

The influence of capitalism on the production of knowledge in nursing

Influências capitalistas na produção do conhecimento em enfermagem
Influencias del capitalismo en la producción del conocimiento en enfermería



Monica Motta Lino^a
 Vânia Marli Schubert Backes^a
 Maria Arminda da Silva Mendes Carneiro da Costa^b
 Maria Manuela Ferreira Pereira da Silva Martins^b
 Murielk Motta Lino^a

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ABSTRACT

Objective: To understand the capitalist influence over the production of nursing knowledge according to Brazilian and Portuguese researchers.

Method: Descriptive, exploratory, and qualitative research, with 17 research nurses selected using the snowball technique. Data were collected from October 2011 to November 2012 in Brazil and Portugal, by means of semi-structured interviews. We analysed the content of the interviews and produced inferences based in the theoretical assumptions of Gaston Bachelard and the notion of an epistemological obstacle.

Results: The results were organised into three categories: Blocks to creativity/innovation and the practice of repetition; Overestimation of the quantitative; and Resistance to rupture.

Conclusion: It is necessary to create new ways of assessing scientific literature from a qualitative perspective that allows room for creativity, professional development, and critical and reflective thinking. Solidarity is perceived as an alternative to overcoming the problems caused by the capitalist way of producing knowledge.

Keywords: Nursing. Knowledge. Nursing research. Scientific publications indicators. Efficiency. Capitalism.

RESUMO

Objetivo: Compreender as influências capitalistas na produção do conhecimento em enfermagem na percepção de pesquisadores brasileiros e portugueses.

Método: Pesquisa descritiva, exploratória, qualitativa, tendo como participantes 17 enfermeiros pesquisadores selecionados a partir da técnica bola de neve. A coleta dos dados ocorreu entre outubro de 2011 a novembro de 2012 no Brasil e em Portugal a partir da aplicação de entrevistas semiestruturadas. Procedeu-se à análise do conteúdo das entrevistas, produzindo inferências embasadas nos pressupostos teóricos de Gaston Bachelard e na noção de obstáculo epistemológico.

Resultados: Encontram-se organizados em três categorias: Bloqueio da criatividade/ inovação e a prática da repetição; Hipervalorização do quantitativo; e, Resistência à ruptura.

Conclusão: É preciso repensar novos modos de avaliação da produção científica em uma perspectiva qualitativa, com espaço à criatividade, à valorização profissional e ao pensamento crítico e reflexivo. A solidariedade é percebida como alternativa para romper com problemas decorrentes do modo capitalista de produzir conhecimento.

Palavras-chave: Enfermagem. Conhecimento. Pesquisa em enfermagem. Indicadores de produção científica. Eficiência. Capitalismo.

RESUMEN

Objetivo: Comprender las influencias capitalistas en la producción de conocimientos en enfermería en la percepción de los investigadores brasileños y portugueses.

Método: Investigación descriptiva, exploratoria, cualitativa, cuyos participantes eran 17 enfermeros investigadores seleccionados por la técnica bola de nieve. Los datos fueron recolectados entre octubre de 2011 y noviembre de 2012 en los países Brasil y Portugal con la aplicación de entrevistas semiestruturadas. Se procedió a analizar el contenido de las entrevistas con la producción de inferencias basadas en los supuestos teóricos de Gaston Bachelard y la noción de obstáculo epistemológico.

Resultados: Están organizados en tres categorías: Bloqueo creatividad / innovación y la práctica de la repetición; Sobreestimación de lo cuantitativo; y la resistencia a la ruptura.

Conclusión: Es necesario repensar nuevas formas de evaluación de la literatura científica desde una perspectiva cualitativa, con espacio para la creatividad, el desarrollo profesional y el pensamiento crítico y reflexivo. Solidaridad es percibida como una alternativa para romper con los problemas derivados del modo capitalista de producción de conocimiento.

Palabras clave: Enfermería. Conocimiento. Investigación en enfermería. Indicadores de Producción científica. Eficiencia. Capitalismo.

^a Universidade Federal de Santa Catarina (UFSC), Departamento de Enfermagem, Programa de Pós-graduação em Enfermagem (PEN). Florianópolis, Santa Catarina, Brasil.

