

ARTICLE

EVALUATION OF THE TECHNICAL COURSE IN NURSING AT A STATE PROFESSIONAL TRAINING CENTER<sup>1</sup>

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**ABSTRACT:** There is a need to evaluate the licensed practical nurse (LPN) programs to understand how this educational background is related to professional performance. The objective was to track the alumni profile of an LPN school; identify how they evaluate the teaching-learning process experienced in the course; and evaluate, from the alumni perspective, the training experienced in relation to their professional performance. This is a descriptive exploratory study, with quantitative data distributed according to absolute and relative frequency and qualitative subjected to content analysis. In total, 128 alumni participated, 92.97% were women; 34.37% were married; 77.34% were under the age of 40; 64.07% got a job within six months after completing the course; 40.63% were employed in the private service; most of the disciplines were considered sufficient for professional practice, with percentages higher than 80%. The topics were systematized: technical training is a passport to enter the world of work; from technical training to comprehensive human training; the role of teachers in training and the things that could be different in the technical nursing course. The training, from alumni perspectives, was sufficient and decisive in their lives for insertion and permanence in work, showing the importance of public spaces for technical training in nursing.

**Keywords:** Licensed Practical Nurse Program, Professional Education, Teaching Evaluation.

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## **AVALIAÇÃO DA FORMAÇÃO NO CURSO TÉCNICO EM ENFERMAGEM DE UM CENTRO ESTADUAL DE EDUCAÇÃO PROFISSIONAL**

**RESUMO:** Avaliar a formação dos trabalhadores Técnicos em Enfermagem é uma necessidade para entender como esta formação se relaciona com a atuação profissional. Neste trabalho, objetivou-se traçar o perfil dos egressos de uma escola técnica; identificar como avaliam o processo ensino-aprendizagem realizado no curso; avaliar, na perspectiva dos egressos, a formação vivenciada em relação a sua atuação profissional. Estudo exploratório descritivo, com dados quantitativos distribuídos conforme frequência absoluta e relativa e qualitativos submetidos à análise de conteúdo. Participaram 128 egressos, 92,97% mulheres; 34,37 % casadas; 77,34% com menos de 40 anos; 64,07% conseguiram trabalho em até seis meses após o fim do curso; 40,63% estão empregados no serviço privado; a maioria das disciplinas foram consideradas suficientes para atuação profissional, com percentuais acima de 80%. Sistematizaram-se as temáticas: a formação técnica é passaporte para a inserção no mundo do trabalho; da formação técnica à formação humana integral; do papel dos professores na formação e coisas que poderiam ser diferentes no Curso Técnico em Enfermagem. A formação, na perspectiva dos egressos, foi suficiente e determinante em suas vidas para inserção e permanência no trabalho, demonstrando a importância de espaços públicos de formação técnica em enfermagem.

**Palavras-chave:** Educação Técnica em Enfermagem, Educação Profissionalizante, Avaliação do Ensino.

## **EVALUACIÓN DE FORMACIÓN DEL CURSO TÉCNICO EN ENFERMERÍA DE UN CENTRO ESTATAL DE FORMACIÓN PROFESIONAL**

**RESUMEN:** La evaluación de la formación de los trabajadores del Técnico de Enfermería es necesaria para comprender cómo esta formación se relaciona con el desempeño profesional. El objetivo fue rastrear el perfil de los egresados de una escuela técnica; identificar cómo evalúan el proceso de enseñanza-aprendizaje experimentado en el curso; evaluar, desde la perspectiva de los egresados, la formación experimentada en relación a su desempeño profesional. Estudio exploratorio descriptivo, con datos cuantitativos distribuidos según frecuencia absoluta y relativa y cualitativos sometidos a análisis de contenido. Participaron 128 egresados, 92,97% mujeres; 34,37% casado; 77,34% menores de 40 años; El 64,07% consiguió un trabajo dentro de los seis meses posteriores a la finalización del curso; El 40,63% está empleado en el servicio privado; la mayoría de las asignaturas se consideraron suficientes para el ejercicio profesional, con porcentajes superiores al 80%. Se sistematizaron los temas: la formación técnica es un pasaporte para el ingreso al mundo laboral; de la formación técnica a la formación humana integral; el rol del docente en la formación y las cosas que podrían ser diferentes en el Curso Técnico de Enfermería. La formación, desde la perspectiva de los egresados, fue suficiente y decisiva en la vida de los egresados para la inserción y permanencia en el trabajo, mostrando la importancia de los espacios públicos para la formación técnica en enfermería.

**Palabras clave:** Educación Técnica en Enfermería, Educación Vocacional, Evaluación de la Enseñanza.

## **INTRODUCTION**

The challenges in technical nursing training range from the historical, political, and economic context of the country to the multiple personal factors inherent to teachers and students. Professional training in secondary technical education, whose objective must be the socialization of science, culture, techniques, and instruments that can lead the graduate to be an agent of change in the context of work, can be learned to demonstrate how it prepares its students for professional performance.

A historical look at professional education in Brazil reveals signs of marginalized training, aimed at a portion of the population that would possibly not access higher levels of training (CUNHA, 2000; MANFREDI, 2002). The very terminology surrounding professional education carries meanings that refer to preparation for manual tasks (GALLINDO, 2013). It is related to changes in productive processes in the Brazilian economic constitution, which configured, in Brazil, the so-called educational duality (training according to the social class to which one belongs), shaping different possibilities of access to education (CUNHA, 2000), therefore, distancing it from the theoretical reflection that should be the hallmark of all training processes, especially in the final years of basic education and higher education.

