


## **THEORETICAL-METHODOLOGICAL CONTRIBUTIONS OF ERGOLOGY TO RESEARCH ON WORK IN THE NURSING AREA**

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### **ABSTRACT**

**Objective:** the present study is a theoretical reflection aiming to systematize conceptual and methodological aspects of the ergologic perspective, emphasizing contributions to studies on the work in the nursing area.

**Methods:** study developed based on selected texts by authors that take on the ergologic perspective to examine human work, discussing theoretical or methodological aspects. Publications about the work in the nursing and health fields that resorted to ergology were also included. The study considered books, master's dissertations, doctoral theses, and scientific papers published in indexed journals and discusses the following concepts: prescribed work and real work; work and activity; experience and established knowledge; skill's ingredients; and three-pole dynamic device. The study shows the method used in ergology, stressing the data collection process. A reflection about the contributions of this approach to understanding the work in the nursing area was carried out based on studies addressing the work in the health and nursing areas and ergology's concepts and method, with emphasis on the richness of this theoretical-methodological framework for the development of research on this area.

**Results:** work in the nursing area includes a combination of knowledge and practice that goes beyond reproducing standards, routines, and procedures prescribed by institutions and the profession itself. The execution of the work activity is complex and involves the debate of standards and poses a challenge to the act of working with competence, in the dialogical impermanence between knowing how to act and being able to act.

**Conclusion:** ergology can be a fruitful theoretical and methodological framework to better understand the complexity of the work activity in the nursing area.

**DESCRIPTORS:** Ergology. Work activity. Work. Nursing. Nursing education.

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# CONTRIBUIÇÕES TEÓRICO-METODOLÓGICAS DA ERGOLOGIA PARA A PESQUISA SOBRE O TRABALHO DA ENFERMAGEM

## RESUMO

**Objetivo:** o presente estudo consiste em uma reflexão teórica, com objetivo de sistematizar aspectos conceituais e metodológicos da perspectiva ergológica, destacando contribuições para pesquisas sobre o trabalho da enfermagem.

**Método:** construído com base em textos escolhidos de autores que assumem a perspectiva ergológica para estudar o trabalho humano, tratando de aspectos teóricos ou metodológicos. Também integraram o estudo publicações sobre o trabalho em saúde e enfermagem que utilizaram a Ergologia. Inclui livros, Dissertações de Mestrado, Teses de Doutorado e artigos científicos publicados em periódicos indexados. Discute os conceitos de: trabalho prescrito e trabalho real; trabalho e atividade; saber investido e saber constituído; ingredientes da competência; e dispositivo dinâmico de três polos. Apresenta o método na Ergologia, destacando o processo de coleta de dados. A partir de estudos sobre o trabalho em saúde e enfermagem, e dos conceitos e método da Ergologia, foi realizada uma reflexão acerca das contribuições desta abordagem para compreensão do trabalho da enfermagem, destacando a fertilidade deste referencial teórico-metodológico para a pesquisa sobre este tema.

**Resultados:** no trabalho em enfermagem há um encontro do saber e da prática que vai além da reprodução de normas, rotinas e procedimentos prescritos institucional e profissionalmente. A realização da atividade de trabalho manifesta-se como uma dramática que envolve o debate de normas e desafia o agir com competência, na impermanência dialógica entre o saber agir e o poder agir.

**Conclusão:** a Ergologia pode ser um referencial teórico e metodológico profícuo para melhor entendimento da complexidade da atividade laboral da enfermagem.

**DESCRITORES:** Ergologia. Atividade de trabalho. Trabalho. Enfermagem. Educação em Enfermagem.

# CONTRIBUCIONES TEÓRICO-METODOLÓGICAS DE LA ERGOLOGÍA A LA INVESTIGACIÓN SOBRE EL TRABAJO DE ENFERMERÍA

## RESUMEN

**Objetivo:** reflexión teórica apuntando a sistematizar aspectos conceptuales y metodológicos de la perspectiva ergológica, destacando contribuciones a las investigaciones sobre el trabajo de enfermería.

**Método:** estudio elaborado en base a textos elegidos de autores que asumen la perspectiva ergológica para analizar el trabajo humano, refiriendo aspectos teóricos o metodológicos. Se incluyeron publicaciones sobre trabajo en salud y en enfermería que aplicaron la ergología, así como libros, disertaciones de maestría, tesis doctorales y artículos científicos publicados en periódicos indexados. La investigación discute los conceptos de: trabajo prescrito y trabajo real; trabajo y actividad; saber invertido y saber constituído; ingredientes de la competencia; y el dispositivo dinámico de tres polos. Presenta el método en la ergología, destacando el proceso de recolección de datos. A partir de estudios sobre el trabajo en salud y enfermería, y de los conceptos y métodos de la ergología, se realizó una reflexión sobre las contribuciones del abordaje a la comprensión del trabajo de enfermería, destacándose la fertilidad del referencial teórico-metodológico para investigar la temática.

