



TECHNICAL-SCIENTIFIC SKILLS AND DIFFICULTIES OF ACADEMICS OF NURSING DURING MONITORING OF SEMIOTECHNICS
HABILIDADES E DIFICULDADES TÉCNICO-CIENTÍFICAS DOS ACADÊMICOS DE ENFERMAGEM DURANTE A MONITORIA DE SEMIOTÉCNICA
HABILIDADES Y DIFICULTADES TÉCNICO CIENTÍFICAS DE LOS ACADÉMICOS DE ENFERMERÍA DURANTE LA MONITORÍA DE SEMIOTECNICA

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ABSTRACT

Objective: to describe the skills and technical-scientific difficulties of Nursing students during the monitoring of Semiotechnics. **Method:** descriptive study with a quantitative approach. Twenty-nine students from the Nursing Course participated. The monitoring was performed in the Nursing laboratory. Two instruments were elaborated for data collection, then analyzed by descriptive statistics and presented in tables of distribution of absolute and relative frequency. **Results:** the skills that prevailed in most techniques were the psychomotor and the empowerment of technical-scientific knowledge, both with 44.8%. The difficulty that predominated was the disrespect to the asepsis principle (75.9%). In the initial performance, all the students obtained unsatisfactory classification and, in the final performance, 15 (51.72%) obtained a satisfactory classification. **Conclusion:** the supervision provided the student with the improvement of the techniques, skills for the professional exercise, interactive learning, reflection based on the problematization and reconstruction of knowledge. **Descriptors:** Nursing Education; Nursing Students; Knowledge; Motor Skills.

RESUMO

Objetivo: descrever as habilidades e dificuldades técnico-científicas dos acadêmicos de Enfermagem durante a monitoria de Semiotécnica. **Método:** estudo descritivo, com abordagem quantitativa. Participaram 29 alunos do Curso de Enfermagem. A monitoria foi realizada no laboratório de Enfermagem. Foram elaborados dois instrumentos para a coleta de dados, em seguida, analisados pela estatística descritiva e apresentados em tabelas de distribuição de frequência absoluta e relativa. **Resultados:** as habilidades que prevaleceram na maioria das técnicas foram a psicomotora e o apoderamento do conhecimento técnico-científico, ambos com 44,8%. A dificuldade que predominou foi o desrespeito ao princípio de assepsia (75,9%). No desempenho inicial, todos os alunos obtiveram a classificação insatisfatória e, no desempenho final, 15 (51,72%) obtiveram classificação satisfatória. **Conclusão:** a monitoria oportunizou ao aluno o aperfeiçoamento das técnicas, habilidades para o exercício profissional, aprendizagem interativa, reflexão baseada na problematização e reconstrução do saber. **Descritores:** Educação em Enfermagem; Estudantes de Enfermagem; Conhecimento; Destreza Motora.

RESUMEN

Objetivo: describir las habilidades y dificultades técnico-científicas de los académicos de Enfermería durante la monitoria semiotecnica. **Método:** estudio descriptivo, con un enfoque cuantitativo. Participaron 29 alumnos del curso de enfermería. El monitoreo se llevó a cabo en el laboratorio de Enfermería. Dos instrumentos fueron desarrollados para la recogida de datos, y entonces analizados mediante estadística descriptiva y presentados en tablas de distribución de frecuencia absoluta y relativa. **Resultados:** las habilidades que han prevalecido en la mayoría de las técnicas fueron la psicomotricidad y el empoderamiento de conocimientos técnicos y científicos, con 44.8%. La dificultad que predominó fue el desconocimiento del principio de asepsia (75.9%). En el rendimiento inicial, todos los estudiantes no alcanzaron la calificación satisfactoria y, en el desempeño final, 15 (51.72%) obtuvieron una calificación satisfactoria. **Conclusión:** el monitoreo ha proporcionado al estudiante el mejoramiento de técnicas, habilidades para la práctica profesional, aprendizaje interactivo, reflexión basada en el cuestionamiento y reconstrucción del conocimiento. **Descriptor:** Educación en Enfermería; Estudiantes de Enfermería; Conocimiento; Destreza Motora.

