

DOI: 10.1590/S0080-623420140000400019

ORIGINAL ARTICLE

Problematizing the multidisciplinary residency in oncology: a practical teaching protocol from the perspective of nurse residents*

PROBLEMATIZANDO A RESIDÊNCIA MULTIPROFISSIONAL EM ONCOLOGIA: PROTOCOLO DE ENSINO PRÁTICO NA PERSPECTIVA DE RESIDENTES DE ENFERMAGEM

PROBLEMATIZANDO LA RESIDENCIA MULTIPROFESIONAL EN ONCOLOGÍA: PROTOCOLO DE ENSEÑANZA PRÁCTICA DESDE LA PERSPECTIVA DE RESIDENTES DE ENFERMERÍA

Myllena Cândida de Melo¹, Gisella de Carvalho Queluci², Mônica Villela Gouvêa³

ABSTRACT

Objective: To investigate practical teaching of nurse residents in a multidisciplinary residency in oncology. **Method:** A qualitative descriptive study grounded in the problematization methodology and its steps, represented by the Maguerez Arch. Data were analyzed using content analysis. **Results:** Potentiating and limiting elements of the residency guided the design of a practical teaching protocol from the perspective of residents, structured in three stages: Welcoming and ambience; Nursing care for problem situations; and, Evaluation process. **Conclusion:** Systematization of practical teaching promoted the autonomy of individuals and the approximation of teaching to reality, making residency less strenuous, stressful and distressing.

DESCRIPTORS

Education, nursing
Problem-based learning
Internship nonmedical
Preceptorship
Oncology nursing

RESUMO

Objetivo: Investigar o ensino prático de residentes de Enfermagem de uma residência oncológica multiprofissional. **Método:** Pesquisa descritiva qualitativa, embasada na metodologia da problematização e em suas etapas, representadas pelo Arco de Maguerez. Os dados foram analisados segundo a análise de conteúdo. **Resultados:** Elementos potencializadores e limitantes da residência nortearam o desenho de um protocolo de ensino prático na perspectiva dos residentes, estruturado em três etapas: acolhimento e ambiência; cuidados de Enfermagem a partir de situações-problema e processo de avaliação. **Conclusão:** A sistematização do ensino prático promoveu a autonomia dos sujeitos e a aproximação do ensino à realidade, tornando a residência menos extenuante, aflitiva e estressante.

DESCRITORES

Educação em enfermagem
Aprendizagem baseada em problemas
Internato não médico
Preceptoría
Enfermagem oncológica

RESUMEN

Objetivo: Investigar la enseñanza práctica de los residentes de enfermería de una residencia oncológica multiprofesional. **Método:** Investigación descriptiva cualitativa, basada en la metodología de problematización y en sus etapas, representadas por el Arco de Maguerez. Los datos fueron analizados mediante el análisis de contenido. **Resultados:** Tanto factores potenciadores y limitantes de la residencia guiaron el diseño de un protocolo de enseñanza práctica desde la perspectiva de los residentes, estructurado en tres etapas: acogida y ambiente; cuidados de enfermería a partir de situaciones problema y proceso de evaluación. **Conclusión:** La sistematización de la enseñanza práctica promueve la autonomía de los sujetos y la aproximación de la enseñanza a la realidad, haciendo la residencia menos agotadora, angustiante y estresante.

DESCRITORES

Educación en enfermería
Aprendizaje basado en problemas
Internato no médico
Preceptoría
Enfermería oncológica

* Extracted from the dissertation "A residência como cenário educativo para enfermeiros: o uso da metodologia da problematização", Professional Master's Program of Education in Health, School of Nursing Aurora Afonso Costa, Federal Fluminense University, Niterói, RJ, Brazil, 2013. ¹ Master's degree, Professional Master's Program in Health Education, School of Nursing Aurora Afonso Costa, Federal Fluminense University, Niterói, RJ, Brazil. ² Adjunct Professor, Department of Nursing Fundamentals and Administration, Federal Fluminense University, Niterói, RJ, Brazil. ³ Associate Professor, Department of Health Planning, Institute of Community Health and Professional Master's in Health Education, Federal Fluminense University, Niterói, RJ, Brazil.

INTRODUCTION

Residency is considered a form of service-based training, based on learning through daily practice. This practice is characterized by progressive acquisition of basic technical and relational attributes, which are essential for the professional development of the learner, through exposure to situations suitable for training, neither artificial nor artificialized, but representing day to day moments that are planned to be educational⁽¹⁾.

Critical reflection on the work processes - even in conditions of alienation and subordination to a logic that hinders professional practice as creative and capable of providing the subjects with satisfaction - is a necessary condition to expand fulfilling dimensions of work in healthcare. In this scenario, it is important to understand that the major contemporary education-related issues are profoundly related to the new demands of the work process, driven by changes in the production and distribution of goods and knowledge generated by scientific and technological advances in our society⁽²⁾.