Studies on secondary-level technical professional education in nursing in Brazil have demonstrated concern in evaluating the training offered. Franco and Milão (2020) studied teaching-service integration in technical training in Nursing. Bógus et al. (2011) researched, in the State of São Paulo, the effects of the course on working in the profession and mobility in the job market, and Brazil (2020) analyzed the training of technical health workers in Brazil from 2010 to 2016, from the perspective of training policy, analysis of theoretical-methodological guidelines and comparison of training in different regions of Brazil.

Currently, the Technical Course in Nursing is one of the professional education courses, but it was not always carried out in the secondary-level technical professional education, just like other professional training in Brazil. From 2004 onwards, this category was raised, by Decree No. 5,154/2004, which aimed to overcome the educational duality, characteristic of worker training (BRASIL, 2004; BRASIL, 2012).

Carrying out this study is linked to the process of establishing nursing and its teaching which, in the national and international context, given the social division of labor, has become a profession with different agents to provide care. Throughout history, this work has been provided by practitioners, nuns, nursing attendants, and nursing assistants. From the 1960s onwards, Nursing Technicians were added to this group of professionals. The nursing team in Brazil is made up of nurses, responsible for coordination and training, and assistants and technicians (OGUISSO; CAMPOS; MOREIRA, 2011; GEOVANINI et al., 2019).

According to the Federal Nursing Council, 2,432,299 professionals work in the area, 429,182 (17.65%) nursing assistants, 1,408,311 (57.9%) nursing technicians, 594,503 (24.44%) nurses and 303 (0.01%) obstetricians (COFEN, 2021). These data show that the Nursing Technician professional assumes, in greater numbers, nursing care in institutions.

Among the schools that offer this training in the city of Cascavel, located in the western region of the State of Paraná, there is the *Centro Estadual de Educação Profissional Pedro Boaretto Neto* (CEEP), which started offering it in 2005. CEEP is a state school, with several technical-level courses, which began its activities in 2003, when training in professional education was resumed in Paraná (BUGS et al., 2015).

For Cerqueira et al. (2009), if the school fulfills its educational and preparation function for the world of work, it will facilitate the insertion and continuation of the individual's professional life, an inclusive school that provides citizenship and develops critical-reflective thinking. The evaluation of this training, based on graduates, can contribute to monitoring, development, reformulation and, if necessary, building new paths for the Nursing Technician course.

The education model proposed in technical schools in Paraná, from 2002 onwards, had been of emancipation for work, without duality, in line with the construction of a fair society, based on training that articulated the diverse relationships and phenomena encountered throughout professional practice. This understanding of professional education breaks with the exclusive adequacy of training to the job market, employability, and work; a commitment to human formation is adopted through the appropriation of scientific, technological, and social historical knowledge, through education (PARANÁ, 2006).

This study sought to answer how Nursing Technicians evaluate the training experienced concerning their insertion in the world of work, with the following objectives: to outline the profile of graduates from a technical school; to identify how graduates evaluate the teaching-learning process experienced in the course; and to evaluate, from the perspective of graduates, the training experienced concerning their professional performance.

We based on the assumption that the school must fulfill its mission as a trainer of professionalized individuals with possibilities for technical practice in nursing to consolidate what was mediated by teachers in the classroom, laboratory, and internship field, with scientific knowledge and

clarification of the need to seek constant improvement because of the frequent changes in the healthcare area. Therefore, it is believed that the technical training in nursing offered should form individuals with the scientific knowledge and human relations necessary to act in the care of the individual, family, and community, in all evolutionary phases, with the ability to develop activities in the three levels of health care, able to reflect on their actions during nursing care.

## METHODOLOGICAL NOTES

This work is classified as a case study (YIN, 2015), exploratory and descriptive, with quantitative and qualitative data, whose participants were students graduating from the Nursing Technician course at a State Center for Professional Education in the Western region of Paraná that offers courses in the subsequent modality and integrated into three operating shifts. In total, there are 88 classes and approximately 2700 students, coming from around 35 municipalities in the region. The Center has around 45 employees and 211 teachers and computer, electronics, electromechanical, nursing, buildings, physics, chemistry, and biology laboratories, Internship Center, and Materials Center (CEEP, 2017).

This course began in 2005 in a subsequent semester format, lasting two years. It is the only public nursing technician course in the city, created after the end of the Jaime Lerner government, which closed the public Nursing Assistant course at *Colégio Estadual Marilis Faria Piroletti* (GIRARDELLO; RODRIGUES; CONTERNO, 2014; CEEP, 2017). The changes that have occurred in the curricular matrices since their creation, highlight the search to adjust the equation of professional training and autonomous human subjects so that they meet what is necessary in the field of collective health and not just hospital care, alongside the constant concern in keeping up with the demands of the world of work, as well as the configurations of the Unified Health System- *Sistema Único de Saúde* (BUGS et al., 2015). Currently, training is developed into a disciplinary political pedagogical project with 17 subjects divided into four semesters.

To contact graduates, invitations were sent to 303 of the 377 (not all were located) who completed the course between 2014 and 2018, with the link to complete the online data collection instrument, and of these, 128 instruments were returned with the mandatory questions answered. The inclusion criteria were having attended and completed technical nursing education at CEEP between 2014 and 2018 and having returned the online data collection instrument, with all mandatory questions answered. The period from 2014 to 2018 was delimited, considering that it would be enough time to capture the process of training and professional insertion, as well as to assess whether the training was sufficient for this insertion. Furthermore, previous periods would be hampered by inaccessibility to email and telephone addresses. The names and telephone numbers of the graduates were obtained after filing a request for research authorization with the Regional Education Center, which is within the organizational structure of the Department of Education of the State of Paraná.

