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POSSIBILITIES OF EPISTEMOLOGICAL EVALUATION OF GRADUATE PROGRAMS IN NURSING IN THE LIGHT OF KARL POPPER

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ABSTRACT

Objective: to reflect on the Hypothetical-Deductive Method of Karl Popper and its applicability for the epistemological evaluation of the Graduate Programs in Nursing.

Method: it is a theoretical and reflective study. Nursing as a science under construction needs to critically evaluate the epistemological foundations that demarcate it. Such an evaluation is abstruse to be carried out, since what is at issue is the validation of the program from the epistemological point of view of the production resulting from dissertations and theses, evaluating it in the philosophical perspective that underlies it. Undoubtedly it is a huge project and has its value in the action of unveiling the phenomenon that develops there, allowing to ratify or rectify the program. To direct its construction, the following guiding question is formulated: how can the Hypothetical-Deductive Method contribute to the epistemological evaluation of the Graduate Program in Nursing?

Results: the text points out that the scientific demarcation of nursing is found in the study object of the program. This must be falsifiable, clear, precise, reflecting what is specific to nursing as a career and area of knowledge.

Conclusion: admitted to be the role of nursing in the prevention and treatment of diseases, as well as the restoration and promotion of health, from the offer of nursing care, the fallibilism attitude in the researcher who works in the program can move it to a better understanding of the world around him and to evaluate the effective impact of their scientific production on the fulfillment of the purpose of the profession.

DESCRIPTORS: Nursing. Education, graduate. Philosophy. Academic dissertations. Education. Knowledge. Nursing theory.

POSSIBILIDADES DE AVALIAÇÃO EPISTEMOLÓGICA DOS PROGRAMAS DE POSGRADO EM ENFERMAGEM À LUZ DE KARL POPPER

RESUMO

Objetivo: refletir sobre o Método Hipotético-Dedutivo de Karl Popper e sua aplicabilidade para avaliação epistemológica de los Programas de Posgrado em Enfermagem.

Método: trata-se de um estudo teórico e reflexivo. A enfermagem como ciência em construção necessita avaliar criticamente os fundamentos epistemológicos que a demarcam. Tal avaliação é abstrusa de ser realizada, pois o que está em questão é a validação do programa sob o ponto de vista epistemológico da produção resultante de dissertações e teses, avaliando-o na perspectiva filosófica que o fundamenta. Indubitavelmente é um projeto colossal e tem o seu valor na ação de desvelar o fenômeno que ali se desenvolve, permitindo ratificar ou retificar o programa. A fim de direcionar sua construção, formula-se a seguinte questão norteadora: como o Método Hipotético-Dedutivo pode contribuir para a avaliação epistemológica de los Programas de Posgrado em Enfermagem?

Resultados: o texto aponta que a demarcação científica da enfermagem é encontrada no objeto de estudo do programa. Esse deve ser falsificável, claro, preciso, refletindo aquilo que é específico da enfermagem como carreira e área de saber.

Conclusão: admitido ser o papel da enfermagem a prevenção e o tratamento de doenças, bem como a restauração e a promoção da saúde, a partir do oferecimento do cuidado de enfermagem, a atitude falibilista no pesquisador que atua no programa poderá movê-lo a uma melhor compreensão do mundo que o cerca e a proceder à avaliação do efetivo impacto de sua produção científica para o cumprimento do propósito da profissão.

DESCRITORES: Enfermagem. Educação de Pós-Graduação. Filosofia. Dissertações acadêmicas. Educação. Conhecimento. Teoria de enfermagem.

POSIBILIDADES DE EVALUACIÓN EPISTEMOLÓGICA DE LOS PROGRAMAS DE POST-GRADUACIÓN EN ENFERMERÍA A LA LUZ DE KARL POPPER

RESUMEN

Objetivo: reflexionar sobre el Método Hipotético-Deductivo de Karl Popper y su aplicabilidad para la evaluación epistemológica del Programa de Post-Graduación en Enfermería.

Método: se trata de un estudio teórico y reflexivo. La enfermería como ciencia en construcción necesita evaluar críticamente los fundamentos epistemológicos que la demarcan. Esta evaluación es absurda de ser realizada, pues lo que está en cuestión es la validación del programa desde el punto de vista epistemológico de la producción resultante de disertaciones y tesis, evaluándolo en la perspectiva filosófica que lo fundamenta. Indudablemente es un proyecto colosal y tiene su valor en la acción de desvelar el fenómeno que allí se desarrolla, permitiendo ratificar o rectificar el programa. A fin de dirigir su construcción, se formula la siguiente cuestión orientadora: cómo el Método Hipotético-Dedutivo puede contribuir a la evaluación epistemológica de los Programas de Posgrado en Enfermería?