^b Escola Superior de Enfermagem do Porto (ESEP). Porto, Portugal.

■ INTRODUCTION

Nursing has been pursuing the consolidation of an area of knowledge based on research; it is a science under construction. With the aim of structuring scientific thought, researchers are creating their own body of knowledge that is influenced by transformations through time. The competence of providing care to human beings requires the production of advanced knowledge in the field of nursing that interfaces with other fields of knowledge⁽¹⁾.

This science, in the assumption of Gaston Bachelard, is considered a process that produces truth, that is, science is the work of researchers/scientists in the process of rationally reorganising experience in a way that makes it acceptable. Thus, science is a socially constructed object based on criteria of scientificity that is collective and sectoral to the different sciences. Since it occurs from the reformulation of theoretical problems and scientific ruptures, a science is not the product of a single individual, but rather of a society in a given context⁽²⁾.

In order to establish a space in the field of science, the field of nursing in the Coordination for the Improvement of Higher Education Personnel – CAPES has encouraged the qualification of researcher/scientist physicians who, among the various competencies and skills listed and desired, masterfully employ the instruments and disseminate/socialise scientific knowledge in highly qualified journals⁽¹⁾.

Responding to current demands of scientific research, the capitalist process of qualifying the researcher nurse has triggered in its conception a criterion of productivity. It is not enough to master instruments and socialize the knowledge if the research is not published in highly qualified journals with a high impact factor.

This capitalist mode of producing knowledge has influenced the scientific development of nursing. The North-American term “publish or perish” alludes to the pressure on researchers to publish work constantly in order to continue or maintain their academic career. Economic, educational, scientific, and technological policies focus on productivity, which can be understood as the quantitative intellectual production of the researchers. The expression of scientific progress in contemporary science has been based on the expansion of knowledge, but is assessed almost exclusively with numeric resources and private systems. How many papers are published? What is the impact factor of the journals? How many citations does it have? The capitalist pace adopted by researchers in order to meet the requirements of production influences and hinders a broader construction of knowledge in nursing.

The cause of the stagnation, inertia, and even regression of science is called an epistemological obstacle, according to the assumptions of Gaston Bachelard, and represents one of the most important areas of his work. It is in the heart of the actual act of knowing that, through a sort of functional imperative, slowness and conflicts appear⁽²⁾. For this reason, we ask, how does capitalism influence the construction of knowledge in nursing in Brazil and in Portugal? Thus, the objective is to understand the influence of capitalism on the construction of knowledge in nursing from the perception of Brazilian and Portuguese researchers.

■ METHOD

This study is the result of a doctoral thesis in nursing. It is a descriptive, exploratory, multicentric study with a qualitative approach, conducted Brazil and in Portugal. Data were collected using semi-structured interviews with researcher nurses from both countries, with experience in scientific research and a doctoral and/or post-doctoral title. The inclusion criteria were different for Brazil and Portugal, considering the peculiarities of each country. In Brazil, the criteria were researchers who were leaders of research groups and/or coordinated graduate programmes in nursing and/or had a coordination position in nursing fomentation institutions and/or national assessment institutions. In Portugal, the inclusion criteria were renowned researchers in the country and/or coordinators of nursing courses and/or involved directly with units of investigation and the orientation of graduate students in nursing. The participants were selected using the snowball technique, which consists of initial participants indicating new participants, forming an indication network. The criterion of data saturation by repetition of information resulted in 17 participants, as illustrated in Chart 1.

The data collection period lasted 14 months (Oct/2011 to Nov/2012) and data analysis lasted 20 months (Oct/2011 to May/2013). The interviews were recorded on a digital archive, transcribed, and subsequently validated by all respondents. The interviews of the Portuguese researchers were transcribed by research assistants from Portugal to transfer accurately the particularities of the language.