The data collection instrument, with 40 questions, was constructed considering the characterization of the subjects, the elements that make up the teaching-learning process (teaching planning, contents/disciplines, teaching methodologies, evaluation, teacher-student relationship, resources for the teaching—physical, human, material – and professional insertion/performance. The reference was the Curricular Guidelines for Secondary Technical Professional Education- *Sistema Único de Saúde* (BRASIL, 2012), the Pedagogical Project for Technical Nursing Courses of Paraná- *Projeto Pedagógico dos Cursos Técnicos em Enfermagem do Paraná* (PARANÁ, 2016) and the school's Pedagogical Project- *Projeto Pedagógico da escola* (CEEP, 2017).

This instrument was evaluated by six professors from the Nursing Technician course in a workshop on February 4, 2020, who suggested changes to the format of the questions, which were accepted. The instrument included the evaluation of all course subjects, individually on a scale of 1 to 10, to what extent each one was sufficient for their professional performance. Values from 1 to 4 were considered insufficient, 5 to 7 were considered partially sufficient, and 8 to 10 were considered sufficient.

Quantitative data collection occurred virtually, by sending an asynchronous instrument (FLICK, 2013), using the LimeSurvey tool (LimeSurvey, 2015), version 2.64, updated in March 2017, and the link to the questionnaires was sent by messaging app (WhatsApp).

From the lists of students from the selected years, two were drawn from each semester, since the school has two intakes per year, who were contacted via WhatsApp to check their availability and interest in participating in an interview, making up the participants in the qualitative stage of data

collection, so that, in the end, 30 interviews were carried out. The guiding question was: talk about your training and how much it contributed to your performance; other questions were prepared with the aim of identifying the process experienced (content, teaching methods, assessment, physical and human structural conditions) in training for professional practice. The interviews were supposed to be face-to-face or via video calls, but due to the COVID-19 pandemic and the availability of participants, text and audio messaging was the only possible way. The collection of quantitative and qualitative data took place in April and May 2020. Two interviews were previously defined per semester, which were sufficient, as the answers converged, with no need to expand the number previously stipulated.

The quantitative data were distributed in tables to display absolute numbers and percentages, and the qualitative data were subjected to content analysis in the three stages proposed for this type of analysis (BARDIN, 2016). The study was approved by the Research Ethics Committee, Opinion 3669176, and CAE 24300619.3.0000.0107. The statements are identified with the initials of the word student = A, the year, semester, and shift.

## RESULTS

Table 1 shows the distribution of respondents, observing that, on average, 41.2% returned the questionnaire with the highest percentage of responses in 2018 with 45 (58.44%).

**Table 1** – Distribution of graduates and study participants, between 2014 and 2018. Cascavel/PR, 2020.

Conclusion year	2014	2015	2016	2017	2018	TOTAL
Graduates	63	58	75	86	95	377
Questionnaires sent	52	43	60	71	77	303
Answered questionnaires	20	16	22	25	45	128
% of questionnaires answered	38.46	37.21	36.67	35.21	58.44	41.2

**Source:** Data collected in the survey.

Among the 128 graduates who responded, 119 (92.97%) were female and nine (7.03%) were male. 44 (34.37%) were married; single 46 (35.94%); lived in a stable union, 27 (21.1%); 10 (7.81%) were divorced; and 1 widow (0.78%), showing a predominant profile of women, with organized families.

The distribution, in terms of age, shows that the majority 99 (77.34%) were under 40 years old, 32 (25%) were between 20 and 24 years old; 25 (19.53%) were 25 to 29; 19 (14.84%) were 30 to 34; 23 (17.97%) were 35 to 39; 14 (10.94%) were 40 to 49; 9 (7.03%) were 45 to 49 and 6 (4.69%) were 50 or over.

The majority of graduates, that is 82 (64.07%), found work within six months of finishing the course; eight (6.25%) one year after graduating; three (2.34%) two years after graduation; four (3.12%) were unable to find work; six (4.69%) decided not to work in the area; four (3.12%) decided to undertake another training, and 21 (16.41%) gave other answers to this question. Even in most recent years (2017 and 2018), the majority found a job within six months of graduating, showing their fast entry into the job market.

The majority, 75 (58.79%), reported working in the profession with a formal employment contract (signed license – CLT). A portion of 21 (16.41%) worked in public health services, following a public competition; two (1.56%) were on leave due to health problems; five (3.91%) were unemployed, and five (3.91%) left the profession. Other answers were given by 20 (15.62%) interviewees, highlighting those who had studied and were practicing higher education professions such as nursing (2), biomedicine (1), and medicine (1). Among the five who left the profession, four (80%) cited personal and family reasons, and one (20%) for another reason.

Regarding the number of employment relationships, 79 (61.72%) work with one job, 23 (17.97%) have two jobs, and 26 (20.31%) do not work as nursing technicians. Mostly 50 (39.06%) reported that they work 40 hours a week. However, 41 (32.03%) work more than 40 hours a week, 16 (12.5%) work 30 hours a week, two (1.57%) work 20 hours a week, and 19 said they work another workload.

In 2020, the research period, the national minimum wage was R\$1,045.00 (one thousand and forty-five reais). Based on it, graduates reported their monthly income, which was two minimum wages for 63 (49.22%); a minimum wage for 42 (32.81%); three minimum wages for 16 (12.5%); four minimum

wages for 6 (4.69%) and five minimum wages for one (0.78%) of the interviewees. We observed that the significant majority, 105 (82.03%), receive up to two minimum wages.