**Resultados:** en el trabajo de enfermería existe una conjunción de saber y práctica que va más allá de la reproducción de normas, rutinas y procedimientos prescritos, institucional y profesionalmente. Efectivizar la actividad laboral se manifiesta como un drama involucrando el debate de normas y el desafío al actuar con competencia, frente a la impermanencia dialógica entre el saber actuar y el poder actuar.

**Conclusión:** la ergología puede constituir un referencial teórico-metodológico útil para mejorar la comprensión de la complejidad del trabajo de enfermería.

**DESCRITORES:** Ergología. Actividad laboral. Trabajo. Enfermería. Educación en enfermería.

## INTRODUCTION

Ergology, as a theoretical-methodological approach to understand human work, originated in studies entitled Pluridisciplinary Analysis of Work Situations, developed in the 1980s at the University of Provence, in France. Pluridisciplinary analysis assumes a dialogue between several knowledge fields for considering the complexity of human activity and acknowledging that its study is not limited to a single subject. The richness of this debate scenario allowed the creation of the Department of Ergology in 1999, under the intellectual leadership of the philosopher Yves Schwartz, and the emergence of a new theoretical-methodological perspective for studies on human work entitled ergology.<sup>1-2</sup>

This subject coordinates several themes without overlapping them,<sup>2-3</sup> and academic knowledge is combined with experiences intrinsic to workers, including values and the history of the person who executes the activity, construed as the leading agent of the action. Ergology adopts the pluridisciplinary research perspective and belongs to the field of intervention studies, in which two methodological procedures stand out: those entitled “self-confrontation” and the “double method”.<sup>2</sup>

The work in the nursing area, like several types of work in the services sector, is characterized by the simultaneity of production and consumption and variability and unpredictability, with a strong influence of the practice settings, including material conditions for its execution, organization modes, and work relationships. It is an activity mostly developed by applying characteristics of collective work, involving several workers and professionals with specific and necessary knowledge for health care. Additionally, it is a type of work in which the results are significantly influenced by the decisions and values of the people who carry it out.<sup>3-4</sup>

Taking into account the richness of the theoretical-methodological perspective of ergology to analyze human work and the characteristics of the work in the nursing area that challenge experts to seek approaches that can better contribute to its understanding, the present study is a theoretical reflection that had the objective of systematizing conceptual and methodological aspects of the ergologic perspective, emphasizing contributions to the nursing work field.

The reflection was carried out based on texts intentionally and non-exhaustedly selected, in which authors take on the ergologic perspective to study human work, approaching theoretical or methodological aspects.<sup>1-5</sup> The present study also included publications that examined the work in the health and nursing fields from the ergology perspective.<sup>2-4,11-7</sup> The texts that supported the present reflection were available in books, are part of master’s dissertations or doctoral theses, or are scientific articles published in indexed journals. All the texts were available in Portuguese.

## ERGOLOGY: BASIC CONCEPTS

### Prescribed work and real work

Prescribed work is construed as a set of standards that regulate how work must be carried out. This expression contains standards, regulations, edicts, the prescribed routines, the procedures, the orders, and the results to be obtained, established by people or institutions. It also encompasses the organizational context in which the work is developed, that is, the physical environment, materials and equipment, and the socioeconomic conditions.

Prescribed work goes beyond prescriptions and the characteristics of the environment, and takes into account that workers prescribe themselves and that the work collective influences people in a permanent variability and, in this movement, the workers’ emotions, biological body, knowledge, experiences, and history, as well as their relationships influence the execution of the work.<sup>2-3,13</sup>

The antecedent norms are all that the preceding rules guide the activities and goes beyond rules and regulations, taking into account cultural, historical, and social aspects that are neither

imposed nor absolute,<sup>7</sup> “[...] indicate values that can both mirror the concern with the affirmation of life (as in health, education, right to work and leisure, safety, environmental preservation, equity, etc.) and embody economic interests of the commercial type”.<sup>14:25</sup>