Resultados: el texto apunta que la demarcación científica de la enfermería se encuentra en el objeto de estudio del programa. Este debe ser falsificado, claro, preciso, reflejando lo que es específico de la enfermería como carrera y área de saber.

Conclusión: admitido ser el papel de la enfermería la prevención y el tratamiento de enfermedades, así como la restauración y la promoción de la salud, a partir del ofrecimiento del cuidado de enfermería, la actitud falibilista en el investigador que actúa en el programa podrá moverlo a una mejor comprensión del mundo que lo rodea ya proceder a la evaluación del efecto efectivo de su producción científica para el cumplimiento del propósito de la profesión.

DESCRIPTORES: Enfermaría. Educación de posgrado. Filosofía. Tesis académicas. Educación. Conocimiento. Teoría de enfermería.

INTRODUCTION

The year 2017 marks a new stage in its evaluation process through the Comissão de Aperfeiçoamento Pessoal de Nível Superior (Commission for the Improvement of Higher Education Personnel CAPES), a body of the Ministry of Education/Brazil responsible for the recognition and evaluation of the Graduate Programs in Nursing (PPGENF) *stricto sensu* post-graduate courses (master's degree and doctorate) at the national level. For the first time, the reports of the various PPGENF are evaluated in the quadrennium.[1-5]

The data available in the Sucupira Platform indicate that, during the four-year period to be analyzed, 4817 academic papers were produced by 74 PPGENFs. Out of them, 3671 were master's dissertations, and 1146, doctoral theses. These numbers are expressive. Despite all efforts and commitment in the evaluation of PPGENF, its analysis from the perspective of the Philosophy of Science and Epistemology still lacks insertion. It is necessary to evaluate the epistemological foundations that constitute it and to consider them in the evaluation process, since it is the researcher's duty to critique his scientific production.[4-6]

In this sense, it is salutary the metaphor of Otto Neurath when stating: "We are like sailors who need to rebuild their boat in the open sea, never being able to dismount it in a dry dock and rebuild it there with the best components.".[7:172] For this philosopher, science, like all aspects of human life, is in the process of being made. Three images proposed by Neurath help to understand the plural nature of science, as well as the notion that it is always in the process of being reconstructed, since a complete reconstruction is not possible.[7-8]

Thus, the "sailors" represent the researchers; the "boat", science; the "open sea", the natural world. Neurath argues that it will be in the course of the development of scientific knowledge that researchers will have to deal with the correction of possible deviations or misunderstandings of directions, since there is no "dry dock", that is, a place where to take refuge to produce the rectification; it is in the very course of the elaboration of science that correction is given.[7-8]

In addition, it is known that such an evaluation is abstruse to be carried out, since what is at issue is the evaluation of the PPGENF, from the epistemological point of view of the production resulting from dissertations and theses, evaluating it through the theoretical-philosophical point of view or grounds. There is no doubt that it is a huge project and it has its value in the action of unveiling the phenomenon that develops there, allowing to ratify or rectify the PPGENF.[2,6]

It should also be emphasized that this epistemological evaluation is imperative and necessary, because its result is to instigate reflection and the search for a response, even if provisional, to the following questions: is nursing a science? What is the criterion that scientifically demarcates nursing research? To what extent does the knowledge produced in nursing support the rigor of a chosen scientificity for the training of researchers? What is the impact of nursing research production on its

pragmatics? These questions, among others, exemplify the value of the epistemological reflection of the PPGENF.[2-6]

Currently, the *stricto sensu* post-graduate courses have been systematically evaluated by CAPES, which appoints a committee of experts from each area of knowledge. It is responsible for assigning concepts ranging from 1 to 7 to the program based on the use of metrics and previously established and published criteria. Concepts 6 and 7 are assigned to programs of excellence and should constitute the goal to be achieved by all the most different PPGENF. The programs that reach this qualification, besides the criteria, indicators and metrics common to the other programs, need to attend certain singularities. As a career linked to the current scientific paradigm, nursing has similar criteria for evaluating other areas. This fact favors its visibility and recognition of its scientific nature.[9]