The private hospital was the most cited workplace, with 52 (40.63%), followed by the public hospital with 11 participants (8.59%); the philanthropic hospital was mentioned by 10 (7.81%); private home care for four (3.13%); the family health unit or basic health unit, the Municipal Health Department and the State Health Department had two mentions (1.56%) each, totaling six (4.68%) graduates. Twenty people reported other workplaces (35.16%).

Table 2 shows the distribution of the evaluation of the courses taken and how much they were sufficient for professional performance, observing that in all semesters, percentages above 80% were sufficient. Evaluations slightly lower than 80% were given to the subjects Biosafety and Article Processing and Nursing Care in Mental Health (second semester), Nursing Care for Children and Adolescents and Fundamentals of Work (third semester), and Nursing in Health Surveillance (Fourth semester).

Table 2 – Distribution of subjects by academic semester and evaluation of graduates. Cascavel/PR, 2020.

First semester						
Assessments/Subjects	Insufficient		Partially sufficient		Sufficient	
	Total	%	Total	%	Total	%
Anatomy and Physiology Applied to Nursing	7	5.47	14	10.94	107	83.59
Fundamentals of Nursing	3	2.34	13	10.16	112	87.5
Introduction to Nursing Care	1	0.78	11	8.59	116	90.63
Communication and Information Process in Nursing	4	3.13	18	14.06	106	82.81
Health Disease Process	1	0.78	23	17.97	104	81.25
Second semester						
Clinical Nursing Assistance			13	10.16	115	89.84
Biosafety and Article Processing	2	1.56	24	18.75	102	79.69
Mental Health Nursing Care	4	3.12	23	17.97	101	78.91
Nursing Care in Public Health	2	1.56	19	14.85	107	83.59
Third semester						
Women's Health Nursing Care	3	2.34	12	9.38	113	88.28
Nursing Care for Children and Adolescents	2	1.56	27	21.09	99	77.35
Surgical Nursing Care	2	1.56	22	17.19	104	81.25
Fundamentals of Work	3	2.34	23	17.97	102	79.69
Fourth semester						
Nursing Care for Critically Ill Patients			17	13.28	111	86.72
Nursing assistance in emergencies and emergencies	3	2.34	14	10.94	111	86.72
Nursing in Health Surveillance			26	20.31	102	79.69
Health Work Process			25	19.53	103	80.47

Source: Data collected in the study.

When evaluating the workload of the subjects, 113 graduates (88.28%) considered it sufficient; 12 (9.38%) were partially sufficient and three (2.34%) considered it insufficient. The supervised curricular internship was considered sufficient for 118 (92.19%), and partially sufficient for 10 (7.81%).

The teaching methods were considered sufficient for 111 (86.72%); for 16 (12.5%) they were partially sufficient, and for one (0.78%), they were insufficient. The evaluation strategies were sufficient for 117 (91.41%); 10 (7.81%) were partially sufficient and insufficient for one (0.78%) graduate.

The physical structure was considered sufficient for 114 (89.06%) respondents; for 12 (9.38%) was partially sufficient, and for two (1.56%) was insufficient. When evaluating the laboratories, 119 (92.97%) considered them sufficient, for nine (7.03%) were partially sufficient.

The fields of practice where they carried out Supervised Curricular Internships were sufficient for 118 (92.19%) respondents; partially sufficient for nine (7.03%); and one (0.78%) considered them insufficient. When evaluating the performance of teachers who worked in training, 125 (97.66%) considered it to be sufficient; two (1.56%) as partially sufficient, and one (0.78%) assessed it as insufficient. Regarding the training throughout the course and how much it prepared them to work

professionally, 121 (94.53%) considered the preparation sufficient, and seven (5.47%) as partially sufficient.

The systematization through content analysis of qualitative data collected synchronously and asynchronously took place through the themes: technical training is a passport for insertion into the world of work; from technical training to integral human training; the role of teachers in training; and the things that could be different in the Nursing Technical Course, as shown in Chart 1.

As a result of the technical and scientific knowledge they acquired in the course, the school's performance was decisive for their insertion in work, due to the school's social recognition and personal satisfaction with the insertion and importance of training, mainly in the responses that highlight it as a reference for quality, although it requires effort.

The subjectivities, elements of integral training, are expressed in feelings of gratitude and pride, but beyond that, the graduates consider that the training made them better, changing their way of facing the world, from personal to financial aspects. They express the affection developed for the profession, as when the graduate considers that professional practice must be developed with love by putting themselves in someone else's shoes, or by feeling passionate about their work, and proud of the quality of their work. These affects were mediated by the training process that worked to construct the humanity of the technical nursing worker.

When they were asked to evaluate the training they received, in the final question of the online questionnaire, the quality of their teaching performance was highlighted, as a differentiating element in their training. It is important to consider that the question was about the evaluation of the training they received and the graduate's return mostly to their memories of the teaching their experiences, which suggests the value that the professional education teacher acquires. The answers repeat elements already listed in the subjectivities present in comprehensive training, to highlight that the teachers performed their work competently and that the school, in general, is an environment prepared for the training of Nursing Technicians. In two responses, the importance of the teacher mastering what he teaches appears and that they could improve the ways of teaching, as well as the relationship with students.

In the theme of things that could be different, the need for student participation in decisions about training was noted, referring to the need for dialogue between teachers, coordination, and students. Some noted the lack of materials at times for practical teaching, the need to improve the relationship between teachers and students, and some subjects that could be moved between semesters and others inserted, in addition to increasing the workload for training.

Chart 1 – Themes and illustrative statements from graduates about training. Cascavel/PR, 2020.