Real work, which refers to the activity of a specific person, is the situation of the act of work itself and, from the ergology perspective, the prescription emerges from an organization of this work. The authors that discuss this concept<sup>6</sup> point to the existence of a gap between prescribed and carried out work. According to them, this “empty space” requires a movement by the workers, who cannot predict or anticipate everything. However, continuous exercise and personal motivation are necessary to deal with the arbitrariness imposed by prescription. The execution of the activity involves a *complexity of the use of oneself and of the body-self*, “[...] a universe in which standards of every type rule: scientific, technical, organizational, management, or hierarchical, which refer to relationships of inequity, subordination, and power – there is all this combined”.<sup>7:194</sup> “[...] the activity always involves a dialectics between heterodetermination, that is, the use of oneself by another person, and singularization, that is, the use of one by oneself”,<sup>14:27</sup> a complexity of use of oneself which involves “contradictory and enigmatic” factors.<sup>7</sup>

## Work and the activity's perspective

Work is not just an operationalization in the technical or mechanized sense, but actually makes up human beings, “[...] work is an act of the human nature that encompasses and gives back all the human complexity”.<sup>1:96</sup> The understanding of work as a mechanical action deprived of thought is not enough to allow the visualization of its complex dimension and hinders the understanding of risks resulting from it by work organizations, which impacts on risk prevention measures.<sup>1</sup>

Work changes, “[...] consubstantial to the nature of human work: it keeps changing”.<sup>7:25</sup> Changes have happened since the analytical perspective of the “workers and their machine” and, from 1980, terms such as “skill” began becoming prominent. What makes work happen is a movement of body and soul, of dialogue between oneself with the others. Authors declare that “we are always caught off guard regarding human activity. It is always, in a given environment, negotiating norms”. The knowledge of the subject is still needed to understand work, and analysis of the activity confronts this knowledge with the knowledge experienced by workers in their real context, “[...] or we say that these concepts suffice to understand what happens in a work situation, or we say that it is during rework and the contact with the concrete situations that people restructure all that”.<sup>7:31</sup>

Workers, in being asked about their work, will talk about their task, work environment, work procedures and standards, and materials and equipment, which are understood by ergology as the prescribed work. The description misses the understanding of what the work activity is as a managed meeting, surrounded by conscious human act, with the possibility of choices and adaptation.<sup>15</sup>

## Experience and established knowledge

Ergology considers that, in every work activity, an individual knowledge, specific to each human being, is deposited, which somehow makes the prescribed work closer to the real one. This knowledge produced by human beings is part of their individual and professional experiences, as well as their life history and their established knowledge. Experience, “which is a true knowledge”,<sup>1:100</sup> combines with the established one, and they interact with each other. For ergologists, only the combination of both elements can translate the reality of work. These parts allow to understand the work situations, inseparable from human beings, who add to their acquired knowledge through their experience and academic training.<sup>1,16</sup>

Taking the academic production work as an example, it is possible to say that the established knowledge is what is learned in academia, obtained through books, and formalized as technical education and undergraduate and graduate courses according to the organizational and technical standards and regulations. Experience is acquired during work activities through people's experiences and means the acquisition of an important element of the set of skills to perform a certain activity. It is not prescribed or drafted, it is exclusive, original, and the following citation complements and translates the concepts of these two types of knowledge when analyzing the work accidents statistics in France: "A worker gets to a new work environment, the risk of accident he or she is exposed to is higher than after some adaptation time. It is evaluated, then, that the person does not have experience". According to the ergologic perspective, the text would be changed into: "The worker has not acquired their individual experience knowledge specific to that place!".<sup>1:102</sup>

### **Competence ingredients proposed by ergology**

It is possible to say that there is a dialectical relationship between knowledge and individual values that pervade work, given the change of the use of the term "training" into "competence".

The transfer training/competence is structurally parallel to the transfer to work/to manage. The elements that we can identify as work situation *management* much more clearly and that drive this resource to the vaguer concept of competence did not come from nothing with the "new technologies", the "new work organization forms", and the new rules to evaluate the agents; they already existed in the previous forms, with apparently more unambitious objectives and implicit ways, disguised by the evidence of the gesture construed as repetitive.<sup>5:2-3</sup>

This reference currently guides the "ingredients of competence". The first ingredient consists of mastering the set of protocols of all the conceptual knowledge that precedes work. The second ingredient is people's experience before the situations that occur in the work environment. The third ingredient results from the dialogue between the first and the second ones and offers the opportunity to make choices about how or when to carry out a certain task. The fourth ingredient is related to the discussion of standards and values that will define what the priorities are and the adherence to a certain project or the lack of it. The fifth ingredient is the acting of workers and their awareness to perform certain tasks better. The sixth ingredient "[...] is the search for the complementarity with the other and the strengthening of the cohesion of the collective aspects in work."<sup>6:693</sup>

### **Three-pole dynamic device - TPDD**

The three-pole dynamic device is defined as two imaginary ends that interact with each other; the term "pole" expresses a virtual place where objectives, competences, and knowledge are put together, summarized, and expressed [...].<sup>1:103</sup> It is characterized, consequently, by dialectics and the places where experience and the established knowledge move around. The TPDD is a methodological plan that exposes the complex guidelines proposed by the method, and it is recommended that every professional area apply it as a methodological resource, because it considers workers as the central element of the investigation.<sup>7</sup>