This study focused on a multidisciplinary residency that sought to educate critical and reflective health professionals, prepared to act in a comprehensive and interdisciplinary way in oncology care, in different modalities: health promotion, disease prevention, screening, early detection, diagnosis, treatment, rehabilitation and palliative care.

For this purpose, it was necessary to adjust the whole process of professional training to meet the diversity and complexity of everyday practice in an oncology institution. The Ministry of Health notes that this adjustment implies the confrontation of some challenges, such as⁽³⁾: replacement of the teacher-focused educational model by learning activities centered on the reflection about reality in order to articulate theory and practice; overcoming the fragmented disciplinary model with the construction of an interdisciplinary curriculum in which the educational axis articulates processes of teaching, research, management and multidisciplinary team care, with a cross-sectional theme of comprehensive care; disruption with the individual versus collective, and biological versus social, polarization; the transformation of the conception of evaluation as a punitive process for an inclusive, diagnostic and procedural evaluation.

This challenge presupposes the theoretical and methodological domain of the conception of problematizing education on the part of the actors involved in the panorama of the residence: management, teaching, preceptorship, tutoring.

In this context, methods of active learning have long been recognized, organized from problem situations that value learning how to learn. Reflection on everyday problems triggers the search for explanatory factors and a

proposal of solutions. The contents are reconstructed by the learner, who reorganizes and adapts the content to his prior cognitive structure, discovering relationships, laws or concepts that require assimilation⁽⁴⁾.

The Problematization Methodology (PM), as an active and critical educational approach of pedagogical work, is grounded on the Philosophy of Praxis by Adolfo Sánchez Vázquez and the Liberating/Problematizing Pedagogy by Paulo Freire, inspired by the principles of Dialectical Historical Materialism⁽⁵⁾.

This article aims to deepen the knowledge of practical teaching in a multidisciplinary residency in oncology, arising from the application of the problematization methodology with nurse residents.

METHOD

The descriptive qualitative study was developed in 2012 in a public teaching hospital in Rio de Janeiro, which offered a Multidisciplinary Residency Program in Oncology (MRPO).

The study included nurse residents in the first MRPO year in 2012. Respondents comprised a young group (23-29 years old), with a maximum of two years post-graduation, most of whom were single women from other states, totaling nine subjects.

The research method was based on the PM and its steps, represented by the Maguerez Arch (Figure 1).

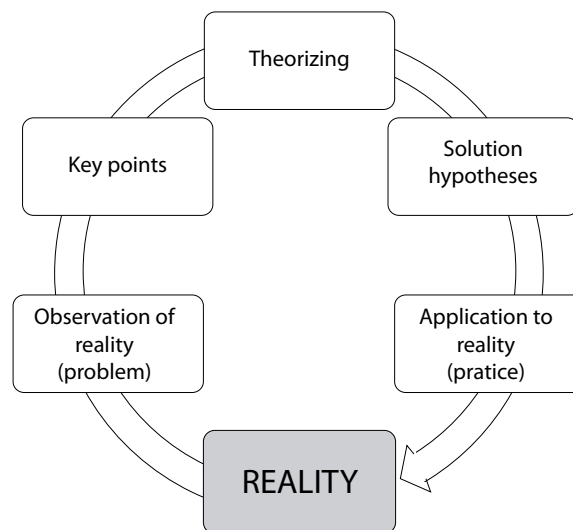


Figure 1 –Maguerez Arch used by Berbel, based on Bordenave & Pereira⁽⁶⁾.

The Maguerez Arch is based on the lived reality, in which it seeks to work within real life, in other words, with reality as the starting point. The study was performed in five steps: observation of reality → key points → theorizing → solution hypotheses → application to reality, returning to the same reality, in order to change it at some level⁽⁶⁾.

Therefore, data were collected through observation of the participants and through recordings made in a field diary during meetings with residents participating in the

research, based on the steps of the Maguerz Arch and on a PM, which is detailed in Figure 2.