The data were analysed using Bardin’s perspective of content analysis⁽³⁾ for 20 months, based on the theoretical assumptions of Gaston Bachelard and his definition of the epistemological obstacle. This obstacle portrays resistance that prevents the progress of human thought, that is, the preceding condition of the progress of science is the scien-

Title	Brazil	Portugal
Doctoral	06	06
Post-Doctoral	03	02
Subtotal	09	08
Total	17	
Region		
Brazil (States)	RS, SC, MG, SP, RJ, CE, PA	
Portugal (Cities)	Lisbon, Porto, Coimbra	

Chart 1 – Distribution of study participants according to title and region. 2013

Source:⁽¹⁾.

tific problem in the form of obstacles that affect the very act of knowing⁽²⁾.

After thoroughly reading the transcripts, coding, and forming the pre-categories and categories, we proceeded with the discussion based on our research findings⁽³⁾. The following thematic categories emerged, Blocks to creativity/innovation and the practice of repetition; Overestimation of the quantitative; and Resistance to rupture.

Research was approved by the human research ethics committee (CEP/UFSC 2227/13) and validated in Portugal. The participants were identified with the initials PB (Brazilian Researcher) and PP (Portuguese Researcher), followed by a number.

■ RESULTS AND DISCUSSION

Scientific research in nursing is considered relevant and essential for all the participants of the study. Productivity in research – icon of a capitalist mode of thinking the construction of knowledge – is singled out as a driving force in the construction of knowledge. However, some limitations to be reconsidered and reflected on in the context of research productivity are discussed in the respective categories of analysis.

Blocks to creativity/Innovation and the practice of repetition

Nursing research needs to be anchored in critical-reflective exercises, in which the work process is continuously transformed from situations experienced in everyday life⁽⁴⁾. In this context, we must acknowledge certain shortcomings in your own practice and the limits of creative expression imposed by the capitalist mode of producing knowledge.

Our weak point is mainly the demand without providing means and without expecting quality. The requirement of writing papers from academic base work does not even cover the first discursive levels and does not agglutinate the professional voice immersed in the daily exercise of nursing, to where the base research results would be channelled as part of the social process. (PB9)

The productivity criterion becomes a factor that hinders the creative process of the researcher for the purpose of producing a lot of work in a short period, that is, the criterion is objective and merely numerical⁽⁵⁾. In the meantime, must we publish anyway, and at what cost? The practice of conducting research that ignores relevant issues in daily life in healthcare is thus repeated. This work sparks little interest from the viewpoint of practice, and it is not consumed and applied because it adds irrelevant value to the services, community, and professional nurses.

The weak spot happens to be the absence of quality in the production of research, the resulting papers and new research that would transfer these results and involve the professionals of the various practices in the profession. (PB7)

Scientific knowledge advances from the ruptures and concerns about the way the phenomena behave, in a continuous process of transformation⁽²⁾. Creativity and innovation need time and space to occur. Mediated by dialogue and by observation, it is possible to focus on the phenomena that affect the daily healthcare routine and recreate new ways of conceiving healthcare for human beings. Weaknesses of economic and social order in the daily routines of nurses that cause, for example, work overload, reflections of postmodernity, have limited or impeded the advancement of knowledge.

The pressure to produce a number of productions does not consider that I also have to teach, that I also have to do a number of other things. (PB1)

The accelerated pace imposed on researchers to respond to the criteria of productivity has caused an intellectual static based on repetition. This inertia is a potential cause of stress, suffering, and illness, in view of the progressive and increasing demands without the return of value that affects contemporary society, especially in the academic world⁽⁶⁾.

Another problem is related to the formulation of research problems; nurses must know how to formulate

problems. The scientific spirit rejects questions that are not clearly formulated and, in the scope of science, problems do not emerge spontaneously. The sense of the problem is the true scientific spirit, since knowledge is the answer to a question. If there is no question, there can be no scientific knowledge. Nothing is clear and gratuitous; everything is built on a critical reflection of reality⁽²⁾.

The researchers stressed the need for time to reach intellectual maturity.

The little experience of nurses in research must still be overcome. No one constructs an epistemological framework in the short term. The construction of knowledge requires a lot of build-up and I think nursing is precisely at this point of accumulation. We still don't have a solid basis for research from the epistemological point of view in any of our dimensions. (PB5)

Nursing lacks experimental research that affects the care of people, promotes change and innovation, and strengthens the professional identity⁽⁷⁾.