The TPDD is a tripolar space made up of pole I, pole II, and pole III, each one with specific characteristics and common points. Pole I refers to the available knowledge, the prescribed ethical rules and codes, the academic and professional competences of the people who carry out work, the knowledge that prepares and formalizes the prescribed work.<sup>7</sup> Pole II relates to the individual experiences and histories built in a real moment. This pole represents the very well-defined rules, standards, and hierarchies that people develop in their singular experiences acquired during the execution of the activity. These poles complete each other when a work activity is examined.<sup>1,12</sup>

The third pole of action is the one in which questionings, “two-way questions and answers”<sup>7:269</sup> are expressed, in which the two other poles coordinate, with decision-making that takes into account the rules, standards, and hierarchies. It is “part of the organization, conception, and development of discussions”<sup>1:104</sup> Each pole represents its space in an integrated way.<sup>7</sup> Figure 1 shows the TPDD methodological diagram.<sup>7,1</sup>

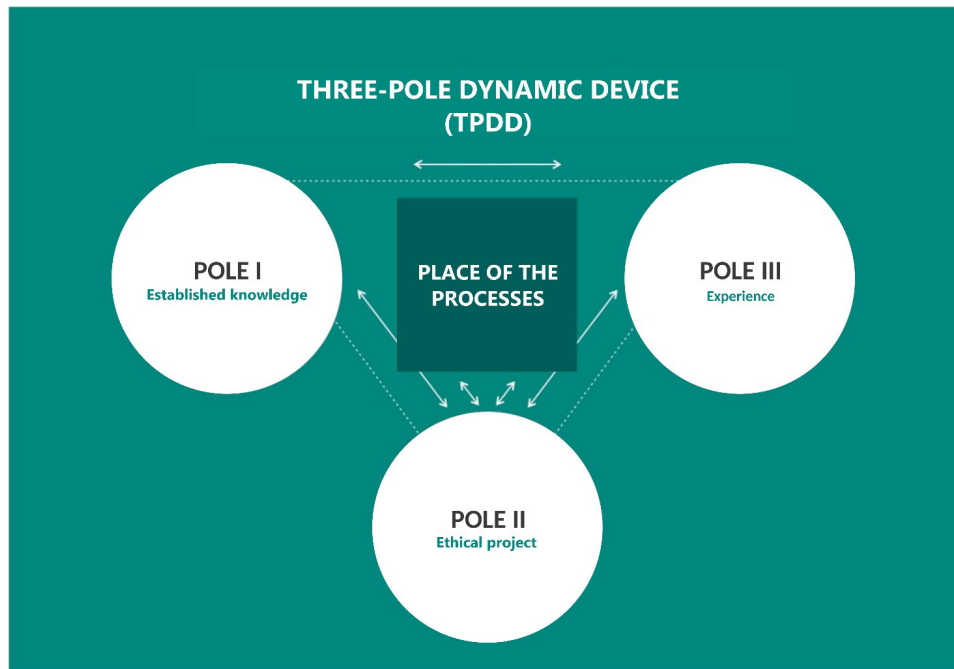


Figure 1 – TPDD methodological diagram.<sup>7,1</sup>

## METHOD IN ERGOLOGY

Self-confrontation and the double method stand out as data collection and analysis instruments in ergology. Self-confrontation is recommended to understand work situations and its objective is translating the act of workers, that is, elucidating its execution when work is carried out.