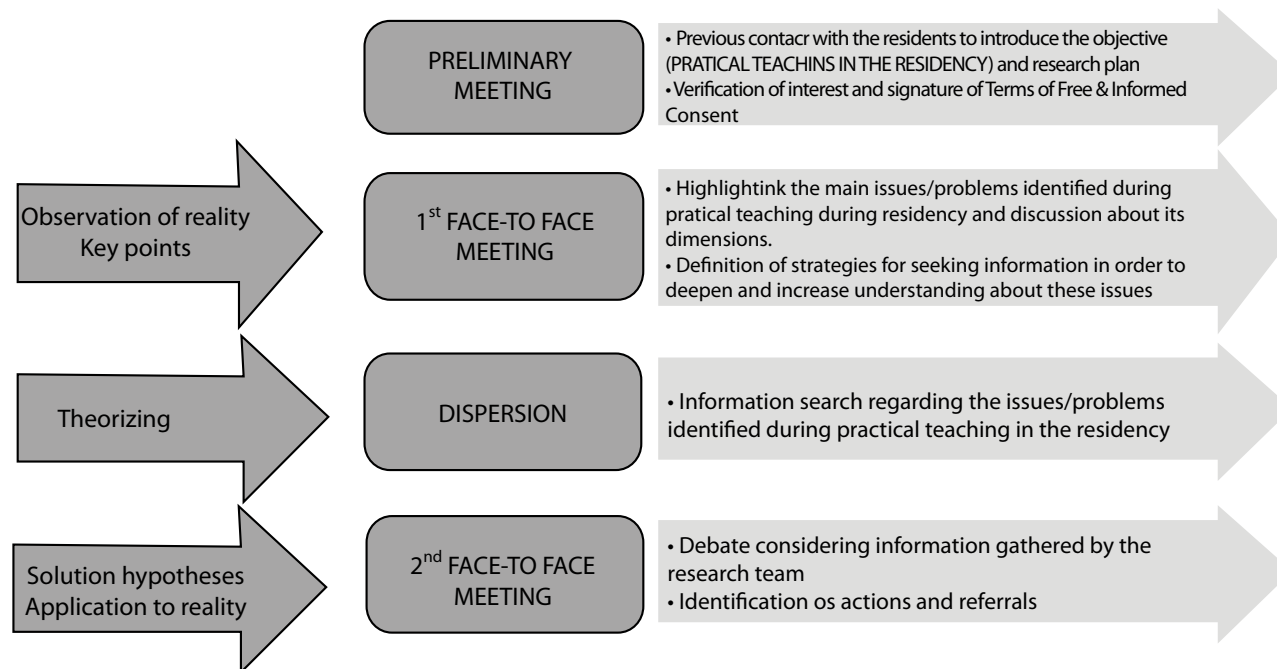


Figure 2 – Data collection scheme, constructed by the researchers– Rio de Janeiro, Brazil, 2013

In the **1st meeting** with the residents, through **observation of reality**, they identified possible problem situations related to the residency in their professional environment. In this step, the researcher sought to instigate, motivate and discuss theoretical or practical key situations, issues or problems experienced by residents. Next, the group selected a major problem situation that met its expectations in a general way, individually reflecting and expressing its understanding about the possible reasons and dimensions for the existence and maintenance of the highlighted problem, listing its issues (**key points**). In the next step of collection (dispersion), the residents had 15 days to seek, individually or in groups, data and information to ground the dimensions/reasons for the problem situation - **theorizing** - and thus raise **solution hypotheses**. In the **2nd meeting**, the researcher took over the main problem situation, questioning which search strategies were used by participants. Subsequently, the information brought by them was presented and discussed, generating a synthesis with their individual perception of the problem, its potentiating and limiting factors, causes/dimensions and whether there were changes in their level of knowledge. Immediately, residents exposed possible solutions, appointments, referrals and new practical actions applicable to the problem in question, ending with the construction of a protocol for practical teaching - **application to reality**.

During each meeting, the researchers mediated group discussions, simultaneously typing and projecting their syntheses in a simultaneous data show, in order to ensure collective

visualization and analysis. After the sessions, individual analyses were requested of the participants and recordings resulting from participant observation were made in a field diary by the researchers. The individual records were typed and participants were identified by letters A through I.

Data were analyzed through the technique of content analysis⁽⁷⁾, by following three steps: 1) pre-analysis; 2) material exploration; and 3) results analysis and interpretation. Thus, the research material from the field diary and the syntheses was compiled and organized through fluctuating reading. Secondly, data were coded from units in the records and, in sequence, were categorized by classifying the elements according to their similarities and differences, with subsequent reunification, according to common characteristics⁽⁷⁾.

It is emphasized that the project was approved by the Ethics Committee under registry CAAE/03454912.0.0000.5243, responding to the ethical principles of Resolution 466/2012⁽⁸⁾.

RESULTS

Through data analysis, potentiating and limiting factors of the practical teaching in MRPO that permeated all the research process were identified. Potentiating factors were: the advanced provision of technological resources; and the physical structure/equipment available to the MRPO, which were suitable for the activities of teaching, research and care, enabling improvement of scientific and technological

knowledge on health by the residents. The limiting factors identified were: the (little) perception of the preceptor about their educational role; dissociation between theory and practice; and the inadequacy of supervisory and evaluative procedures regarding the residents' activities.

