the fundamental model [18].

Since the base of nursing knowledge is a set of universal ideas and views about humans and human-environment relations, which have their own specific features, thus, in creating its scientific revolution and formation of its main paradigm, the paradigms of other sciences such as Mechanistic and Organist, Change and Resistance, Totality and Simultaneity, Particular & Determinism, Interactive-Integrative and Unitary-Transformative paradigms are involved [19].

Shapere (1971) argued the widely use of paradigm, and acknowledged that the paradigm covers anything and everything, and this allows the scientists to do anything. In fact, with such a criticism, Shapere somehow sug-

gests that Kuhn's philosophy considers no value for scientific methods. He believes that scientific methods should be related scientific codes and laws [4]. Nursing scholars have found that theories previously conducting clinical services are not today sufficient to explain, predict and direct the clinical services. In addition, the old theories may not be useful anymore for the developing science of nursing, as the researchers working on new paradigms of nursing do find evidence that differentiate between the nursing science and sciences such as anthropology, biology, chemistry, physics, psychology and sociology that nurses routinely refer to them cited to explain the discipline [20]. Newman argues that since nursing is to study care in experiencing of human health, then, it cannot have a single paradigm [13]. Paradigms are a framework of assumptions for theories, explorations and principles that guide the ideas of an area. In another classification, some scientists classify the paradigms into four categories of behavioral, interactive, systematic and evolutionary paradigms.

However, some believe that nursing has been seen through the development and evaluation of nursing theories regarding the development of scientific processes. Following the application of Kuhn's theory in the development of scientific knowledge, Hardy argues that nursing is in the pre-paradigm stage, since it has been described by various thoughts; although it describes a variety of phenomena, but explains this phenomenon in several ways. Nursing should try to pass the pre-paradigm stage, as remaining in the pre-paradigmatic stage can cause loss of energy, bewilderment and confusion.

Use the pre-paradigm in a science produces some problems for the systematic research. Meta-paradigm or the dominant paradigm represents a general knowledge agreements settlement of a specific discipline and provides basic parameters of a field and a central point for scientific endeavors and may itself include a series of paradigms, which are more real paradigms and can conduct the scientific activities [21]. The presence of the dominant paradigm facilitates the natural work of the sciences. With a paradigm, the research becomes purposeful and systematic and fewer unanswered questions would remain [18].

Some people believe nursing has not moved through a fixed path during its evolutionary course and jumped from a branch another, which has led to confusion of its scientists. Regarding nursing paradigms, Hal believes that Cohen should be asked some questions such as [22]:

- What is the process of accepting a paradigm?
- Why and when, a paradigm shift occurs?
- What is the relationship between the theory and the value?
- Is it possible that the paradigms do not follow the simultaneous competition?

According to scientists, nursing is in the pre-paradigm stage. The scientific revolution may never happen in nursing, not for the nursing is not progressing, but as the normal science course may not happen. Behavioral and natural sciences' disciplines are continuing to make progress and having rival paradigms to describe and predict other disciplines. Another point to consider is that having only one paradigm for sciences such as nursing, which deals with human being and a complex set of health and illness, is not accepted. Some nurses believe that nursing has come to start of a paradigm now, or is changing the paradigm [12].

Kuhn believes that science without theory is in the pre-paradigm stage, which cannot be called a science; but, one can say it is an event to be considered. Paradigm is a worldview. If we accept that modern science attempts to discover new knowledge or truth, how our approach is based on a particular paradigm.

Usually, the nurses have no problem with meta-paradigm. However, they disagree with each other whether the nursing is a paradigm or a pre-paradigm to the problem, which is the main challenge between nursing scholars. However, nursing should not be blamed; the reason for such disagreements is the lack of a single definition for nursing [23], while the authors explain various concepts. The challenge is more than 20 years lasting in nursing that whether the nursing is at the pre-paradigm or paradigm stage? Paradigm is an abstract vision or landscape of a discipline, systematic beliefs, ideologies and theories. In accordance with Kuhn's view, the profile of a mature science is characterized by the followings:

- 1) Acceptance by the scientific community as a paradigm;
- 2) Approach to solving the discipline problems, which have been caused by the paradigm;
- 3) Presence of the knowledge as research articles in scientific journals rather than books;
- 4) Development of an obscure and unfamiliar language;
- 5) A leading paradigm has the most important criteria.