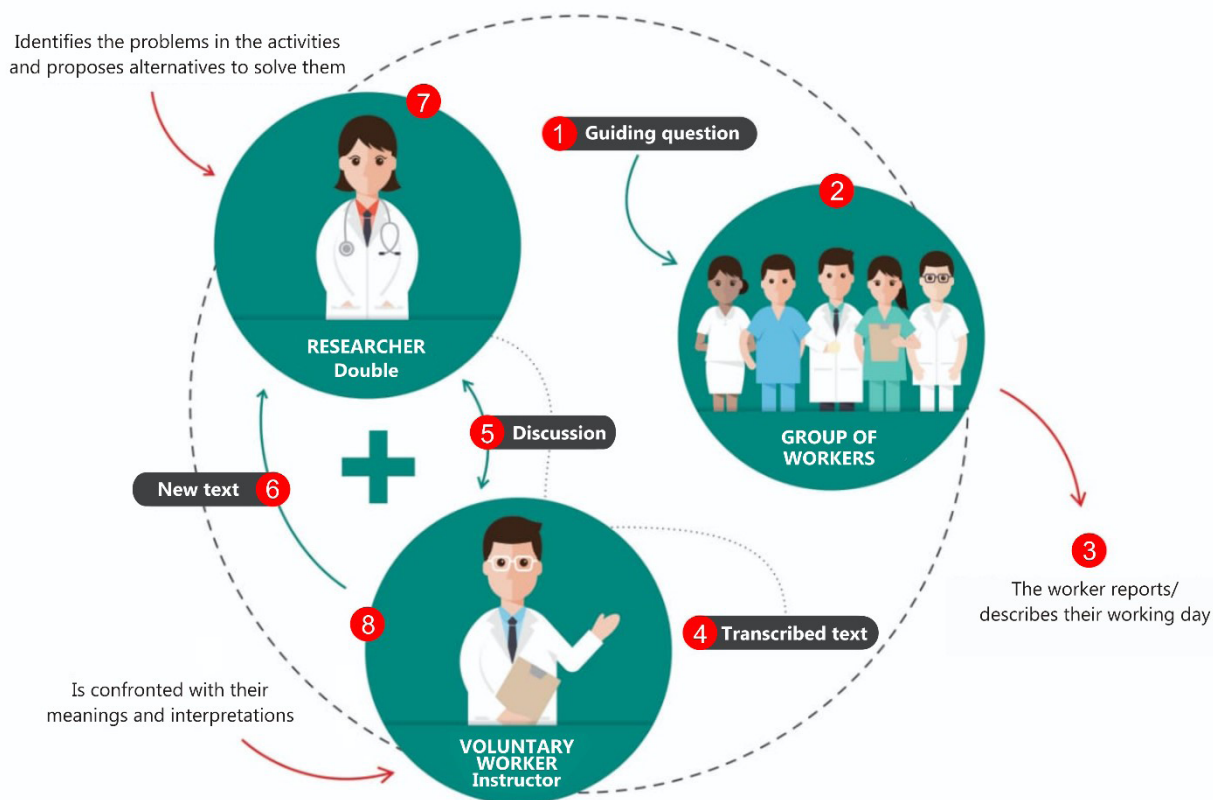
Thus, it is the workers who “perform the confrontation with themselves before their work and establish practical mechanisms that allow a careful analysis of the activity”<sup>2:215</sup> The elements for this analysis can be obtained through the observation of the activities, footage, and researchers’ reports and field notes, opposing to their way of thinking, registered in the interviews, methods that confront “workers and their work”. According to a very pertinent comment, “[...] to understand the activity, which is more global than the action, it is not enough to focus exclusively on the action of performing a task and then, based on the restrictive observation, coordinate its meaning; it is necessary to take into consideration that the activity is also made up of its invident surroundings”<sup>2:220</sup>

The method is useful to understand the observation of prescribed work and performed work, as well as to obtain, in the workers’ speech, their expressions or what better expresses or reveals their choices. The author identifies as different forms of “meaning production: the environment, the technological resources, the organization”; the purpose, the prescribed procedures, the previous standards, and the choices, with the “comment of workers in affirmative and negative answers, contradictions, silences, and the unspoken”<sup>2:215</sup>

Another procedure suggested by ergology is the double method, applied to analyze work. This procedure was created by Ivar Oddone in the 1970s to make it easier for workers to know themselves and their activity, with interventions to improve it. The method is carried out by a researcher, who plays the role of a double, and a voluntary worker, designated as the instructor. With a guiding question exposed to the collective of workers as a starting point, each worker begins reporting or describing their working day individually, listing the performed activities and exposing it to the group. During the procedure, the double (the researcher) uses the reports to identify the problems in the description of the activity carried out by the participants and suggests alternatives to solve them.<sup>9</sup>

A text originated in the dialogue between the double and the instructor emerges based on the answers of the participants to the guiding question. It is transcribed and given to the instructor so he or she can elaborate a new text, thus beginning the second step of the method. At this point, the worker (instructor) is confronted with their own meanings and interpretations, with the opportunity to produce a new text, which may be sent to the double (researcher). It is from this stage that work can be “observed and transformed”.<sup>9:05</sup>

The double is responsible for instigating, provoking, and interacting, seeking to obtain detailed information from the instructor. The method is applied to answer “*how, why, and for what* workers carry out their activities”.<sup>9:06</sup> Figure 2 shows the steps that make up the “double method”.<sup>9</sup>



**Figure 2 – Description of the double method.**<sup>9</sup>

## ERGOLGY AND THE WORK IN THE HEALTH AND NURSING AREAS: SOME STUDIES

The scientific literature has studies on work in the health and nursing fields that used the ergology approach, applying it as a theoretical framework in some cases and as a theoretical-methodological framework in others. Consequently, the studies on health and nursing can be used to illustrate the way to understand human activity through the mentioned approach.