Thus, considering the limiting factors, categories related to practical teaching in the residency were identified, namely: 1) structuring systematic welcoming and

ambience for new residents; 2) planning and implementation of nursing care based on problem situations; and 3) the reorganization of the evaluation process. Based on the analysis of these categories, a *Practical Teaching Protocol* could be designed. This protocol was proposed by the group participating in the research in order to guide basic educational activities to be performed by professionals involved with MRPO, connecting those responsible and their actions, as described in Chart 1.

Chart 1 - Practical Teaching Protocol, with their respective responsibilities and actions - Rio de Janeiro, Brazil, 2013

PRACTICAL TEACHING PROTOCOLENSINO PRÁTICO	
I – Welcoming and Ambience	
RESPONSIBILITY	ACTIONS
General coordination of education	Planning, implementation and coordination of the courses and programs offered by the institution; Promoting and disseminating the production of scientific knowledge; Reception and guidance for the conversation cycle.
Coordination of the multidisciplinary area	Presenting specific laws that govern the MRPO and related documentation; Planning course content and activities in the cross-sectional axis (common to all the categories).
Coordination of the nursing area	Presenting the unit dynamics, duty roster, expected activities, attributions and evaluation forms; Visiting the units and the heads of department; Introducing the residents to the tutor.
Tutor	Receiving the residents cordially, being available for any clarifications, suggestions and/or complaints; Introducing the service: team, service dynamics, location of materials and goods, printed forms, and systems pertinent to care;
Preceptor	Introducing the new resident to the preceptor. Reintroducing the working environment and the team; To clarify and review theoretical and practical assignments of the resident, in addition to the dynamics and operability of the clinic in question, institutional routine and care; To support and facilitate the daily lives of residents in practice.
II – Nursing care based on problem situations	
RESPONSIBILITY	ACTIONS
Coordination of the nursing area	To plan course content and activities of the specific axis, as well as the learning objectives; To provide technical-scientific support to the teachers and assistance to the preceptors; To organize and select the group of advisers for monitoring and contribution to the development of the work for the conclusion of the course; To organize, promote and disseminate scientific events.
Tutor	To implement pedagogical strategies integrating theory and practice, linking teaching-service; To promote pedagogical training and continuing education of the preceptors; To plan and promote multidisciplinary study groups and clinical sessions; To continuously evaluate the academic-care development of the residents.
Preceptor	To instigate questioning by the resident, arousing their interest; To encourage participation of residents in decision-making, involving them in the whole care process, and not only in performing techniques; To accompany, supervise and guide the daily life of the resident in practice; To work on concepts, available treatments and care in oncology, based on situations experienced in the practice and experience of the residents, in order to bring them this reality and experience with oncology clients; To provide theoretical support and possible research bases, for depth regarding the patient's medical history and/or case, physical examination, diagnosis and cancer treatment; To promote/facilitate multidisciplinary rapport, bringing nurse residents closer to other professionals, focusing on quality of care; To articulate integration of theory and practice, to collaborate and assist in the implementation and/or support of the proposed treatment, with development of a plan of care; To create opportunities and highlight specific procedures and techniques of each unit, as well as to guide and supervise their performance.

Continue...

Continuation...

PRACTICAL TEACHING PROTOCOLENSINO PRÁTICO	
III – Evaluation ProcessAvaliação	
RESPONSIBILITY	ACTIONS
General Education Coordination	Preparation and definition of the evaluation criteria.
Coordination of the nursing area	Preparation of evaluation instruments according to the learning objectives.
Tutor	To evaluate the preceptor, considering the notes of the resident and the preceptor himself; Gathering all or at least two of the preceptors who accompanied the resident to be evaluated, listening to their opinions on their learning and performance, thereby reducing bias caused by empathy or antipathy between preceptor/resident.
Preceptor	To evaluate the process of the resident, with initial, partial, and final stage, during the resident's stay in the service with immediate feedback, listening to the difficulties and facilities experienced by him, also punctuating his expectations as a preceptor; To expose and discuss with the resident the evaluation forms already developed by the program, giving him the opportunity to speak, pointing out suggestions and criticisms; To present the evaluation to the resident, providing him the right to question and/or to justify any point evaluated; To praise the resident, in accordance with his professional conduct, and according to criteria established by the learning program.

It should be noted that such actors play distinct roles at different times in the scenario of multidisciplinary residency, namely: general coordination of education (coordinator designated by the general director of the institute), coordination of multidisciplinary teaching area and specific nursing coordinator (coordinators indicated by the education committee and approved by the general coordinator), tutoring (leader of service - administrative nurse, in the unit and/or nursing supervisor, manager), teachers (professionals linked to the educational area of the institution and management/care professionals with expertise in the areas), preceptorship (nursing assistants) and teaching committee (committee formed by the participation of the coordinator of education, member of the course/program coordination representative from each unit of the institute, teaching and student representative).