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INTRODUCTION

Nursing is a science and, as such, is linked to a series of technical and scientific knowledge, consolidated through ethical, political and social practices through teaching, research and extension, making, under the provision of services to the individual, family and community, in accordance with the scenario in which they are included.¹

The area of Nursing education goes through a phase of challenges and expansion of its field of knowledge, demanding more and more qualification and preparation of the professionals involved in this process. With the evolution of society, it is necessary that all sectors transform themselves in order to follow the needs imposed by the globalized world. Therefore, Higher Education Institutions (IES) have followed this evolution through reforms in the curriculum and better training in their teaching staff, with the capacity to integrate teaching and practice, contributing to an interdisciplinary, integrated and socially committed knowledge.²

A teaching and learning modality established within the principle of exclusively linking to the academic training needs of Nursing undergraduate students is monitoring, whose purpose is to contribute to a broader and more in-depth academic education, encouraging their interest and participation in the activities.

The use of realistic simulation, through academic monitoring, is becoming more and more frequent in the practice of health care. HEIs have implemented simulation to help educate their students, but the evaluation of the effectiveness of this intervention remains an area that requires research.⁴ Therefore, with the use of this technology, it becomes necessary to know the main needs of the students during monitoring, as well as the changes promoted by this process of educating.⁴

The academic monitor becomes a facilitator and mediator of the learning of another scholar. It is an agent that will perform the process of interaction and bonding with the other students and teacher responsible for the discipline. The teaching relationship between the monitor and the student is established in a mutual way, with a higher level of confidence, in which both are responsible for the learning process, and the monitor contributes to instigate the critical growth of the academic.⁵

Through monitoring, the monitor obtains perceptions that allow him/her to break pre-

established blocks with respect to educational processes and, by gaining the competence to reflect critically on his/her own knowledge and the means of recreation of teaching and learning for the other academics, this monitor movement gives him a new way of "reading the world."⁶

Nevertheless, the didactic materials elaborated for the monitoring are very important, because they allow a quality service and, in the short term, they allow the academic to visualize the technique and later the realization of the technique, which differs from the class period, by the time and the high number of students.⁷

Aware of the fact that the Semi-technical curricular component is essential in the Nursing course, since it provides the student with the first contact with the practice for the development of skills and abilities required for the exercise of the profession, this study is justified, since it allows the follow-up of the Didactic activities in the laboratory, contributing to the dynamics of the teaching-learning process of the academics and, consequently, to the quality of Nursing care.

Faced with the constant concern with the quality of nursing education, this study aimed to describe the skills and technical-scientific difficulties of Nursing students during the monitoring of Semitechnics.

METHOD

An exploratory descriptive study, with a quantitative approach, carried out with 29 second and third grade students enrolled in the Nursing course of a Public University of the interior of Paraná.

The inclusion criteria established were: to be studying or to have taken the curricular component of Semitechnics and to have participated in at least one monitoring during the period of data collection. On the other hand, not attending the meetings was an exclusion criterion.

At the institution under study, the monitoring of Semitechnics was implemented in 2013 and this curricular component is taught in the second year of the current curricular matrix.

It should be emphasized that the monitors publicized the accomplishment of the monitoring by means of e-mails, posters in the Nursing laboratory and in the classrooms of the 2nd, 3rd and 4th grades to encourage the participation of the academics in this activity. Of the 90 possible respondents, only 29 participated in the survey, because 61

students did not attend the monitoring offered during the period of data collection.

Data collection was performed in the Nursing laboratory between June and August of 2014. During this period, 24 meetings were offered, lasting four hours, totaling 96 hours of monitoring. It was emphasized that participation in monitoring was voluntary and that all disciplinary content addressed in the monitoring had been delivered in the classroom. The student had the option to participate as many times as necessary to construct the learning. For the collection of data, two monitors, academics of the 4th year of Nursing, were previously trained by the professor of the discipline of Semiotronics. Both presented theoretical and practical mastery of basic nursing techniques.