A study that examined the work performed by nurses at the Family Health Strategy used both the theoretical and methodological framework of ergology to elucidate the complexity of the work developed by nurses in this care setting. The author of the study justified the choice of this perspective stating that “[...] it assumes the observation of the activity considering prescribed work and real work and associating the explanations provided by the workers with their choices”.<sup>11:54</sup> The ergologic approach was considered suitable to understand the work of the nurses because it takes into account the discussion of values and the singularity that exists in the real context of work.<sup>11</sup>

In another study, the authors<sup>15</sup> examined the activity of nursing professionals at a hospital unit to understand how the relationships between standards and restandardizations happen at a hospital institution. From the ergology perspective, the authors interpreted that the routine work in the nursing field is ruled by standards, protocols, and regulations, and that professionals, with their specificities, act in this prescribed context in a situation of permanent restandardization. According to ergology, environment and activity are always singular and the “environment is always more or less inaccurate”, “it is never the same over the days, or over different work situations. So, there it is a *first inaccuracy of the environment*”.<sup>7:189</sup> And real work involves decisions by the person who performs it, always a complexity of the use of oneself, by oneself, and the use of one by other people.<sup>2</sup>

A book on ergology<sup>7</sup> has examples of situations of work in the health and nursing fields used to help understand this framework. According to the study, if nurses, when performing their work, aim to recover patients' health, they will, with this purpose in mind, “negotiate/evaluate both the whole and a segment of their activity”.<sup>7:26–27</sup> Several aspects are considered, for instance those pertaining what will be required from their body and institutional demands, as well as the values they have regarding the patients and their professional work. This decision-making process consists of a complexity mediated by values and coordinated to previous experiences. And the environment where the activity takes place is full of variabilities.

A book<sup>7</sup> shows results about a study on the possibilities of developing interdisciplinarity in the work process of health professionals that participated in a course of multiprofessional residency in family health. Ergology was used in the thesis as the theoretical framework, contributing to explaining the variability, the possibilities, and the obstacles for the practice of interdisciplinarity.

The authors of the book *Trabalhar na Saúde*<sup>14</sup> address work in health services based on the ergologic perspective. They encourage the readers to think about how healthcare workers can manage all their activities, whether the way they are executed can pose risks to the professionals' health, and how they make decisions when confronted with standards, protocols, and the prescribed public policies. Work calls for the creation of new standards and (re)standardization. It is also a place for rework and challenges, where microchoices have to be made based on social and historical values. These factors are determining, enigmatic, and contradictory.



## CONTRIBUTIONS OF ERGOLOGY TO RESEARCH ON WORK IN THE NURSING FIELD

From the Taylorism perspective, work had to be fragmented and the conception excluded from the plant floor and the environments where work was carried out. However, this has never been achieved in its totality.<sup>2</sup> Additionally, the past decades have consolidated the understanding that work is not execution alone, and one of the approaches for this understanding is ergology.

According to this method, every work activity is always a complexity of the use of oneself, in the sense of a drama, whether individual or collective, an encounter of singular people who share a multidetermined and inaccurate environment.<sup>17-18</sup> The experiences of workers, the culture, the values, the conditions of the environment, the personal relationships, and the permanent variability are central elements in ergology and encourage us to ponder over its propriety to help understand the complexity involved in the nursing work, given that it takes human care as its focus of activity and knowledge production, involving relationships between who cares and who receives care, in situations that are always singular.<sup>3</sup>

The work in the nursing field has a remarkable social relevance and is developed by professionals with technical and legal skills to meet the complexity of the demands of care to the population health. Nursing is present in almost every healthcare institution and has its activities developed in regulated settings, based on knowledge produced by health sciences and the nursing subject itself.<sup>3-4</sup>

Taking into account the standards established before the execution of the nursing work, it is necessary to stress that it mostly has characteristics of collective work, both in the relationship with other healthcare professionals and workers involved in institutional work, and within the profession. It is a professional type of work, which is regulated, in Brazil, by Professional Activity Law no. 7498/1986, establishing that nursing is performed by nurses, nursing technicians, nursing aides, and midwives, that nurses legally can carry out all the typical activities of the profession, and that there cannot be nursing actions without the supervision of this type of professional.<sup>3,19</sup>

In work in the nursing field, there is an encounter of knowledge and practice that goes beyond habitual routines, expressing the complexity (discussion with standards) and challenging the acting with competence, in the dialogic impermanence between “knowing how to act (mastering the previous standards), wanting to act (being motivated or adhering to a collective project), and being able to act (capacity to face the restraints of the environment)”.<sup>12:3205</sup>

However, especially in the nursing field, work settings and relationships vary significantly, and the specificities of competences, skills, level of education, administrative positions and functions, and bureaucratic activities are part of the work, challenging collective acting. This fact can contribute to boosting competitiveness, conflicts, and discord.