DISCUSSÃO

The discussion refers to the notes of the Practical Teaching Protocol, detailed in Table 1.

Structuring systematic welcoming and ambience

The Aurélio dictionary describes welcoming (acolhimento in Portuguese) as *the act or effect of embracing; reception; refuge, harboring*⁽⁹⁾. The National Humanization Policy defines welcoming as

receiving users, beginning with their arrival, and being fully responsible for them, giving attention to their complaints, allowing them to express their concerns, anxieties, and at the same time, placing necessary limits, ensuring resolute attention and liaison with other health services for continuity of care when necessary⁽¹⁰⁾.

The other point, ambience has been considered a concern for nursing for some time. Florence Nightingale devised the Theory of Environment, stating that the individual has his natural defenses influenced by a healthy or unhealthy environment, an environment with external conditions that can prevent disease, suppress it, or make it worse⁽¹⁰⁾. Thus, nursing is supposed to, as a profession of patient contact, change the unhealthy aspects of the environment, promoting better conditions upon which nature can act. Nightingale referred to this as a therapeutic environment, conducive to the healing process, through the use of pure air, light and warmth, cleanliness, repose, with the least expenditure of vital energy of the patient⁽¹¹⁾.

Welcoming and ambience are two concepts that refer to the patient or health service user from the health perspective. However, such definitions can be perfectly applied to professionals and residents. A health care organization that intends to train workers must receive them with care, beginning upon their arrival, fully taking responsibility for them, listening to their expectations, allowing them to express their concerns, questions, and integrating them with a team of multidisciplinary health care team, supervising their activities, and promoting a space that is peaceful and conducive to learning.

Among the institutional responsibilities for the residents' education, the figure of the preceptor prevails, who assumes numerous functions given his direct interaction with the resident. Sometimes he shows the way, serving as a guide; other times he stimulates thinking and an active attitude in the resident. Many times he plans, controls the learning process, and analyzes performance. But he also counsels, using his experience, caring for personal and professional growth of the young apprentice⁽¹²⁾.

The interaction between preceptor and resident is permeated by relationships, whether professional or personal, arising out of daily contact in the workplace, where skilled workers share knowledge and experiences with nursing residents, who primarily are recently graduated and inexperienced. In order to initiate a productive relationship, it is essential that those involved are interested and accept their responsibilities in the context in question. The statements below represent the interpretation of nursing residents regarding their reception, welcoming and ambiance in the residency.

The possible causes for this problem are: lack of preceptors' time for the residents; lack of interest in teaching by the chosen preceptor, who, in turn, does not accept the role (Statement recorded in the field diary).

The preceptors are not prepared/trained to do so, they do not have this characteristic, they do not like to teach, and consider the residents double work (Statement recorded in the field diary).

Planning and implementation of nursing care based on problem situations

Historically, education in health has been guided by the use of traditional methods derived from mechanistic, cartesian, flexnerian patterns. In this conservative model of teaching and learning, the teacher is placed in the center of the educational process as a content transmitter, whereas the student is supposed to be a mere spectator, and passive repeater⁽¹³⁾.

Meanwhile, the job market has increasing demands for productivity and quality with skills beyond technical-instrumental dexterity, also requiring intellectual flexibility, given the needs for continuous improvement of production processes of goods and services. Consequently, unskilled, fragmented, repetitive and routine work is replaced by new forms of organization, by multipurpose work, performed by an integrated team, with more flexibility and autonomy⁽¹⁴⁾.

Traditionally, education in health and nursing was centered on the rigid repetition of tasks, rules and routines distant from reality, performed without forethought, generating submissive, alienated and uncritical professionals. Hence the need for changes in the educational field beginning at the undergraduate level, with the accession of alternative teaching methods such as the problematization of reality, aiming at the formation of professionals who are active and capable of intervening in reality. Furthermore, the change is paradigmatic, with explicit requirements for incorporation of new technologies that address the completeness, diversity, globalization and the uncertainty of everyday healthcare workers⁽¹⁵⁾.

Considering the constant transformation of teacher education in nursing regarding the evolution in education,

from the mutability of health, this should bring the perspective of reflective learning, a critical training that builds autonomy and creativity⁽¹⁶⁾.

Among the nurse's duties with care is the nursing process, a movement to identify the problem/need of the client being assisted, operationalizing in steps such as data collection or nursing assessment; nursing diagnosis; nursing planning; implementation and nursing evaluation. Therefore, it is a dynamic system, which requires from the professional a scientific basis, knowledge, skills and attitudes based on ethical commitment, responsibility and care for the other⁽¹⁷⁾.