Regarding the analysis of the PPGENF at the level of excellence, CAPES, based on the final report of the evaluation committee, identifies and evaluates the programs that present great competencies in the areas of Solidarity, Nucleation, Leadership and Internationalization (scientific production and international insertion).[3,9]

It cannot be neglected to consider that, in the context of reflection, Brazilian nursing is a transplanted career with a United States base and assumes a theoretical-philosophical alignment that is consistent with this reference, imposing the approximation of the guidelines proposed by the American Association of Colleges (AACN) for doctoral programs.[2-3,10]

Among the criteria established by AACN, the following stand out: 1 - faculty: with diverse intellectual origins and perspectives; 2 - study program: accessible to all students and possessing activities that address the philosophical and historical foundations of the career, in order to favor the student in his criticism and construction of nursing knowledge; 3 - evaluation: it must be systematic, in a continuous way, looking for an analytical that does not end in the quantification, but that seeks to apprehend qualitative elements.[2,10]

Thus, it is understood that the criteria assumed by CAPES are close to AACN's recommendations. The indicators and metrics are substantive and cause the PPGENF to generate the scientific progress of the career, from its alignment with the sciences that, historically, have had greater evolution, notably, Physics.[2-6,11-12]

The justification and the relevance of this reflection reside in the fact that Nursing, as a science under construction, needs a critical evaluation of its epistemological foundations that scientifically demarcate it.

To guide the construction of this article, the following guiding question is formulated, namely: how can the Hypothetical-Deductive Method contribute to the epistemological evaluation of the PPGENF? To elucidate the question, the text is divided into two sections.

In view of the above, this article aims to reflect on the Hypothetical-Deductive Method of Karl Popper and its applicability for epistemological evaluation of the Graduate Programs in Nursing.

THE HYPOTHETICAL-DEDUCTIVE METHOD AND ITS BASILARY ELEMENTS

The epistemological discussions lead to question the possibility of scientific knowledge. Two thoughts are shown as strategies to legitimize this possibility or refute it. The first is dogmatism. For its adherents, knowledge is possible as well as the discovery of the truth. Thus, one can come to full knowledge and refute any doubts about human confidence about what is known. The other is skepticism. For this thought, one cannot know the phenomena of the world, either by its constant transformation, or by the limitation of the sensory organs, notably sight and hearing, or methods and theories.[11,13-14]

Fallibilism appears as an intermediate attitude to these two epistemological positions. Opposing dogmatism, this position admits that scientific knowledge is fallible, subject to errors and revisions; soon, in permanent construction. Against skepticism, fallibilism argues that scientific knowledge is possible, because it advances by allowing the human being to interact with the world, both by regularity and by the capacity for change.[11-13]

Karl Popper (1902-1994) is a fallibilism in the scientific area. For him, scientific knowledge does not have the value of truth, but of verisimilitude. In his work "Conjecturas e Refutações", he assumes that there are different degrees of approximation of truth. That is, a scientific hypothesis can be refuted, but some of its consequences may correspond to reality and, therefore, part of its content is true. To this proximity of truth, which is directly linked to the existence of true contents in an assertion, he called verisimilitude.[14]

Popper and the problem of induction

It is understood by induction the reasoning that enables the researcher, from empirical and observed data, possessing occurrence with regularity in nature, to generalize. For example, from the observation of some cases of white swans, it is concluded that all swans are white. During the history of science, the use of this resource has aroused a position of strong controversy as to whether to justify and legitimize its use for the construction of scientific knowledge. This problem has been called the problem of induction.[11]

The problem of induction is one of the questions that has aroused more discussion and interest in the Philosophy of Science in the last century. This is because, if empirical science is of an inductive basis, then whether induction is a rational procedure is whether science is a rational activity. As the answer given to this question has not been widely accepted, it is in this context that Popper's skepticism against inductivism arises for the elaboration of scientific knowledge. The theorist aimed to explain the rationality of science without appealing to induction.[11-17]

For the theorist, 1) "[...] there is no logical entity called inductive inference";[15:103] 2) "[...] induction does not exist";[15:104] 3) "[...] a principle of induction is superfluous".[17:29]

Affirmation 1 consists of the Popperian thesis that induction is invalid from the logical point of view. For Popper, it is a mistake to consider induction as a valid logical procedure, since what it proposes is an extrapolation of empirical content, that is, generalization ignores the fact that a single case in opposition will undoubtedly move the reason to consider the proposition as contradictory, hence, from the logical point of view, it is invalid.[17]