In work settings with these characteristics, nursing professionals experience relationships with the users of health services frequently. They are faced with care models, public policies in force, and technologies, materialized as new equipment, products, and professional knowledge. The several laboratory settings with inadequate or insufficient structure and materials also stand out in this scenario, because they may originate unsafe actions, ergonomic risks, psychological damage, and exposure to infectious agents and ionizing radiation, among others.<sup>14,20-21</sup>

This complex dimension can be better interpreted and understood with the theoretical and methodological contributions of ergology. The double method and self-confrontation are resources that can provide a better understanding of the nursing work activity, helping to capture the diversity of living work, considering the fields of human experience and relationships, always enigmatic. Every human activity is a permanent discussion of standards and human beings establish multiple relationships with the environment where they are inserted.<sup>18</sup>

From the perspective of the interpretation of the use of oneself at work, the complexity of use of the body-self, their definitions, and the discussion of standards and values that make up restandardizations, maybe we can uncover the enigmatic and obscure sides involved in the core of acting in work in the nursing field.

## CONCLUSION

The ergologic approach consists of a fruitful theoretical and methodological framework for research on work in the health and nursing areas. Ergology considers human beings in their singularity, influenced by the environment, which is always inaccurate, and by work relationships, urging the need to recreate and restandardize. It acknowledges that the work environment is technical, human, and cultural, and that all the types of inaccuracies combine and add in it, strengthening one another, which seems useful to help understand the diversity of work in the health and nursing fields.

Considering the specific activities of the sector and the multiplicity of standards, the technical and scientific training and the environment conditions require that workers make choices and are faced with the variability of the situations that come up. With the guidance of the principles of ergology, it is possible to understand that work is not just carrying out what has been prescribed, but indicates a fundamental characteristic of human beings, which is recreating and mobilizing themselves, in a permanent use of oneself by other people and by the self.

## REFERENCES

1. Trinquet P. Trabalho e educação: o método ergológico. *Histedbr* [internet]. 2010 Aug [cited 2016 Jul 10];(Spe): 93-113. Available from: <https://dx.doi.org/10.20396/rho.v10i38e.8639753>
2. Figueiredo M, Athayde M, Brito J, Alvarez D, editors. *Labirintos do trabalho: interrogações e olhares sobre o trabalho vivo*. Rio de Janeiro, RJ(BR): Editora DP&A; 2004.
3. Pires DEP. Transformações necessárias para o avanço da Enfermagem como ciência do cuidar. *Rev Bras Enferm*. 2013 Sept [cited 2019 Oct 03]; 66(Spe):39-44. Available from: [http://www.abeneventos.com.br/anais\\_senpe/17senpe/pdf/9002cf.pdf](http://www.abeneventos.com.br/anais_senpe/17senpe/pdf/9002cf.pdf)
4. Pires DEP. A enfermagem enquanto disciplina, profissão e trabalho. *Rev Bras Enferm*. 2009 Sept/Oct [cited 2019 Oct 03]; 62(5):739-44. Available from: <https://dx.doi.org/10.1590/S0034-71672009000500015>
5. Schwartz Y. Os ingredientes da competência: um exercício necessário para uma questão insolúvel. *Educ Soc* [internet]. 1998 Dec [cited 2017 Feb 17]; 19(65):1-18. Available from: [http://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S0101-73301998000400004](http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0101-73301998000400004)
6. Scherer MDA, Oliveira CI, Carvalho WMES. Cursos de especialização em Saúde da Família: o que muda no trabalho com a formação? *Interface*. 2016 [cited 2019 Oct 03]; 20(58):691-702. Available from: <https://dx.doi.org/10.1590/1807-57622015.0020>
7. Schwartz Y, Durrive L, organizers. *Trabalho & ergologia: conversas sobre a atividade humana*. Niterói, RJ(BR): Editora da Universidade Federal Fluminense; 2010.
8. Holz EB, Bianco MF. Ergologia: uma abordagem possível para os estudos organizacionais sobre trabalho. *Cad EBRAPÉ*. 2014 Aug [cited 2019 Oct 03]; 12(Spe): 494-512. Available from: <https://dx.doi.org/10.1590/1679-39519106>
9. Goularte RS, Gatto VB. O método instrução ao sócia (IAS) na pesquisa sobre o trabalho docente. *Linguagens e Cidadania*. 2013 [cited 2019 Oct 03]; 15(1):1-16. Available from: <https://periodicos.ufsm.br/LeC/article/view/22830>