Initially, the monitors observed the techniques performed by the students, on the human simulation manikin, without interference and interruption. At the end of the procedures, the monitors guided the correct development of the basic techniques, allowing them to be re-executed for the improvement of skills and the reconstruction of knowledge in such procedures.

Two instruments of data collection were elaborated, through a review of the analytical literature, both applied concomitantly. The first one was related to the academic self-assessment in relation to the teaching-learning process in front of the technical-scientific knowledge and psychomotor ability. The second one was completed by the monitors during the execution of the technique by the students and after the guidelines offered, and was composed of the following variables: a) type of nursing procedure performed - i. Intravenous therapy - IVT (medication administration, venipuncture, collection of blood tests and venoclysis), ii. Delayed bladder catheter/bladder catheter - SVD/SVA, iii. Nasogastric tube/nasoenteral tube - SNG/NSE, iv. Dressing, v. Intestinal lavage; B) development of techniques - i. Psychomotor ability, ii. Respect to the asepsis principle, iii. Technical and scientific knowledge and c) initial and final performance - i. Satisfactory (technical-scientific ability in the development of the technique/absence of difficulties), ii: unsatisfactory (presence of

one or more difficulties in the development of the technique).

It should be noted that the variables b and c of the research instrument were evaluated before and after the monitor's orientations, in order to evaluate the contribution of monitoring to the final performance of the student.

The data were analyzed by descriptive statistics and presented in tables of distribution of absolute and relative frequency. Subsequently, they were discussed based on the available literature on the subject.

The study followed the ethical principles according to Resolution 466/2012 of the National Health Council and was approved by the Ethics Committee under protocol n. 670.967 dated 05/22/2014 and by the institution under study.

RESULTS

Of the 29 students, 23 (79.3%) were in the second grade and six (20.7%) were in the third grade. Participants were students aged between 19 years and 41 years, with the mean age being 22.34 years, with female prevalence (93.1%).

They reported that they were participating in the monitoring for the first time 19 (65.9%) academics and ten (35.1%) participated two or more times.

Regarding the type of procedure, supervised techniques and later guided by the monitors were IVT and dressing, both with 21 (72.4%) students who performed these procedures, followed by 17 (58.6%) who performed SNG / SNE and 11 (38%), the SVD / SVA. The least sought procedure to perform was intestinal lavage, with only two (6.9%) academics who carried it out.

Regarding the development of the technique, all the students presented one, two or three difficulties in a certain procedure. The difficulty that predominated was the lack of compliance with the principle of asepsis (75.9%). Already the skills that prevailed were the psychomotor and the empowerment of technical-scientific knowledge, both with 44.8% (Table 1).

Table 1. Distribution of nursing students according to the development of basic nursing techniques. Paraná, Brazil, 2014 (n = 29).

Variables	n (%)	n (%)
Development of the technique	Hability	Dificulty
Respect for the asepsis principle	7 (24.1)	22 (75.9)
Psychomotor ability	13 (44.8)	16 (55.2)
Technical-scientific knowledge	13 (44.8)	16 (55.2)

In IVT, SVD and dressing, the difficulty that predominated was related to the respect for the asepsis principle, through the breakdown of this principle, with a significant percentage of 85.7%, 85.7% and 61.9%, respectively. In SNG/SNE, the psychomotor ability involved was the difficulty that prevailed (60%). In the intestinal cleanse, there was no difficulty presented.

In view of the difficulties presented in the development of the techniques, there was intervention by means of orientation of the monitor for all the students and of these, 23 (79.3%) scholars chose to perform the technique again, but six (20.7%) did not, expressing that only the orientation and the intervention were sufficient for the learning, not being necessary the repetition of the same.

Against this background, it should be noted that more than half of the academics (68.9%) reported a deficit or impairment in a certain content of the discipline of Semi-technical, in relation to technical-scientific knowledge.

In turn, 25 (86.2%) of them reported skill and ability compromised during the execution of basic nursing techniques, justified by the lack of time to attend the monitoring, as well as nervousness and anxiety because they had never performed the technique before.