Affirmation 2 consists of his refusal to the supposed psychological solution given by Hume to the problem of induction. For Hume, the human being is conditioned to have expectations and beliefs regarding the untried. His explanation is famous when he says that: "[...] as we look around us at external objects, and when we consider the operation of causes, we can never, from a single case, discover any necessary power or connection and any quality linking the effect to the cause and transforms one into an infallible consequence of the other. We discover only that one really follows the other. The push of a billiard ball is expected with movement in the second. That is all that appears to the external senses [...]".[18:110]

Thus, in the empirical world, when the human being is subjected to a regularity of events, by means of a constant conjunction, he ends up establishing a relation of cause and effect that does not exist from the phenomenon. Popper is claiming that inductive inference, even when considered a psychological mechanism or process, is no more than an illusion. Thus, if 1 and 2 are correct, then science completely waives induction, and in that sense the thesis affirmed in 3 is valid.[14-17]

For Popper, the confidence that leads science to use induction comes from a metaphysical faith in the regularity of the phenomena of nature. This uniformity of nature for the inductive researchers represents the certainty of the continuity of things. Thus, for them, from this principle, it is authorized to predict, with exactitude, how the facts will follow when they possess elements that are part of the regularity of the phenomenon. Such a position is the motive of the criticism of the theoretician, because for him, instead of constructing and assuming this dogmatic position, science should be concerned with constructing hypotheses that should be tested by the scientific exercise itself.[13-17]

Popper's alternative to inductivism - the Hypothetical-Deductive Method

Popper argues that the central problem of the Philosophy of Science is the problem of demarcation, that is, to find objective criteria that allow to distinguish the scientific theories of metaphysics or pseudoscience. The criterion of scientific demarcation assumed by Popper is that the statement is scientific if and only if it is liable to empirical falsification.[11-17]

Thus, there is only one fundamental condition for any hypothesis to have the status of scientific theory: the hypothesis must be falsifiable. It is the fact that a scientific theory can be theoretically falsifiable that determines its scientificity. The falsification of the hypothesis allows to evaluate its degree of verisimilitude, which, in the final analysis, distances and demarcates before the pseudoscientific theories.[11-17]

Popper still advocates that science is an activity of conjectures and refutations. The operation of science consists in the creation of hypotheses on the part of the researchers for the resolution of problems. Such hypotheses must be empirically tested. If they undergo rigorous tests, they are corroborated and provisionally maintained and should be constantly retested. If they are falsified, they should be abandoned and replaced. The more falsifiable a theory is, the better it is. The degree of falsifiability of a statement depends on its accuracy, boldness, degree

of risk, generality, clarity of its terms, among other elements. Therefore, the degree of falsifiability of a statement is related to its informational content.[11-17]

In the Popperian perspective, progress in science occurs in the process of attempts and errors of conjectures and refutations. There is growth in scientific knowledge when a theory is falsified by means of empirical tests. Thus, abandoning a hypothesis that proved unable to pass an empirical test means distancing oneself from error. Although there is no guarantee that the next hypothesis is true, it guarantees the discarding of conjectures incapable of adequately explaining the investigated phenomena.[11-17]

In this way, the progress of science in the Hypothetical-Deductive Method can be summarized as follows. Science starts from an empirical problem that is associated with the explanation of some data in the world. The researcher proposes falsifiable hypotheses to solve the problem. The hypothesis is criticized; if it withstands tests, it is proven; if it does not resist them, it is eliminated. The substitute hypothesis should be subjected to criticism and more robust evidence. Thus, when a hypothesis that has successfully passed a wide variety of tests is falsified, a new problem arises, which requires the invention of another hypothesis, followed by new criticism and evidence. This process is continuous.[1-12,17]

That being so, one can never assert that a theory is true, despite the many rigorous proofs it has surmounted. It can only be said that the theory in force is superior to its predecessors if it has been able to overcome tests that falsified previous theories. It is said that the theory that resists the empirical test undergoes corroboration. This successive cycle of conjectures and refutations would capture the rationality of scientific practice without relying on induction.[15-17]

Applicability of the Hypothetical-Deductive Method for the epistemological evaluation of the Graduate Programs in Nursing