We have very little experimental study, and it is not even in our scope of work, it is more research applied to experimental studies. Many times, these high impact journals are the ones that publish experimental studies, they prefer these studies. (PP7)

In Portugal, there is a difficulty in conducting investigations and developing new technologies.

We have some research being done, but very little compared to what it could be. We practically do not have patents, which is a huge loss. The weakness is that now we are faced with the external review and they ask us: do you have patents? (PP3)

An innovative and creative practice is driven by epistemological curiosity, which seeks the meaning of things and facts, leading to astonishment, discovery and inventiveness⁽⁴⁾. Thus, research in nursing needs to happen in a pleasant manner and with freedom. It should oppose the mechanisation of memory and the domestication of thought. Innovation and creativity can be stimulated or repressed, and the criterion of productivity is a mode of repression.

This repressive factor has made the capitalist influence in research a paradox. Given the budget limitation of research promotion institutions, it is necessary to find a way of weighting and distributing resources. The natural

consequence is the individual and institutional prioritisation process. Who should receive the funding? Currently, it is the person with the highest productivity (numeric), with mastery and experience in the conduct of research. The criterion is a number and satisfies only a few.

You don't see that professor who graduated being valued. How many people studied with that professor, with his mark? This professor is not as valued as the one that has lots of published works. This is not to belittle the researcher, but I think we need to join forces and enhance the teaching-research-extension tripod, the pillars of a university. The extension at the university is like the poor cousin. You will see that a young researcher who meets all of those prerogatives of production, he or she climbs right to the top. I have lots of doubts about these new paths, sometimes they are rampant. (PB2)

The evaluation of academic production is based on bibliometric indicators. It is a fragile resource in terms of creativity and relevance; an illusion, given its superficiality and devaluation of the complex system of qualitative assessment⁽⁵⁾. It is a vulnerable way to stimulate research, since productivity is not very supportive and requires researchers to maintain a certain rivalry for a distorted cause.

The merit of scientific thought is unquestionable. By analysing the productivity criterion, its influence in blocking creativity/innovation and the practice of repetition shows the importance of research in the progress of science. It is about supporting the dormant potential of researcher nurses. It is wanting to transform this reality for the construction of new truths, for an epistemological rupture, a reform of knowledge that goes beyond the relentless repetition of information that disagrees with today's problems⁽⁸⁾.

Overestimation of the quantitative

The criteria of productivity are numeric, but not impartial. There is an illusion among researchers that the quantitative is self-explanatory and irrefutable. However, the statistical variables have limitations and follow the economic influences of the industry of knowledge. The bibliometric interpretation is subjective. Regarding the example of the citations, evaluating studies according to an index of citations can be more dangerous than a peer review because the convenience in producing objective data (number of citations) limits qualitative and complex judgment, and is less labour-intensive and economically interesting⁽⁹⁾.

In the evaluation of postgraduate education in nursing, even with ongoing advances, the criteria adopted are primarily based on metrics and alternatives to transform into measurable data or comparable measures for results and impacts that are not always so comparable⁽¹⁰⁾. Thus, it is essential to reflect on the numbers involved in the evaluation of the postgraduate-faculty-researcher ensemble.

There is, for example, the criticism that there is no apparent justification for why researchers choose a particular reference among so many other possible references, which weakens the belief that highly cited studies are better than the other less cited studies. The practice of citation among peers does not always highlight studies that substantiate work during its creation, given the choice for convenience. Citation is undoubtedly relevant because it helps to circulate ideas, but it becomes a perverse practice when it is used as a discriminatory measure of quality^(9,11).

The behaviour of researchers in the process of citations, and of publishers who demand the citation of at least one paper of the journal, can lead to stagnation or degeneration in certain areas of knowledge^(11,12).

The respondents mentioned the valuation of the quantitative in nursing.

In Europe, they are starting to criticise this inappropriate requirement of journals. As a professor, I can't believe that the multiplication of publications in high impact journals reflects so significantly on the level of day-to-day work. A book that took years to write loses its value and requires a deeper and more reflected discourse. This would probably have more impact on the work in the classroom, in the debate, in the confrontation, in the analysis. (PP2)

The privilege of the quantitative is the result of the scientists growing belief in the measure rather than the reality of the object. It ignores the object relations for the depletion of its quantitative determination. The measurement depends on a proper reflection and not the other way around. It also depends on an instrumental built specifically for the object that is being evaluated. Analysing the overvaluation of the quantitative shows that it is the method of measuring, more than the object of the measurement, that the scientist describes. The object measured is nothing more than a particular degree of approximation of the method of measurement. The scientist believes in the realism of the measurement more than the reality of the object⁽²⁾.