In the initial evaluated performance, all the students obtained an unsatisfactory classification, due to presenting, in the realistic simulation, one or more difficulties in the development of a certain technique, which refers to the psychomotor ability compromised or disrespect to the principle of asepsis and / or deficit of technical-scientific knowledge. In the final performance, eight (34.8%) students remained unsatisfactory, but 15 (65.2%) obtained a satisfactory classification, characterized by the ability to perform the technique.

DISCUSSION

From the monitoring, students' needs were identified as a deficit in the technical-scientific knowledge of the Semio-technical curricular component, as well as difficulties during the execution of basic nursing techniques in the human simulation manikin. In this context, the orientation of the academics was monitored, which may have

contributed to the improvement and satisfactory development of the techniques, skills for professional practice, interactive learning, reflection based on problematization and knowledge construction.

These results corroborate a survey carried out with 11 nursing students from the 7th to 9th period of the Rio de Janeiro State University, who pointed out that monitoring is an important contribution tool for technical and pedagogical development because of the opportunity to expand experiences that contribute to the professional's formation.⁸

It was evidenced that one of the techniques most sought and performed by the students in the Nursing laboratory was the IVT. Peripheral venous punctures and medication administration represent approximately 85% of all activities performed by Nursing professionals. It is an invasive procedure that has a high level of technical-scientific complexity, which requires professional, competence and psychomotor skills. It is an imminent risk of death if there are errors in the preparation or administration of medications.⁹ It is believed that the complexity involved in IVT explains the greater demand among the various techniques that are opportunistic in this study.

Another prominent procedure performed in the same proportion as the IVT was the dressing, which consists of cleaning and covering an injury with the objective of promoting wound healing or preventing colonization at the insertion sites of invasive devices, Infection and harm to the patient.¹⁰ Correct execution of this technique is critical to the purpose of this procedure. To do so, using realistic simulation as a teaching methodology allows students to have a differentiated learning experience that only classroom teaching could not provide.¹¹

The lack of respect for the asepsis principle was the difficulty that prevailed in most of the techniques performed in the Nursing laboratory. This reality is alarming, since it influences the greater risk of infection to the patient provided that the topography of infection is related to the procedure performed. Therefore, monitoring offers relevant benefits to academics who seek support in their difficulties, because it is a task in which all are committed to review the

contents passed in class, committing themselves to actions and thus favoring the expansion and the reconstruction of knowledge.⁷ In addition, the use of realistic simulation in education contemplates the practice of skills needed in an environment that allows errors and professional growth, without jeopardizing the patient's safety. Thus, it is possible to improve skills without harming the patient during the learning process in which knowledge is constructed, from programmed situations, simulated in protected and controlled scenarios.¹²⁻¹⁴

The difficulty mentioned in relation to the technical-scientific knowledge and the skills of execution of basic techniques is a necessary result of being re-evaluated and discussed among the teachers of the discipline, in order to allow the planning of strategies that facilitate the teaching-learning process. In addition, the student needs to be stimulated in understanding the learning stages as well as the natural feelings that permeate the execution of a technique, for example. Analogous attitudes are justified by the fact that the academic environment is under great stress and pressure, creating a series of expectations and desires proper to the moment of their lives.¹⁵ However, they are often faced with a reality not always expected, course and teaching conditions, perceiving themselves in a new stage of their lives in which they are called to the responsibility.

In the comparison of the performance of the students, having as parameters the initial evaluation, the intervention of the monitors and the final evaluation, it is highlighted the significant improvement of the performance in the last moment, attributed possibly to the orientation and intervention of the monitors, which corroborates with the affirmation of researchers^{16,17} that monitoring is an important tool in the teaching of Semiotronics, as it acts in the reflection of the construction and reconstruction of knowledge in a teaching-learning process.

Thus, monitoring contributes to the student training process. The monitor tends to function as a teacher-student connection, aiding the teaching-learning process. The importance of monitoring is linked to the contribution offered to monitored students, in the relation of knowledge exchange, in intellectual gain, and this is a formative teaching activity.¹⁸⁻⁹ The formation of a link between students and teachers occurs. It promotes the continuous construction of knowledge, continuous improvement, the

discovery of new skills and, consequently, individual and collective growth.