For researchers working in a PPGENF, the act of assuming a fallibilism posture seems to be, in the context of plural and complex societies, the most adequate posture in terms of epistemological attitude for the elaboration of the scientific knowledge of nursing. Through it, two mishaps are prevented, namely: 1 - the ideological conflicts resulting from dogmatic positions and 2 - fall into the relativism of the "anything goes", from the scientific point of view, for the construction of nursing knowledge.[2-3,6,13-15]

To resolve doubt, it is necessary to conceptualize the term plural and complex society. It is understood as the scenario of rapid changes stimulated by the scientific-technological development and the engagement of countless social actors who act and express themselves organically in society.[13]

In the context of plural and complex societies, one must continually reflect and question what is known and produced scientifically. The mere fact of using the scientific method to solve a given problem does not guarantee that the nursing knowledge is being constructed. In this sense, it will be up to the researchers who experience PPGENF the awareness that the discussion to be tackled is not about methods and techniques to be used in the studies, but on the assumption of the scientific demarcation that founds the research in the program.[2-3,6,16-17]

Thus, this demarcation is found in the study object of the program. This should be clear and precise, reflecting what is inherent in nursing as a profession and area of knowledge. It must meet two Popperian requirements to gauge and ensure its scientific character. First, it must be founded in the empirical world. According to the statement, or system of statement that composes it, it must be falsifiable, because this is the seal of its scientificity.[6,14,16-17]

This movement of definition of the object of study by the PPGENF researchers is imperative, being feasible through the reflexive attitude and the democratic process. It is through dialogue and consensus that such a situation will develop. In this sense, it is through the political process that the solution and definition of the object of study to be treated in the PPGENF is directed. In doing so, the researchers establish the scientific demarcation of nursing, from the definition in the program of its object of study, having, for that, precise, bold statement, with clear terms and empirical informational degree. When defining the object of study of the program, the line of research to be instituted must unite with the object in an implied way and keep the same distinctive characteristics of the statement of it.[6,17]

In the first moment, one has the false impression that the heretofore exposed is something simple and even unnecessary of being processed. However, a critical inspection is enough, based on the use of the Hypothetical-Deductive Method, based on the abstracts of dissertations, theses and descriptors, to verify that there are serious difficulties to identify

the object of study, the motto of scientific research in nursing. Therefore, when researchers assume the fallibilism attitude, they undertake the intellectual effort to abandon scientific dogmatism, criticizing the product of their scientific conceptions, and then begin to question the basis on which they are building the science of nursing.[6,10,12]

It is salutary to observe Chauí's considerations when discussing the Operational University (a conceptual entity in which the university institutions that take on the ideological perspective of liberalism are found, in which the institution is supplanted by the organization) and the non-criticism on the part of the researchers of their scientific constructs. For this theory, the scenario in which scientific research in the world has been developed is worrying, since there is a marked reduction in the number of scientific works, produced in the most different areas of knowledge, capable of bringing innovation, improvement and technology, adding knowledge to the existing scientific framework. In the Operational University, the post-graduate programs succumb to the logic of the quantity of academic productions to the detriment of the logic of the scientific quality, since it is a fact that the scientific knowledge demands time of intellectual maturation.[19]

Therefore, there is no doubt that it is imperative for the researcher working in PPGENF to criticize his scientific production. In addition, the immediate goal of the Hypothetical-Deductive Method is to combat error and to think that avoiding it is, from the epistemological point of view, as important as the goal of discovering scientific truth. Then, if there is assurance that the method successively eliminates the error, it will already be enough epistemic reason to use it.[13,17]

Therefore, Popper proposes to the researcher and, by extension, to the one that acts in the PPGENF, to maintain a permanent critical attitude. Because the program is already in progress, there is no way to interrupt what is being done, and this is not the intention of this epistemological analytic. However, when we criticize the present study object, and having been modified from the Popperian proposition, the realignment of the PPGENF will be feasible.[6,17]

With this new realignment, a question arises, namely: how will the researcher proceed? It seems simple to us. After defining and accepting the demarcation, this will guide the line of research to be consensually established by the researchers, through debate and democratic attitude. From the research line, the study projects of the researchers and students will be linked. Then, in the practice of research, it will be up to these actors to elaborate conjectures and hypotheses regarding the object of study to be investigated. These hypotheses should be tested and, if there is the slightest inaccuracy or error, they will be replaced by others and subjected to more robust tests. This cyclical movement ensures that current theory contains at least one error unless its predecessor; then, relatively, it can be said that the present theory has verisimilitude, although there is no idea how far the current theory is of the most correct theory. The preference of the researcher is for the hypothesis that best withstood the tests, since it becomes covered with epistemic status.[15-17]