Increasing the number of productions in the shortest time possible is a goal to be accomplished. Many researchers resort to multi-authorship, which, in the productivist

pace can represent the exchange of co-authorships to the detriment of collaborative authorship.

Depending on how productivity occurs, it can be positive or negative. If it is thought to strengthen research groups or strengthen areas where people have more affinity, it can be positive. But productivity alone, number of productions, always has a negative impact. People are running after, "I need to have so many articles A1 and A2", so sometimes they detract from certain assumptions and principles that we can never lose sight of. (PB5)

One of the foundations of Bachelard's epistemology is that humans are historical, cultural, collective, and sensitive, especially in terms of philosophical and anthropological aspects. There is, in that line of thought, an invitation to question human action, especially action that produces scientific knowledge. The new scientific spirit proposes dialogue and goes against the so-called "dead and crystallized" science based on individual knowledge.

The criticism emerges when, contrary to the principle of constructing knowledge in the collective perspective, collaborative authorship is adopted to respond to the publish or perish, and increase the number of researchers to respond to criteria of productivity. So, multi-authorship is also an object of study and analysis in academia. In the calculation of indicators, the list of co-authors carries little importance because they all score equally and there is no way of knowing – other than through the statement of the author – if the other authors participated enough in the study to warrant their inclusion⁽¹²⁾.

There is also the dogma of the impact factor for the classification of journals. It is up to the researcher to prefer internationally reputable journals. This measure reflects on the average number of citations of published scientific papers for further hierarchy, that is, the criterion is quantitative. The most internationally recognised impact factor classification is the Thomson Scientific® editor, which annually publishes a list of the most important journals in the Journal Citation Reports (JCR).

The process of assessing the impact factor is non-explicit. Thomson Scientific® does not disclose which articles, other than those relating to original research, that it considers citable. A for-profit organisation became the sole arbiter of the impact factor. Thus, science has been evaluated in a way that is itself unscientific, subjective, and secretive⁽¹³⁾.

When researchers choose to work in a regional (or national) scenario, they force journals to publish in the domestic vehicles. Even if this is not the rule – Brazil has continental proportions – most researchers have focused their publica-

tions on national vehicles, also due to the opportunity and scope of Brazilian journals⁽¹⁰⁾.

Nursing must cope with conflicts in this scenario, namely the desire to obtain internationally recognised scientific journals and publish articles in journals with a high impact factor because the requirements of institutions and evaluation bodies have triggered a frenzy in the search for indicators and publications, causing authors to overlook local healthcare needs. In addition, several factors hinder the insertion of Brazilian nursing journals listed in the JCR and the publication in journals with a high impact factor⁽¹⁴⁾.

I believe that scientific production is critical. To record what you do and register the movement between tradition and innovation is essential. I believe that it is necessary to publish in different sources. Because the commitment of my scientific production is not only with the major names of excellence in the world. It is necessary to demonstrate that there's another perspective. (PB7)

The difficulty in maintaining bibliometric indices that fulfil what is understood in contemporary times as producing science is also true for Portugal.

We have a lot of difficulty in publishing our studies in journals with high impact and international circulation, with scientific editors. And faculty and nurses, our doctoral students and master's degree students, have this difficulty. Sometimes it is easier for us to publish in journals that are not in the area of nursing. (PP7)

The capitalist influence on academia has forced researcher professors to carry out different tasks, which leads to stress and suffering.

We are pressured in terms of scientific production, there has to be regular production in impact magazine, but you have to have a workload that is not low, it is high. You have to have extension studies and answer administratively in commissions in coordinating the sector, etc. So it is the 'super-researcher-professor'. I don't know how we cope, but we do what we can. (PB6)

CAPES stratified the intellectual production of post-graduate studies in the Qualis Journals. The journals are classified annually according to the indicators A1, A2, B1, B2, B3, B4, B5 and C, of which A1 is the highest possible classification⁽¹⁵⁾. Thus, the publication with the highest quality, indirectly, is classified as A1, increasing the competitiveness for journals that are considered more prestigious.