As a limitation of this study, it is highlighted that this analysis focused on the description of the abilities and difficulties of the students about specific nursing and technical procedures of an HEI. Thus, these results reveal the problematic of a local reality and, therefore, by virtue of the sample and realization in a single institution, the data are not generalizable. It is also added that the object of the analysis focused on a single immediate evaluation of the student's pre- and post-intervention of the monitor, and the participation in other moments was not observed, which suggests that, the greater the academic participation in the monitoring, the better the capacity and technical-scientific ability.

These are important aspects to be considered in future national surveys, as well as the dissemination of national experiences of implementation of academic monitoring. This may stimulate HEIs to adopt similar paths that support decision-making based on evidence-based practice, in order to qualify the praxis of care based on technical-scientific knowledge.

CONCLUSION

Monitoring in the Nursing laboratory provided psychomotor, affective and cognitive experiences. It was noticed that the doubts of the students were met through guidance and intervention of the monitor after the realistic simulations, which gave the academic greater security, confidence, improvement and skills for the professional exercise.

The study revealed that there was an expressive improvement of students' performance in the final evaluation of knowledge and technical-scientific nursing skills. This data emerges the acquiescence of the monitoring contribution, since most were performing the monitoring for the first time and the difficulties presented in the final performance reduced compared to the initial performance.

It is important to emphasize the importance of teachers and HEIs to provide academic monitoring, as a tool for teaching and transferring knowledge from the classroom to the professional practice, adding theory and practice for the construction and reconstruction of knowledge. They are expected to recognize themselves as protagonists of this process and to reorganize the most qualified and safe health praxis.