Popper ponders that the tests are best understood in the dynamics of the science of physics. However, for him, it is quite possible that the other sciences develop strategies that allow them to evaluate their hypotheses within the context of their pragmatics. As an example, the nursing process can be tested in the whole or in its parts. Starting from the second element that composes it, the nursing diagnosis, it is possible to establish the planning and, in it, the expected results and the nursing interventions. Testing each of these elements, from the implementation of nursing prescriptions, is perfectly feasible in the pragmatics of nursing.[17,20]

In addition, the research developed by the students in the PPGENF should be closely related to the practice and research theme of the advisor, which is intrinsically linked to the object of study that founds the program and the line of research. Thus, the studies completed at each orientation should indicate new hypotheses and, at the same time, have tested their hypotheses by new students, to evaluate their falsification capacity. It will be through this cyclical movement of accentuated criticism that the hypothesis, or all of them, that prove to be verisimilitude will be revealed, being thus corroborated, generating the scientific knowledge of nursing.[6,15,17]

Thus, the fallibilism posture, amid a pluralistic and complex society that demands health care and care, can direct the researcher who acts in the PPGENF to the growth and development of the scientific knowledge of the career. This posture breaks with dogmatic epistemic assumptions, therefore, hindering the development of nursing science. Science, for Popper, should have the characteristic of flexibility, that is, valid knowledge does not mean to be finished or immutable, but it has enough degree of corroboration to serve as a basis for current scientific reasoning and that can obtain better answers

over time.[6,12,15,17]

As a limitation of the study, the epistemological evaluation of PPGENF in a complex and plural society may be undertaken by other philosophers who respond to the demands pointed out by the group of researchers, fomenting other logics that support it. Thus, it will be up to the subjects that work in the PPGENF to list the theoretical line that can justify and legitimize the epistemic constructs elaborated by them, being careful that such choice does not prevent the production of Nursing Science.

CONCLUSION

The epistemological evaluation of PPGENF is one of the challenges that are imposed on the researchers who work for the construction of the specific knowledge of the profession. There is no doubt that the current metrics employed by CAPES are robust and give career visibility. However, it is necessary to judge the constructions of dissertations and theses hitherto undertaken in the light of the Philosophy of Science.

In this sense, the Hypothetical-Deductive Method proposed by Karl Popper can be useful for this enterprise of epistemic criticism to the PPGENF. Starting from the premise that the demarcation that confers scientificity to knowledge, is based on the capacity of its falsification, Popper breaks with the metaphysical tradition and makes that every effort is undertaken so that conjectures and hypotheses, are linked directly to the empirical world, being susceptible to testing, corroboration and substitution when they have error. It is not about obtaining truth, but about understanding scientific knowledge as believable.

Assuming the hypothetical-deductive method, the researchers that work in the PPGENF will have to establish the scientific demarcation of the nursing, doing it through the dialogue and the obtaining of the consensus. The golden rule to be observed is that it should be falsifiable. There is no space in Popper's design for any metaphysical demarcation of any science. The understanding put forward in this text indicates that the manifestation of the demarcation in the scientific production takes place from the definition by the PPGENF of its object of study. This should be clear, informative, unambiguous and tied to the empirical world.

From the study object established by the program, the research theme of the researcher and his students must be subordinated to him. Conjectures and hypotheses against the object of study will be elaborated and tested. If they pass the test, they will be corroborated and maintained; otherwise, they will be disproved. In this way, the studies completed at each orientation serve as substrates for the elaboration of new studies and hypotheses by students who come to join the program, submitting it to more robust tests. It will be through this cyclical movement of marked criticism that the hypothesis, or set of them, will prove to be a verifier, and thus corroborated, generating the scientific knowledge of nursing.

However, it should be noted that the construction of scientific knowledge of nursing is already underway in the various programs. If so, what to do? Simple, to reassess the study object of the PPGENF and the research themes of the advisors in the light of the assumed scientific demarcation. Such movement will allow to ratify or rectify the PPGENF.

Admitted to be the role of nursing in the prevention and treatment of diseases, as well as the restoration and promotion of health, from the offer of nursing care, the fallibilism attitude in the researcher who works in PPGENF can move him to a better understanding of the world that surrounds it and to proceed with the evaluation of the effective impact of its scientific production for the fulfillment of the purpose of the profession.

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