10. Troussier Y. L'activité de jeu aux limites des règles. Société internationale d'ergologie. Ergologia [página na Internet]. 2016 [cited 2017 May 10]; 16:21-37. Available from: [http://www.ergologia.org/uploads/1/1/4/6/11469955/f6.\\_art.\\_1.pdf](http://www.ergologia.org/uploads/1/1/4/6/11469955/f6._art._1.pdf)
11. Bertoncini JH, Pires DEP, Scherer MDA. Condições de trabalho e renormalizações nas atividades das enfermeiras na saúde da família. Trab. educ. saúde [Internet]. 2011 [cited 2019 Oct 02]; 9(1):157-173. Available from: <http://www.scielo.br/pdf/tes/v9s1/08.pdf>
12. Scherer MDA, Pires DEP, Jean R. A construção da interdisciplinaridade no trabalho da Equipe de Saúde da Família. Ciênc Saúde Coletiva [Internet]. 2013 [cited 2019 Oct 02]; 18(11):3203-12. Available from: <https://dx.doi.org/10.1590/S1413-81232013001100011>
13. Verdier É. Planifications et régulations territoriales de la formation et de l'emploi à l'épreuve du travail. Ergologia [Internet]. 2016 [cited 2017 May 10]; 16:113-30. Available from: [http://www.ergologia.org/uploads/1/1/4/6/11469955/f6.\\_art.\\_1.pdf](http://www.ergologia.org/uploads/1/1/4/6/11469955/f6._art._1.pdf)
14. Brito J, Muniz HP, Santorum K, Ramminger T. O trabalho nos serviços públicos de saúde: entre a inflação e a ausência de normas. In: Assunção AA, Brito J, editors. Trabalhar na saúde: experiências cotidianas e desafios para a gestão do trabalho e do emprego. Rio de Janeiro, RJ(BR): Fiocruz; 2011. p.23-43
15. Fischborn AF, Viegas MF. A atividade dos trabalhadores de enfermagem numa unidade hospitalar: entre normas e renormalizações. Trabalho, Educ Saúde. 2015 Sept/Dec [cited 2019 Oct 02]; 13(58):657-74. Available from: <https://dx.doi.org/10.1590/1981-7746-sip00060>
16. Oliveira MCR, Franzi NL. Educação, profissional, trabalho e produção de saberes. Reflexão e Ação [internet]. 2015 Sept/Dec [cited 2016 Jul 10]; 23(3):315-37. Available from: <http://online.unisc.br/seer/index.php/reflex/index>
17. Ribeiro G, Pires DEP, Scherer MDA. Práticas de biossegurança no ensino técnico de enfermagem. Trabalho, Educ Saúde. 2016 Sept/Dec [cited 2019 Oct 02]; 14(3):871-88. Available from: <https://dx.doi.org/10.1590/1981-7746-sol00019>
18. Cunha DM. Notas conceituais sobre atividade e corpo-si na abordagem Ergológica do trabalho. GT: Trabalho e Educação [Internet]. 2015 [cited 2016 Jul 22]. Available from: <http://30reuniao.anped.org.br/trabalhos/GT09-3586--Int.pdf>
19. Bellaguarda ML, Padilha MI, Pires DEP. Conselho regional de enfermagem de Santa Catarina (1975-1986): importância para a profissão. Texto Contexto Enferm. 2015 Jul/Sept [cited 2019 Oct 02]; 24(3):654-61. Available from: <https://dx.doi.org/10.1590/0104-07072015003750013>
20. Fertoni HP, Pires DEP, Biff D, Scherer MDA. Modelo assistencial em saúde: conceitos e desafios para a atenção básica brasileira. Ciênc Saúde Coletiva. 2015 June [cited 2019 Oct 02]; 20(6):1869-78. Available from: <https://dx.doi.org/10.1590/1413-81232015206.13272014>
21. Pimenta AL, Souza ML. Identidade profissional da enfermagem nos textos publicados na REBEN. Texto Contexto Enferm. 2017; 6(1):e4370015. Available from: <http://dx.doi.org/10.1590/0104-07072016004370015>

## NOTES

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### CONTRIBUTION OF AUTHORITY

Study design: Ribeiro G, Pires D.

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Data analysis and interpretation: Ribeiro G, Pires D, Scherer MDA.

Discussion of the results: Ribeiro G, Pires D, Scherer MDA.

Writing and/or critical review of the content: Ribeiro G, Pires D, Scherer MDA.

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### CONFLICT OF INTEREST

There are no conflicts of interests.

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