REFERENCES

1. Carvalho IS, Neto AVL, Segundo FCF, Carvalho GRP de, Nunes VMA. Monitoria em semiologia e semiotécnica para a enfermagem: um relato de experiência. Rev Enferm UFSM [Internet]. 2012 May/Aug [cited 2016 May 05];2(2):464-71. Available from: <http://cascavel.ufsm.br/revistas/ojs-2.2.2/index.php/reufsm/article/view/3212>
2. Canever BP, Prado ML, Backes VMS, Gomes DC. Produção do conhecimento acerca da formação do enfermeiro na América Latina. Rev Gaucha Enferm [Internet]. 2012 [cited 2016 May 05];33(4):211-20. Available from: <http://www.scielo.br/pdf/rgenf/v33n4/26.pdf>
3. Santos LR, Funghetto SS. Regimento da monitoria do Curso de Enfermagem. Brasília: Unieuro; 2006.
4. Harder B. Use of Simulation in Teaching and Learning in Health Sciences: a Systematic Review. J Nurs Educ. 2010;49(1):23-8. Available from: DOI: 10.3928/01484834-20090828-08
5. Freitas KFDS, Oliveira MFV, Lopes, MMB, Garcia TE, Santos MS, Dias GAR. Novas possibilidades para o ensino de enfermagem em saúde mental: uma experiência de monitoria. Rev. Rene. [Internet]. 2014 Sept/Oct [cited 2016 June 12];15(5):898-903. Available from: <http://www.revistarene.ufc.br/revista/index.php/revista/article/download/1560/pdf>
6. Jesus IS, Sena ELS, Andrade LM. Aprendizagem nos espaços informais e resignificação da existência de graduandos de enfermagem. Revista Latino-Am Enfermagem [Internet]. 2014 Sept/Oct [cited 2016 June 22];22(5):731-8. Available from: http://www.scielo.br/pdf/rlae/v22n5/pt_0104-1169-rlae-22-05-00731.pdf
7. Frison LMB, Moraes MAC. As práticas de monitoria como possibilitadoras dos processos de autorregulação das aprendizagens discentes. Poiesis Pedagógica [Internet]. 2010 [cited 2016 June 22]; 8(2):144-58. Available from: <https://www.revistas.ufg.br/poiesis/article/view/14064>
8. Abreu TO, Spindola T, Pimentel MRAR, Xavier ML, Clos AC, Barros AS. A monitoria acadêmica na percepção dos graduandos de enfermagem. Rev enferm UERJ [Internet]. 2014 July/Aug [cited 2016 July 13];22(4):507-12. Available from: <http://www.facenf.uerj.br/v22n4/v22n4a12.pdf>
9. Frota N, Barros LM, Costa A, Santos ZM, Caetano JA. Hipermídia educacional sobre punção venosa periférica: perspectiva de acadêmicos de enfermagem. Cogitare enferm [Internet]. 2014 Oct/Dec [cited 2016 July 17];19(4):717-25. Available from: <http://revistas.ufpr.br/cogitare/article/view/35384/23935>
10. Ferreira AM, Rigotti MA, Pena SB, Paula DDS, Ramos IB, Sasaki VDM. Conhecimento e prática de acadêmicos de enfermagem sobre cuidados com portadores de feridas. Esc Anna Nery Rev Enferm [Internet]. 2013 Apr/June [cited 2016 July 10];17(2):211-9. Available from: <http://www.scielo.br/pdf/ean/v17n2/v17n2a02.pdf>
11. Schmitt MD, Ribeiro MC, Adamy EK, Brum MLB, Santos Zanotelli S. Contribuições da monitoria em semiologia e semiotécnica para a formação do enfermeiro: relato de experiência. UDESC em Ação [Internet]. 2013 [cited 2016 July 17];7(1). Available from: http://www.revistas.udesc.br/index.php/udesemacao/article/view/3264/pdf_37
12. Sanino GEC. O uso da simulação em enfermagem no Curso Técnico em Enfermagem. J Health Inform [Internet]. 2012 Dec [cited 2016 June 12];4(n. esp.):148-51. Available from: <http://www.jhi-sbis.saude.ws/ojs-jhi/index.php/jhi-sbis/article/view/247/136>
13. Alinier G, Platt A. International overview of high-level simulation education initiatives in relation to critical care. Nurs Crit Care. 2014;19(1):42-9. DOI: 10.1111/nicc.12030
13. Rubbi I, Ferri P, Andreina G, Cremonini V. Apprendimento clinico in simulazione: studio osservazionale sulla soddisfazione percepita dagli studenti di infermieristica. Prof Inferm. 2016; 69(2):84-94.
14. Bezerra MGM, Santos GA, Alcântara DC, Rocha AKE, Pereira IO, Silva PS. O papel do monitor no curso de enfermagem: reflexões a partir dos ambientes de cuidar. Rev Rede Cuid Saúde [Internet]. 2014 [cited 2016 July 20];8(2). Available from: <http://publicacoes.unigranrio.br/index.php/r/cs/article/view/2351/1138>
15. Sousa Júnior JA, Silva AL, Magno A, Santos MBH, Barbosa JA. Importância do monitor no ensino de química orgânica na busca da formação do profissional das ciências agrárias. In: X Encontro de Extensão e o XI Encontro de Iniciação à Docência. Anais do X Encontro de Extensão e o XI Encontro de Iniciação à Docência, Apr 9-11, 2008, Universidade Federal da Paraíba. João Pessoa: UFPB; 2008. Available from:

www.prac.ufpb.br/anais/xenex_xienid/xi_enid/monitoriapet/ANAIS/Area4/4CCADCFSMT03.pdf

16. Abreu AG, Freitas JS, Berte M, Ogradowski KRP, Nestor A. O uso da simulação realística como metodologia de ensino e aprendizagem para as equipes de enfermagem de um hospital infanto-juvenil: relato de experiência Rev Ciência Saúde [Internet]. 2014 Sept/Dec [cited 2016 May 05]; 7(3):162-6. Available from:

<http://revistaseletronicas.pucrs.br/ojs/index.php/faenfi/article/view/17874/12495>

17. Natário EG, Santos AAA. Programa de monitores para o ensino superior. Estud psicol (Campinas) [Internet]. 2010 July/Sept [cited 2016 May 05];27(3):355-64. Available from <http://www.scielo.br/pdf/estpsi/v27n3/07.pdf>

18. Abellsson A, Rystedt I, Suserud B, Lindwall L. Learning by simulation in prehospita emergency care - an integrative literature review. [Scand J Caring Sci](#). 2016 June;30(2):234-40. DOI: 10.1111/scs.12252.

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