Using these criteria, as nursing science has several broad paradigms and its scientific community has not still accepted one of them, one can say it is in the pre-paradigm stage [24]. The nurses indicate the Cohen needs to share the values as the same language in nursing journals, which is developing its own language; then, it is in the

pre-paradigm stage. But, if we accept this theory, the nursing cannot be seen as a science having philosophy; since, we said before the philosophy of every science is the main foundation of that science paradigm. If nursing is in the pre-paradigm stage, then, it has no philosophy; while we believe that nursing has numerous philosophy and theories, and even some of our scientists consider the conceptual models equal to paradigm due to their broadness [25].

However, Meleis argue that the Kuhn method is not suitable to study the scientific progress and maturity, which deals with humans [26].

The scientists have defined another classification for different types of paradigms. They believe that the sciences are placed in one of these two categories of paradigms or some in the both. Scientists believe that the paradigms are interpretive or empirical.

Based on this classification, nursing is a set of interpretative of experimental paradigms. Nursing, at first, began to work with quantitative studies, and many of its improvements are the results of such research and the experimental paradigm. On one hand, as nursing deals with human like social sciences, it is not able to deeply identify the human dimensions with the help of empirical research; thus, it needs to get help from another method called qualitative research and the interpretive paradigm. Therefore, we can say that nursing is a science linked to physiological parts as well as the psychosocial parts, and cannot only use one paradigm to advance its missions and need a multiple paradigm. A set of qualitative and quantitative studies in nursing help the proper care and attention to all aspects of human being. However, a multiple paradigm does not require a set of qualitative and quantitative research. But, some sciences can use one of the paradigmatic approaches and benefit from several sub-paradigms in that sub-group to achieve their general goal. However, creativity is an essential and critical source for a science. Being a multiple paradigm science triggers the creativity. As nursing is linked to human behaviors, and a single view is not sufficient for explaining a variety of phenomena and the nurses facing with those phenomena, thus, it cannot grow with a single paradigm. A unique perspective is like focusing a microscope on a topic, while being multiple paradigmatic is like having a lens with wide viewing angle, which is also able to see the far radius. The goal of nursing science is not only to add something to the knowledge base, but, to develop the theory, predict and prescribe its main purpose.

The multiple paradigm nature encourages us to think beyond a framework. The discussion improves by the presence of several paradigms. The nursing science can be understood as a beautiful carpet, which is produced with the help of a variety of colors and various designs that tries to achieve the optimal result with the help of various ways. Nursing problems are too diverse and have numerous solutions and answers. Being multiple paradigmatic, somehow prevents the nursing uniqueness in finding the answer. However, being multiple paradigmatic leads to conditions for nursing science that have confused the clinical staff and divided the scientific problems into several categories and created different views. However, there are debates on how to explain arguments such as, if everyone is a unit, why using the instructions is discussed for an individual as an open system? How can we claim in nursing to use experimental methods, which are also claimed to be controlling method and anti-humanism?

If we consider empiricism obsolete, what should replace it? However, a multiple paradigm has much more advantages than the disadvantages. Changing the nursing science perspective is required for reconciling these two broad paradigms. An approach is needed that focuses on searching instead of finding a broad paradigm or a single paradigm. Although there are differences between two qualitative and quantitative research methods, but both of them argue on describing, probability the conclusion. The incorporation between qualitative and quantitative methods in advanced nursing science is recommended. Although these two different approaches follow a particular route, they suggest theories that describe the relationship between the phenomena. The collaboration between these two paradigms leads to the development of nursing science. When paradigms are dealing with values and ideas, the communicating between different perspectives will happen. Different perspectives in nursing will determine the relationships and develop the nursing.

Loundon recommends a process for integration between the different studies and the aim of developing theories in order to solve the discipline problems. He believes that because of the importance and ease of multiple paradigm, it is appropriate to use it in practice [24].

In addition to the human sciences such as psychology, social science and nay science dealing directly with people, sciences such as agricultural science has considered the definition of multiple paradigm to advance its goals as well [25].

4. Conclusion

Based on what already said, we conclude that the sciences dealing with people and human being cannot reach a fixed paradigm like sciences such as mathematics, physics, etc. Several sets of multiple paradigms can be put together to form and develop a science. This is also true for nursing. The nursing science has come to existence since only a few years ago, and we can say in certain that it is a young and new science but with a good progress. As it is a new science and because of dealing with human being, it has faced numerous scientific developments, and several paradigms are simultaneously created due to multidimensional nature of the human being. However, considering the work of theorists in recent years, the nursing is gradually leaving the multi-paradigmatic state and progressing to become a single paradigm. Accordingly, the author believes that the main layers of nursing science would never be identified if it relies on a single paradigm and becomes a single-paradigmatic.

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