The researchers choose the journals by impact factor and classification in CAPES. So sometimes, there is a new journal and the researchers who could submit papers to this journal will never submit because it has not been Qualis-classified, yet. (...) There are certain principles that we cannot lose sight of. Solidarity is one of them. (PB6)

The same journal can receive different ratings in different areas, and the criteria of relevance is the content it conveys. Although the journal states that, "we have not intention, with this classification that is specific for the evaluation process in each area, to permanently define the quality of journals", this is precisely what occurs in practice⁽¹⁵⁾. In the evaluation of graduate programmes in nursing, for example, a study published in an A1 journal is considered more important than others published in B2 journals. However, an A1 study in public health may be B2 in the area of nursing. The criteria of value and quality of a study is defined according to the stratification of the journal and pertinence of the areas.

Scientific production needs to be available for the doctor, the researcher 1A, to the nurse that is inside the Amazon, for everyone. If you cannot publish a A1 international paper, publish in a local journal with a local approach, so it can mobilise other learning processes. Because we do it a given way the first time, another way the second time, and another way the third time. (...) But my paper is not good just because it is in an a-level journal (PB8).

For Brazilian nursing and Portuguese nursing, it is very difficult to keep publications in journals that rank high in the JCR. Not all researchers offer logistical support, in-depth knowledge about the production process of research, and mastery of English, among other factors, to maintain a greater complexity of production. In the scope of science, it is important to maintain quality and relevance; without these two attributes, work is not characterised as scientific⁽¹⁶⁾.

The impact factor, the journals with more effective weight, the published thesis [...] All this brought something new: innovation to knowledge, a translation of knowledge, it's for the field. But what we see is that we have no answer for that, we're not getting to that level. And somebody has to organise this, I'm talking about Portugal. (PP4)

The privilege of the quantitative, according to the interviewed researchers, exerts some influence on the choice and selection of papers by the journals. The dissemination

of knowledge initiated a cycle: publishing with influential researchers can bring some benefits to the authors.

We know that often the association with an investigator that has been recognised by many journals has an extremely low publication time and the ease of publication is much higher. Otherwise, the time span between the submission of a paper and its possible approval and publication, this space, is significant. (PP5)

The productivity criterion within nursing has privileged a few and undermined many. The researcher who publishes more (in reputable magazines), who has the most citation indicators (in reputable magazines), who advises the most graduate students (in the short term), among other factors, is prestigious in academia and obtains research funding and incentives, naturally beating all the competition. The dispute is political.

Likewise, the influence of the capitalist system at the university is criticised, and reflects on the selection of candidates for master's and doctoral courses in nursing.

In recent decades, we have been experiencing a process of democratisation of the university, levelling "downwards". I thought it was okay since it corresponded to theory of humanisation, pedagogy of the oppressed, the liberating process, but in the course of this process I have encountered a lot of mediocrity and hypocrisy. I started getting nauseous just reading a lot of the stuff that fell into my hands, my questioning made me ill. The requirements of CAPES/CNPQ have contributed to this disqualification of courses – productivity at any price goes against quality. The shelves, or rather, the internet is full of theses and dissertations with little or almost no contribution! I have only one suggestion: qualify candidate selection, demand require levelling, greater rigour in the process. Giving opportunities cannot equal accepting and forgiving insuperable difficulties. (PB7)

The evaluation systems have served both as a means to reflect and, ironically, to strengthen these relations⁽⁵⁾. Research has become a perpetual motion or movement of researchers. The idea of perpetual motion suggests the creation of a machine that works without initial energy, that spins faster and faster, and that still produces energy. According to Isaac Newton, those who seek perpetual motion are trying to get something from nothing. It is along this arduous path that the evaluation systems and funding are reconsidering the best distribution criteria and the generous expansion of resources.