<b>Technical training is a passport to entry into the world of work</b>
My studies were very important, a lot of learning, as soon as I finished the course, I found a job [...] (A2/2014/1).
The theoretical classes were great, but I learned a lot more in practice, right after finishing the course I started working [...] (A2/2014/M).
From the moment I graduated, I submitted my resume to two hospitals [...] I went for an interview at [name of institution] where my career began [...] (A2/2017/1).
Today I am in the job market, and I bring with me everything I learned, from the content given in the classroom to the internship field. I got a job after 2 months of graduation (A1/2018/1).
[...] The course I took at Ceep was fundamental for the profession I have today, it was through the course that I was sure, through my internships that I wanted to be a nurse, which in this case is what I am today (A3/2014/2/M).
[...]In my graduation, the internships helped me a lot and were essential for my profession in which I now work and work in the field, I was explained very clearly, and I am very grateful for training me into the professional I am today (A1/2015/2/M).
My graduation was fantastic, it went far beyond my expectations, wonderful professors, super dedicated, and always ready to help us! 5 months after my graduation I started working in a hospital [...] (A1/2017/1).

Opening doors to the job market (A1/2014/1).

[...] The school is well sought after in the city when they need technicians, just say that you studied at Ceep and people compliment you (A2/2014/1).

[...] I found the teaching at CEEP to be quality teaching, the professionals who graduated from CEEP are very well accepted in the job market, compared to other courses (A3/2014/2/M).

[...] and the reference institution of my training contributed a lot to being able to get my first job, since then I have been working in the area, currently in the pre-hospital service (SAMU) (A1/2017/1).

CEEP has quality professionals and internships that left us confident, and without fear of working in the health sector, I felt empowered to safely begin my work as a health professional (A15/2014/1).

Students who study at CEEP leave with more experience from mandatory internships and classroom content (A17/2014/2N).

Great training, I believe it is the best technical nursing course in the city (A18/2016/1).

[...]It's an excellent school for training technicians, I have nothing to say against it, I learned a lot there and today I work as a nursing technician, and everything I learned to put into practice every day and I always try to learn more and more (2016/2M).

The best school in the city of Cascavel, great teachers, you will be prepared for the job market! (A19/2017/2N).

Ceep is an excellent professional school. It's only for the strong too, as they are demanding when it comes to teaching, today in my field of activity I see the difference between a co-worker trained at Ceep and other institutions (A21/2018/1).

#### **From technical training to integral human training**

I am very grateful for Ceep's technical nursing course, as it prepared me very well for my area of work [...] (A1/2014/2/N).

[...] I have always been very proud of the training I received in my technical nursing course (A2/2015/1).

It was a very good course that completely changed my personal and financial life. I left the course doing an internship, and I grew a lot and learned a lot professionally. Today I'm on the public tender for the city hall and I'm very grateful to have taken the course in a place that really teaches and is very serious. (A1/2016/2/M).

The course taught me not only about learning in the classroom and internship but also about professional and personal development, appreciation of thinking, acting, feeling, and important aspects of life (A1 2016/2/N).

My training was very important for me, acquiring knowledge and being able to contribute to people in need, it made me grow in my personal conduct, today this training certainly made me a better human being, being able to see people beyond the needs they have (A1/2018/2/M).

[...]CEEP didn't just help me in the field of nursing technicians, the course helped me with humanized training in the broadest sense of the matter. In addition to training me as a good nursing technician, with good confidence in my actions in the profession. It shaped me into a better being, enabling great empathy for others (A2/2014/N).

[...]but I was never able to pay for a course, that's where CEEP came in, which made me very happy because it was a goal I had in life, I'll be honest, CEEP had a lot of demands, in theory, tests, group work, and even in our theaters (oh I miss this part, it was the best acting group of the time and of all times) in the laboratory to learn to [be] responsible in using appropriate clothes and accessories, props, gloves, opening materials [...] (A1/2016/2/N).



I am very grateful to CEEP and all the professors who contributed to my development, a difficult task, the more I see the dedication of the teachings in the classroom, laboratory, and internships, all of which contributed to who I am today. (A2/2018/2/M).

[...]Being part of Ceep made all the difference in my training, with internships in places with demand appropriate to our reality, with excellent professors, being a Ceep student goes far beyond being a professional, but rather being a great professional, and today I bring all the learning with me (A2/2018/1).

[...] the course is very demanding, almost more than in college, there are contents that I learned that I didn't see in college and because I dedicated myself, I was able to take it into life (A1/2015/1).

[...]I gained a love for the thing, and all of this thanks to the course at Ceep, it made me a better person and a great professional, I improved a lot as a person, and I learned from the course to see another person's side and not just mine, And yes, I had the best professors I could have, I tried to make the most of it and today I'm here, in addition to being a nursing technician, I became a nurse because of the course, I loved the whole thing. (A1/2015/1).

I have passion for what I do, today I know that... we need to understand this childish world. For me, the course opened a range of other opportunities, a new version of what it means to be a nursing technician. It's a challenge every day you have something to discover (A2/2018/2/N).

[...]And what about bed baths, I work in a GENERAL ICU, and I love taking care of my patients, and those tireless bed baths during internships. I LOVE GIVING BED BATHS!! And I'm sorry, but my elderly people are the best smelling and hydrated in the ICU, today I see that all the demands I had were on me to carry out my work successfully and safely. I would like to thank all the professors for their patience and dedication to me. Thanks.

#### **The role of the professors in the graduation**

Excellent teaching, excellent professors. I am prepared for the job market (A10/2014/1).

Most of the professors are excellent. Some did not know how to teach the content because they did not dominate the matter, leaving the students with doubt. (A8/2014/2N).