It is known that the process of nursing diagnosis consists of a range of cognitive and perceptual activities in which observations lead to inferences which, in turn, lead to more observations, thereby becoming a cyclical method. Thus, it is understood that this set of activities requires diverse competencies such as critical thinking for assimilation and categorization of information obtained in the expectation of understanding the heterogeneity and complexity of human responses to health problems or life situations. Given this context, it is believed that the decision making of nurses should be based on careful evaluation of signs and symptoms presented by the patient, understanding their relationships, and relevance to the care. Therefore, there is the need to use strategies that develop critical thinking skills, both in teaching and in clinical nursing practice⁽¹⁸⁾.

For subjects to learn, it is essential that this assimilation and understanding are articulated with the reality of the learner, starting from his context and valuing his empirical knowledge, that is, knowledge constructed beyond the merits of teaching itself. There is no teaching without learning, the existence of those who teach and those who learn is required⁽¹⁹⁾. Thus significant learning is consolidated, based on experience anchored on previous knowledge of the students. Newly acquired information gives it meaning and does not only represent simple memorization.

Teaching is the process through which learning is facilitated by another person, allowing the person being educated to experience situations with the potential for modifications in real life. This progress is mainly based on three components: someone who teaches and someone who learns, and something that the first teaches to the second. Learning is a manifest reflection of the student experience to the teaching of specific knowledge, facilitated by the instruction of the professor, and is based on certain tactics proposed by the training that is required, contributing to the experience of the learner above all as a being in the world⁽²⁰⁾.

It is widely accepted that learning strategies that include an integrative approach to knowledge provide better results than a superficial (or reproductive) approach based on memorization, in which motivation comes from fear of failure associated with a high work demand. The

learning gained suffers from strong influences of motivation for such and strategies that stimulate that motivation are influenced by the context in which learning takes place, thus, the aim with MP is a profound approach that is motivated by an intrinsic desire to learn, resulting in an integrated and personal understanding⁽²¹⁾.

The statement by one of the research participants summarizes the anguish of the group members, for not considering themselves active in their own process of teaching and learning.

Some preceptors do not care about opinions, theoretical and even practical considerations pointed out by the residents. Many listen, others do not even discuss (Speech recorded in the field diary).

This discourse reinforces the idea in one study⁽²²⁾, according to which the educator needs, in the teaching-learning process based on the assumptions of PM, to offer opportunities for care, having the sensibility to select actual situations considered to be problematic and to recognize the potentialities and difficulties of students, valuing previous experiences and prior knowledge, being a motivational force for the collective construction of knowledge. This is so that the contents can emerge from the reality experienced by learners and educators, from the context of patient care.

The pedagogical action needs to take into account the potential of students, contributing to the formation of better qualified and more humane professionals; giving them the opportunity to renew their needs and value their context and individuality, minimizing failures and inequalities of health policies and education within our country⁽²³⁾.

Reorganization of the evaluation process

In problematization, teachers and students are mediated by the reality that is learned and from which they extract the learning content in order to act on it, enabling social transformation. Therefore, what is learned does not result from imposition or memorization, but from the critical level of knowledge to which one arrives through comprehension, reflection and criticism⁽²⁴⁾. Thereby, PM is a teaching strategy that envisions the formation of more active, meditative and inquisitive professionals, able to work in a team and learn together.

At the end of the teaching process, the teacher and the student conduct an evaluation. Particularly in problematization, teachers evaluate their work and the work of each student. Students also self-evaluate and evaluate their peers and the teacher. This step becomes a constituent part in the construction of knowledge itself and requires different skills and attitudes from teachers and students. This is a moment of understanding about oneself and about the other⁽²⁵⁾.

Evaluation comes from the Latin *a + valere*, which means assigning value and worth to the object under

study⁽²⁵⁾. Therefore, evaluating is assigning a judgment of value on the ownership of a process to assess the quality of its outcome. From this concept it is possible to understand that verification should not have appreciation as its sole purpose, thus the objective of gauging the development of teaching should not be the approval or disapproval of the student, but the direction of their learning and their consequent development⁽²⁵⁾.

The evaluation process of the resident should understand his training in the theoretical, scientific dimension, in his capacity for reflection, argumentation and decision, in addition to the practical aspects, technical and manual dexterity skills. It considers the learning acquired by the resident through the exchange of experiences on the job, the creation of new knowledge and practice, obtained through reflection on doing and experiencing of the process. Thus, when dealing with innovative and critical pedagogical strategies, it is essential that the assessment is also innovative, considering not only quantitative points, but the qualitative development and professional growth of the resident.

With that said, the evaluation is the propulsion of the entire cycle of teaching and learning, as it is through this that we diagnose the weaknesses and strengths, plan and execute the planning that should guide the processes of change and monitor the results⁽²⁶⁾.

The criticisms made by the residents to the preceptors are not in fact taken into account. A real value is not given to the resident's opinion (Speech recorded in the field diary).