Resistance to rupture

Today's research nurses are criticising the criterion of productivity and simultaneously feeding this criterion on a daily basis. This situation resembles a fictional anecdote, where a drunk man crawls around a lamppost in front of his house. A neighbour asks the man what he is doing, to which he replies that he is looking for the keys to his home. The neighbour asks if the key was lost there, and the character of the story replies that it was not, that he had lost it at the door of his house. Surprised, the neighbour asks the obvious question, why is he looking for the key under the lamppost? The man answers that under the lamppost there is more light⁽⁶⁾.

You have to have goals and I am totally in favour of targets. I don't like that discourse that having to publish two articles in Qualis A is an impossible requirement. We have barriers in the production of knowledge in nursing that have little to do with the productivity indicators for research and post-graduation. I want to know how can we improve the publication with an emphasis on nursing, that I would like to know. I really think we owe it to this field. I don't believe in indicators without context: where is the researcher? What level of commitment does the institution have with the research? Is there any continuity? Is there any s dedication of the researcher in relation to the research? (PB7).

There is evidently a need for qualitative indicators in the evaluation of knowledge production and the need to strengthen the professional identity of nursing.

In Brazil, for a post-graduate nursing course to reach the level of excellence of 45% of the total evaluation weight most of the professors-researchers must reach the H Index, in order to assess the international circulation of productions. If this is not an exclusive indicator, it may be the most questionable and risky. Other indicators such as solidarity, nucleation, and leadership correspond to 10%, 10%, and 15% in the total weight, respectively. Thus, the researcher nurses need to remain alert to this system without losing sight of some values⁽¹⁰⁾.

It is the researchers who do the research. Reality in research can be transformed, insofar as the work is done together, in a movement of rupture. People are the strong points, but they are also the fragile points. When you are doing research only to earn credits and everything that comes from that, the results can bring more embarrassment than accomplishment or minimal contribution. (PB4)

How can we think about breaking away from the essentially numeric evaluation that supports the productivity criteria if they legitimise the hard work of researchers with good reputation and production? And thus, the possibilities emerge.

I agree that there is this need to produce and publish, but there needs to be a redefinition of the evaluation. Regarding the numeric standards, there are different numerical commitments. If we think about the bibliometrics in the so-called qualitative analysis, we ask ourselves: how many publications contributed to the practice and innovation of nurses? Or, what is the continuity of these publications? Is there any link in terms of production of knowledge? (PB5)

At first sight, something that is considered habitual becomes irrefutable and difficult to criticise. The scientific spirit should oppose this enchantment; it must resist the usual. The nature alone is only truly understood when it is resisted. Between a sweeping observation and experimentation there is no continuity, only rupture. The epistemological obstacle emerges as the deletion of rupture when it becomes unity, continuity, development. People faithfully believe in the reality they see, with all their passions, with all their souls; but they must break away from that romantic notion to see beyond that which is established, declared. For this reason, the first knowledge, in the assumptions of Bachelard, is the first error⁽²⁾.

Researchers are adapting to the capitalist influence on the way knowledge is produced in the field of nursing. A strategy adopted in Portugal was the creation of a department of scientific dissemination inside a school of nursing.

The journals with the most impact are the English and North American journals. The department has funding that can be used to translate and edit papers for publication in journals of the field with the highest impact factor. I think that this strategy can help towards a more assertive outreach. Because the natural tendency would be to publish in national journals, which are smaller in number and have a lower impact factor, which does not make them less important because lots of nurses read them, and, therefore, it is important. But from the viewpoint of the impact factor, it is less, and area of coverage is also smaller. The fact of writing in Portuguese has this limitation. (PP8)

An issue observed in this process of rupture is the rethinking of the term “scientific” in the field of health sciences. Bachelard states that scientists should reclaim the right to divert, for a moment, the science of their good

work, their desire to be objective, to discover remnants of the subjective in more severe methods⁽¹⁷⁾. Nursing has an implicit subjective nature, in the practice of care, which can portray a confrontation with the objectification of scientific knowledge.