It was the last course, with the best professors, I taught very well, I learned very much in the internships, and I changed as a person (A7/2015/1N).

There are excellent professors at Ceep, and their teaching is excellent, by them (A6/2015/2M).

I have had the best training possible in practical classrooms and I have very good training in professional training, very understanding from the secretary to the professor and the 1000 note, so I have this wonderful professional thanks to Ceep, I am very grateful. (A1/2015/2M).

We have excellent training, and dedicated professors, providing us with practical skills. But since any profession is not enough in theory, it does not exist in daily practice. (A14/2016/1).

A great team of professors at the time, it is a course that requires much more effort from the student and the professor as well. I believe I left Ceep prepared due to the dedication of the professors at the time, all of whom were great [...] (A8/2016/2N).

Great! Fully competent professors dedicated to always giving their best to their students, and always allowing themselves to learn from them! (A7/2017/1).

Great professors who are super dedicated and willing to help in every aspect, thank you! (A7/2017/2/M).

I was privileged to have some of the best professors, and I am immensely grateful for their dedication, God bless every one of those who were by my side (A11/2018/1).

Wonderful professors, and a lot of patience with all the teachings for life, not only in the area of nursing but also in life, I am extremely proud when I meet a professor and I love saying this was my teacher#gratitude+pride (A17/2018/1).

Well, some professors could improve the way they teach and the way they treat some students, but the majority are great (A18/2018/2N).

#### Of the things that could be different in the technical nursing course

Students should also participate in course meetings and decisions, as is already the case at the university level. In MANY moments I was able to perceive IMPOSED situations in a way that was not effective for the majority and would not bring any significant change to the students and the course.

Regarding methods. They should replace the Public Health internship in the first internship, and this internship should be in the first semester. This way, the last semester would not be a burden and the students would already have an idea of what awaits them. The coordination has more dialogues with students (A2/2014/2N).

Yes, in my time there was a lack of materials in the laboratory, and equipment needed for practical classes. Professors and coordination with more respect for students, because coordination is only for God, right? (A2/2016/2/M).

There would be more practical classes for better understanding and learning. We often miss using theory in practice before going to see the patient. (A1/2016/1).

In my opinion, the only thing I would change would be the internship schedule, which would fit in with class hours, as it is very disruptive for those who work. (A1/2016/2N).

Perhaps identify in the student without leaving him more or less inferior to others, his affinity with some areas that he may work in the future: surgical center, emergency, ICU because often some professors impose fear and become insecure professionals, but the rest, in my opinion, there is no need to change (A2/2017/2N).

[...]about the content and teaching method, what was missing in my opinion was a specific subject in first aid, having the same in all modules (A1/2018/2M).

[...]the technical nursing course would have to include psychology, there would have to be psychology classes, and we work a lot on empathy (A2/2018/2N).

**Source:** Data collected in the study.

Quantitative and qualitative data show that training has managed to differentiate by providing, for the care field, nursing technicians capable of assuming care from the technical to the human dimension. They are discussed together below.

## DISCUSSION

The course of Nursing Technicians in Brazil is mostly private: of the 1788 courses in 2015, 1214 were private, 503 were state, 48 were federal, and 23 were municipal. The type of offer that stands out is the subsequent one, with 1229 courses, 301 integrated and 258 concomitants (BRASIL, 2020), data that highlights the need for public courses to be strengthened and contribute to the training of differentiated professionals, in an environment dominated by the private sector.

In the health area, in which nursing technicians work, female participation is well-known and historic. Nursing (nurses, technicians, and assistants) corresponds to 78.9% of this workforce, 85.3% of nursing technicians are women, and 14.7% are men (HERNANDES; VIEIRA, 2020). In Reis et al. (2020), the numbers show that 81.7% were women and among them, 44% were married. Nursing technicians and assistants constitute 77% of the team's professionals (Machado et al., 2015a) and nursing technicians represent 57.9% (1,408,311) of nursing professionals (COFEN, 2021). From local data, there are almost 10% more women graduating from the course studied, compared to the national average. However, a trend towards the "masculinization" of the category is taking hold in nursing, with an increase

in the male presence in its composition. This trend is recent, dating back to the early 1990s. The predominance of women was a legacy of the Anglo-American model, transferred to Brazil, which prohibited the integration of men into the nursing team (MACHADO et al., 2015a, p. 10).

In this study, some young people finished high school and sought professional training, seen in a total of 32 (25%), aged 20 to 24; and young adults who are becoming professionals or moving up within their team to take a technical course, such as those aged 35 to 39, a total of 23 (17.97%), revealing the importance of professional education for insertion, even late, in a professional activity supported by school training. Reis et al. (2020) found the highest concentration (35.9%) in the age group between 31 and 40 years old. Machado et al. (2015a) argued that nursing is a profession undergoing rejuvenation, as 40% of workers were between 36 and 50 years old, and 38% between 26 and 35 years old. Furthermore, 61.7% (1 million and 100 thousand) were up to 40 years old, forming a predominantly young team.

The expansion of the health sector can explain the rapid professional insertion of participants, an expansion that was due to the demographic context (population growth and aging), economic, social (recovery of the job market and access of an important part of the population to medical assistance plans, with increased pressure for the production of diversified and qualified health goods, services, and technologies). From a political point of view, the consolidation of the Unified Health System - SUS *Sistema Único de Saúde* stood out, with the consequent advancement of public policies in the area. The Family Health Strategy- *Estratégia de Saúde da Família*, for example, contributed to the decentralization and expansion of the nursing job market, changing the focus of exclusive care from hospitals to outpatient clinics and the community (MACHADO et al., 2016a). The public health area, with continental dimensions, covers 75 thousand health establishments and incorporates more than 1 million nursing workers, more than half of the category's employability in all spheres (municipal, state, and federal) (MACHADO et al., 2020).