(...)A clear evaluation is needed to point out the performance of each one so that there is a feedback between them (Resident A).

CONCLUSÃO

Teaching in health is a complex task and requires from those in the context a differentiated and sensitive look at the dynamics of this process, which requires listening, flexibility, reasonableness, availability and proactivity. Considering the residency panorama, the health care professional/nurse/preceptor is fundamentally an educator and his performance involves not only the resident but the multidisciplinary team, the patient and family/caregivers. Thus, there must be commitment to critical and liberating learning. However, in the work activity the conventional educational methods are still hegemonic, prioritizing the transfer of information, individuality and repetitive practice. The absence of systematization of practical teaching in the residency, especially in oncology, with all the emotional charge associated, contributes to making it an exhausting, afflicting and distressing experience for those involved.

In contrast, problematization is configured in a flexible manner, and may be adopted in isolation from content,

either theoretical or practical, or implemented across the curriculum of the program in question. But this innovative pedagogy requires greater involvement of its actors, leaving the tutoring process, the ability to promote and conduct dialogue, and to stimulate student autonomy and responsibility up to the teachers. The students are co-responsible for their learning.

Thus, the research process allowed the construction of a practical teaching protocol in the setting of an oncology residency, and the opportunity to stimulate the autonomy of subjects and to better approximate teaching to reality. The residents were *provoked* by the PM, which emerged as a pedagogical tactic, redefining concepts and values.

REFERENCES

1. Barbeiro FMS, Miranda LV, Souza SR. Nurse preceptors and nursing residents: interaction in the practice scenario. *Rev Pesq Cuid Fundam* [Internet]. 2010 [cited 2013 June 25];2(3):1080-7. Available from: http://www.seer.unirio.br/index.php/cuidadofundamental/article/view/584/pdf_45
2. Jesus JCM, Ribeiro VMB. Uma avaliação do processo de formação pedagógica de preceptores do internato médico. *Rev Bras Educ Med* [Internet]. 2012 [citado 2012 ago. 02]; 36(2):153-61. Disponível em: <http://www.scielo.br/pdf/rbem/v36n2/02.pdf>
3. Brasil. Ministério da Saúde; Instituto Nacional de Câncer. Plano de Curso do Programa de Residência Multiprofissional em Oncologia. Rio de Janeiro: INCA; 2012.
4. Marin MJS, Gomes R, Marvulo MML, Primo EM, Barbosa PMK, Druzian S. Pós-Graduação Multiprofissional em Saúde: resultados de experiências utilizando metodologias ativas. *Interface Comum Saúde Educ* [Internet] 2010 [citado 2012 ago. 02];14(33):331-44. Disponível em: <http://www.scielo.br/pdf/icse/v14n33/a08v14n33.pdf>
5. Berbel NAN. A problematização e a aprendizagem baseada em problemas: diferentes termos ou diferentes caminhos? *Interface Comum Saúde Educ*. 1998;2(2):139-54.
6. Berbel NAN, Gamboa SAS. A metodologia da problematização com o Arco de Magueres: uma perspectiva teórica e epistemológica. *Filosofia Educ* [Internet]. 2011-2012 [citado 2014 abr. 08];3(2). Disponível em: <http://www.fae.unicamp.br/revista/index.php/rfe/article/view/2363/2635>
7. Bardin L. *Análise de conteúdo*. Lisboa: Edições 70; 2011.
8. Brasil. Ministério da Saúde; Conselho Nacional de Saúde. Resolução n. 466 de 12 de dezembro de 2012. Dispõe sobre diretrizes e normas regulamentadoras de pesquisas envolvendo seres humanos [Internet]. Brasília; 2012. [citado 2013 mar. 10]. Disponível em: <http://conselho.saude.gov.br/resolucoes/2012/Reso466.pdf>
9. Ferreira ABH. *Dicionário Aurélio ilustrado*. Curitiba: Positivo; 2010.
10. Brasil. Ministério da Saúde. Rede Humaniza/SUS [Internet]. Brasília; 2013 [citado 2013 jun. 05]. Disponível em: www.redehumanizaus.net/glossary/3
11. Nightingale F. *Anotações de enfermagem: o que é e o que não é*. São Paulo: Rideel; 2010.
12. Botti SHO, Rego STA. Docente-clínico: o complexo papel do preceptor na Residência Médica. *Physis (Rio J)* [Internet]. 2011 [citado 2014 jan. 26];21(1):65-85. Disponível em: <http://www.scielo.br/pdf/physis/v21n1/v21n1a04.pdf>
13. Melo MC, Queluci GC. Problematization methodology in nursing of oncologic education: a descriptive study. *Online Braz J Nurs* [Internet]. 2012 [cited 2012 Nov. 10];11(2 Suppl 1). Available from: <http://www.objnursing.uff.br/index.php/nursing/article/view/3965>
14. Colenci R, Berti HW. Professional development and entering the labor market: the perceptions of nursing graduates. *Rev Esc Enferm USP* [Internet]. 2012 [cited 2014 Jan 26];46(1):158-66. Available from: http://www.scielo.br/pdf/reeusp/v46n1/en_v46n1a22.pdf
15. Marin MJS, Lima EFG, Paviotti AB, Matsuyama DT, Silva LKD, Gonzalez C, et al. Aspectos das fortalezas e fragilidades no uso das Metodologias Ativas de Aprendizagem. *Rev Bras Educ Med* [Internet]. 2010 Mar. [citado 2014 Jan 26];34(1):13-20. Disponível em: <http://www.scielo.br/pdf/rbem/v34n1/a03v34n1.pdf>
16. Backes VMS, Moya JLM, Prado ML, Menegaz JC, Cunha AP, Francisco BS. Expressões do conhecimento didático do conteúdo de um professor experimentado de enfermagem. *Texto Contexto Enferm* [Internet]. 2013 [citado 2013 out. 03];22(3):804-10. Available from: <http://www.scielo.br/pdf/tce/v22n3/v22n3a29.pdf>