Not every magazine receives our papers, qualitative research does not have much receptivity. And I think this is a weak spot. So, where do we get our support from? How are we going to get through this? It is a very negative point. It's a subtraction, in a way, of subjectivity. (PP3)

Brazilian nursing, as a field inserted in the vast area of healthcare, needs to observe the rules and policies of CAPES to obtain the approval of its projects⁽¹⁸⁾. In view of the increasing demand in the development agencies, it is important to adopt initiatives that meet the criterion of transdisciplinarity and conduct multicentre research. The area-peers in the larger area of healthcare can carry out collaborative work, fostering solidarity and rejecting the hostility that is influencing the actors of these spaces.

In Portugal, nursing does not have its own area of knowledge in the assessment and research promotion organizations that favour the accreditation of research spaces. This issue is perceived negatively by all the interviewed Portuguese researchers because it significantly interferes in the process of knowledge construction.

The Foundation of Science and Technology (FCT) has essentially given priority to the projects that emerge from accredited Investigation Units. Right now there is no open process for accreditation. The processes for accreditation are not easy. In Portugal, we have only one accredited Investigation Unit, in Coimbra. (PP1)

Portuguese nursing works to conquer a space in the tree of the knowledge of the FCT. Therefore, it works to break up a dominant thought.

Nursing is coalesced with Medicine. And in the area of health, we are right there in a very fragile situation. All the other areas, namely medicine, pass to the front. There are more objective projects, multidisciplinary, they are inserted in large European projects and, therefore, are much better situated. Some of our projects have been funded in related areas, such as education. (PP4)

Here, we are reminded of the first of all tasks – to question where we are and what we aim to be, our comfort and discomfort, what we have overcome and the cost of each

step along this path⁽¹⁰⁾. Thus, an obstacle, when recognised and reflected upon, triggers the process of overcoming this obstacle. If the capitalist influence on the way of being, doing, and researching in nursing causes discomfort in scientific society, how about proposing changes?

Other modes of qualitative evaluation are adopted by countries like Canada, United States, and United Kingdom, such as the request that researchers indicate to the evaluator three of their best articles published in the last five years, and describe their work and the involvement of co-authors. Strategically crafted, this initiative provides less costly evaluations and encourages researchers to write less articles with greater importance from a practice standpoint, thus weakening the productivity criterion and strengthening the quality, pertinence, and relevance criteria^(5, 19-20).

Another proposal is the strengthening of research groups (Brazil) and investigation units (Portugal). It is necessary to encourage such spaces as collaborative spaces of knowledge and not as locations that exclusively target the rapid pace of postmodernity.

If we take the research group not as a place of slave work to comply with bibliometric data, but as a scenario of human coexistence for the promotion of knowledge, this is a strategy where we learn to do research projects, where we learn to live with diverse leaders, where we learn how to open the bag and even in a supportive movement – if your project does not have money and mine does, then 10% of the money from my project will keep your project until you get the funding. It's like a grant of complementarity. Only that, from what I know of nursing, it's always, "me", and when I refer to nursing, it's worldwide. It's always "me, me, me, me". "We" is very rare. (PBA)

Finally, the word is solidarity. Yes, we must publish, we must invest in science and technology for the construction of knowledge in nursing. We must think of collaborative research and respond to social needs. We need time for creativity and innovation. We must rethink new ways of evaluating the production of knowledge, including qualitative aspects. However, we must also rally efforts and promote solidarity in the construction of knowledge in nursing. We must seek to build knowledge in order to make a positive contribution in the field of health services and within the scope of culture.

■ FINAL CONSIDERATIONS

The activity of researchers in nursing has been influenced by capitalist modes of producing knowledge. This paper provides insight into this problem by revealing that

the transformation of the reality of production requirements, with disparate working conditions, and the valuation and development of research, is an arduous task. It is an epistemological obstacle that must be confronted. It also reveals the need for research, researchers, and institutions to make room for collaboration and solidarity. More qualitative indicators are needed; the evaluation with qualitative elements appears to be fairer and more consistent with the needs of society.

As with all scientific research, this study has limitations because it presents a methodological framework of a given reality. Therefore, we suggest further studies on this subject, which is little explored in the scientific community, in order to address the different realities, experiences, and innovative projects that contribute to the formation of a researcher that is supportive, critical, reflective, and has the capacity for transformation.

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■ **Corresponding author:**

Monica Motta Lino

Email: monicafloripa@hotmail.com

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