As already discussed above, the expansion of the health area explains the incorporation of graduates into formal work. However, in this study, graduates are being incorporated more into hospital institutions (private and philanthropic), with a CLT employment contract. It is a profession that develops institutionally, being strongly inserted into formal employment structures, whether in the public, private, or philanthropic sector, showing that there is intrinsic employability in the category. Autonomous activities are developed, but they do not amount to expressive liberal action, for example, in-home care (MACHADO et al., 2015b). Silva et al. (2020) showed a situation of almost full employment among nursing assistants and technicians, in a national study in 2013, when 4.1% of these professionals were unemployed. However, in the last 12 months of that year, the percentage increased to 8.3%. Machado et al. (2015b) identified that unemployment is a reality for assistants and technicians since 9.4% of them reported having experienced unemployment in the last 12 months of that study.

Concerning the continuity of the course, the study showed that 1/3 (34.3%) of assistants and technicians are studying or already have a higher education degree, forming a category that expands their qualifications, motivated by the greater access to higher education courses in the country in the last years. Among those who graduated in nursing, 1/3 (31.4%) completed a nursing technician or assistant course and had previously practiced the activity (MACHADO et al., 2016b). Nursing technicians, when seeking graduation, aim for qualification and upward mobility in the job market, a recent and accelerated movement in the health sector (CHINELLI; VIEIRA; SCHERER, 2019).

It is common in nursing to say that there is work overload, but data shows that the majority work in a job. The results of Machado et al. (2015b) showed that 65.4% of the subjects worked in one job, and 24% had two jobs, highlighting what the authors call the “myth of multiple jobs”. However, they warn that when making this statement, the participant may not be considering the temporary activities they carry out or even working extra shifts in the institutions. Furthermore, it is possible to consider that, being most of them women and married, these professionals face a double shift, adding domestic family care work to their daily lives. This can be seen in the important percentage (32.03%) who work more than 40 hours a week. In the same study, 71.9% had working hours of up to 60 hours per week, and 38.6% worked more than 41 hours per week.

Data on income are in line with other studies that identified the predominance of salaries equal to or higher than the minimum wage, and with no tendency for improvement. In the public sector, the situation is better than in the private sector, which compared to the philanthropic sector, is better positioned (SILVA et al., 2020; MACHADO et al., 2016a). In nursing work, there are precarious conditions for survival with sub-salaries (salaries less than R\$ 1,000) sub-workdays (workdays of less than 20 hours per week), and under-employment, which are the association of these two concepts (that

professional who works without regularity or few hours per week – underpaid – or someone who receives much lower income – subsalary – than what would be due for the functions they perform, in line with what is legally defined) (MACHADO et al., 2015b). Professionals see a value between R\$1,000.00 and R\$2,000.00 as an ideal salary (SILVA et al., 2020).

Regarding the places of work, we identified that they were in line with the national context in which nursing activities are concentrated – in hospitals –, where 58.3% of nursing technicians and assistants are working. We can highlight the lack of inclusion of graduates in primary health care (3.13%) when nationally, 17.4% of nursing technicians and assistants work at this level of care, which is the gateway to the SUS, a system generally used by the population to obtain assistance (MACHADO et al., 2015b). This aspect may be related to the limited number of competitions available to hire professionals for the public service or to the greater ease of integrating the private service which, as seen above, expanded along with the health sector.

Reis et al. (2019) found, in a study with graduates from a SUS technical school in Maranhão, that before training, 95.5% worked in the public service, a number that decreased to 86% after training, warning that private services, in some way, add to the workforce formed by the SUS and for the SUS, highlighting the complexity of the process of qualifying workers in this sector. In any case, private and philanthropic institutions act in the composition of the service offering for the SUS, which implies that graduates, in some way, end up working in the SUS.

According to Saviani (2011), it is up to the school to socialize, through instruments, the knowledge created, and it must be organized so that there is access to this knowledge. Formal education has been guaranteed to the population since the 1988 Federal Constitution (BRAZIL 1988), in article 205, as a right for everyone and a duty of the State and the family. It is a methodically organized institution that has in its pedagogical project the materialization of its practice, in the case studied, in a disciplinary curriculum. The role of formal education is to provide access to systematized knowledge and in this sense, according to the evaluation of graduates, the school has fulfilled its role.

In this way, education seeks to pass on and provide individuals with knowledge and behaviors that make them capable of working in all sectors of society. Bruno (2014) and Biesdorf (2011) clarify that formal education requires specific times and places to take place, specialized personnel, organization, sequential systematization of activities, discipline, regulations and laws, higher bodies, requiring method, and organization following ages and levels of knowledge. What is expected from formal education is effective and meaningful learning, so that the individual can advance in academic, and professional knowledge and social integration.

It is important to emphasize that the professional course of nursing technicians must be committed to the development of basic skills to practice the profession, covering its technical and humanistic aspects, and to follow this course itinerary, a formal education process is required (PERTILLE; DONDÉ; OLIVEIRA, 2020).