17. Menezes SRT, Priel MR, Pereira LL. Nurses' autonomy and vulnerability in the Nursing Assistance Systematization practice. *Rev Esc Enferm USP* [Internet]. 2011 [cited 2013 Mar 05];45(4):953-8. Available from: http://www.scielo.br/pdf/reeusp/v45n4/en_v45n4a23.pdf
18. Bittencourt GKD, Crossetti MGO. Critical thinking skills in the nursing diagnosis process. *Rev Esc Enferm USP* [Internet]. 2013[cited 2013 Ago 04];47(2):341-7. Available from: http://www.scielo.br/pdf/reeusp/v47n2/en_10.pdf
19. Amestoy SC, Backes VMS, Thofehrn MB, Martini JG, Meirelles BHS, Trindade LL. Nurses' perception of the teaching-learning process of leadership. *Texto Contexto Enferm* [Internet]. 2013[cited 2013 Oct 03];22(2):468-75. Available from: http://www.scielo.br/pdf/reeusp/v47n2/en_10.pdf
20. Bordenave JD. A pedagogia da problematização na formação de profissionais de saúde [Internet]. [citado 2014 mar. 20]. Disponível em: <http://www.unibarretos.edu.br/v3/faculdade/imagens/nucleo-apoio-docente/PEDAGOGIA%20PROBLEMATIZADORA.doc>
21. Skare TL. Metodologia do ensino na preceptoria da residência médica. *Rev Med Res* [Internet]. 2012 [citado 2013 mar. 10]; 4(2):116-20. Disponível em: <http://www.crmpr.org.br/publicacoes/cientificas/index.php/revista-do-medico-residente/article/view/251/241>
22. Schaurich D, Medeiros HM, Souza NS, Cartaña MHF. Metodologia da problematização no ensino do cuidado em enfermagem pediátrica. *Rev Enferm UFPE* [Internet]. 2008 [citado 2013 mar. 05];2(4). Disponível em: <http://www.revista.ufpe.br/revistaenfermagem/index.php/revista/article/view/335>
23. Prado ML, Velho MB, Espíndola DS, Sobrinho SH, Backes VMS. Arco de Charles Maguerez: refletindo estratégias de metodologia ativa na formação de profissionais de saúde. *Esc Anna Nery Rev Enferm* [Internet]. 2012 [citado 2014 jan 27];16(1):172-7. Disponível em: <http://www.scielo.br/pdf/ean/v16n1/v16n1a23.pdf>
24. Tsuji H, Aguilar-da-Silva RH. Aprender e ensinar na escola vestida de branco: do modelo biomédico ao humanístico. São Paulo: Forte; 2010.
25. Aguilar-da-Silva RH, Scapin LT. Utilização da avaliação formativa para a implementação da problematização como método ativo de ensino-aprendizagem. *Est Aval Educ* [Internet]. 2011 [citado 2014 jan. 26]; 22(50):537-52. Disponível em: <http://www.fcc.org.br/pesquisa/publicacoes/eae/arquivos/1665/1665.pdf>
26. Almeida MTC, Batista NA. Ser docente em métodos ativos de ensino-aprendizagem na formação do médico. *Rev Bras Educ Med* [Internet]. 2011 [citado 2014 jan. 26]; 35(4):468-76. Disponível em: <http://www.scielo.br/pdf/rbem/v35n4/a05v35n4.pdf>

Financial support

Conselho Nacional de Desenvolvimento Científico e Tecnológico – CNPq, processo nº 1236/2010.