In this study, the possibility of personal and professional development through the course was highlighted, by opening doors for job insertion. Getting a job contributes to the construction of identities, trajectories, experiences of self-recognition, and political and ideological formation, consequently, subjectivities. In another study, getting a job represented the possibility of greater stability and remuneration for what they lived, making nursing technicians less vulnerable when they entered healthcare work (CHINELLI; VIEIRA; SCHERER, 2019). This is in line with the horizon of worker training that goes beyond mere employability and suitability for the job market to emancipatory and, therefore, comprehensive training (FERREIRA; AZEVEDO, 2020). Comprehensive training must encompass the multiple dimensions of the subject in training, or through the words of Ciavatta (2014, p. 190-91), “polytechnic or omnilateral” education that encompasses all aspects of human life – physical, intellectual, aesthetic, moral and for work –, integrating general training and professional education”.

When participants reflect on their professional work, incorporating subjectivities, they reveal the social value that work acquires in their lives. In another study, the perception of this value and the recognition of users were listed as reasons for satisfaction. Although daily work is intensified and causes suffering, given the characteristics of the capitalist way of organizing work, it can promote the constitution of the working subject and new relations of sociability, revealing the centrality of work in the construction of subjectivities, when choices and management of their work process can give it greater meaning and authenticity (CHINELLI; VIEIRA; SCHERER, 2019).

Fabbro et al. (2018), in a work related to the evaluation of nursing training subjects, consider that professors have the possibility not only to do things differently but to do better, according to the

evaluation of the graduate. This new way of doing things can be technical and human. It is believed that from this, it is possible to train critical, reflective, and socially responsible professionals.

Regarding the time allocated for training, 113 (88.28%) participants considered it sufficient, indicating that the balance in the distribution of course hours provides the achievement of the objectives proposed in the PPP, which aim to articulate scientific and technological knowledge until the humanistic training to train nursing technicians capable of responding to the demands of different social groups, for cultural, social, ethnic and economic differences (CEEP, 2017).

Teaching methods, considered sufficient for the majority, are strengths, as planned and evaluated methods are good allies in achieving learning objectives (ARAÚJO; FRIGOTTO, 2015; CARDOSO et al., 2020). In Sobral and Campos (2012), the education of health professionals has been based on the model of medical courses, emphasizing biological aspects, the fragmentation of knowledge, strengthening the dichotomy between theory and practice, and disregarding the needs of the SUS. To strengthen the need to reorient methodological practice, Weber, Firmini, and Weber (2019) consider that the professor should master active methodologies and that in the training of new professionals, any change should be accompanied by the need for a review of the concepts of teaching and learning. Ramos (2017) argued that content and method should not be separated, just as both are not justified if they disregard a society project and broader purposes in terms of human and social formation.

The physical structure of the school, as well as the laboratory, was cited as sufficient for most graduates, but according to Monteiro and Silva (2015), a school needs quality facilities and materials, as the teaching-learning process is very complex and requires more than structure; it requires competence and skill.

The activities carried out during internships are remembered by students as necessary for the practical development of the profession. By demonstrating and transmitting knowledge, professors were recognized as good ones, as in addition to technical knowledge, there was a relationship with the attitudes and qualifications necessary for the teaching profession. According to Lima and Pereira (2014), the activities developed during the supervised internship contribute to the future professional's perception of the relevance of work in society, as well as to critical reflection on its execution process. According to Dias et al. (2014), carrying out the internship is the moment in which interns need to count on the understanding and knowledge of the professor so that they can add the knowledge built to the values of self-confidence and see as clearly more prepared and comfortable to deal with practices related to the training process.

Quantitative and qualitative data are reinforced when participants positively evaluate the subjects, the organization of training, the fields of practice, and the performance of professors. Professional education can provide students with a liberating education, with the necessary foundation so that they can carry out their chosen profession and, from this, achieve professional and personal emancipation.

In teaching for professional education, it is necessary to understand beyond the act of teaching an occupation to understand the student, the subject, who is often a worker, a housewife, a mother, a husband, and a father. When seeking training, this subject also seeks recognition in society, self-performance, and recognition of their interpretation of their place in the world.

The subjects reveal affections such as gratitude, which can be an indicator of quality to evaluate the course, as naturally, human beings are grateful for what has positively transformed their lives. The personal empowerment after completing the course, mentioned by the graduates, demonstrates not only the learning of a new profession but personal recognition in the society in which they live. They show gratitude for the training received, highlight the preparation they received, and consider it sufficient for professional practice.

Regarding the school mentioned in the research, Bugs et al. (2015) showed that it exists due to the struggle of the teaching staff to keep the only public school in the city active, showing that, despite political forces and adverse corporate projects, the determination of the subjects was a decisive factor in the existence of the school and this is revealed in the commitment that students perceive in their teachers' teaching practice. Thus, it demonstrates that the teacher must articulate students' learning strategies, not only providing the search for information but creating situations to learn to think and be critical about their experiences. The role of the professor does not end with teaching and the contents of their discipline but must encourage people to question how knowledge is constructed (FREIRE, 2000).

In addition to mastering technical content, the professor needs to develop teaching and pedagogical skills, which differentiates him from a care professional to a professor. The quality of

professors' work was highlighted in the evaluation of graduates (MENEGAZ; BACKES, 2016). Nursing teaching, whether in undergraduate or technical education, works directly in teaching young people and adults who bring experiences from their lives and school careers. The professor needs to identify their singularities, as they can influence the teaching-learning process.

Complaints regarding the performance of professors highlight the necessary training and professionalization of this activity. For a long time, their training has assumed a prominent position in discussions regarding public policies. As stated by Ferreira Júnior (2008), in the case of nursing professors who will train professionals to work in the nursing team, they are expected to understand the need to master technical and pedagogical knowledge to supply, which comes up against their initial training that, at times, is technical and welfare-oriented.

It is also clear that for teachers in the technical area, it is necessary to practice and be an active technical professional so that they can be recognized as good professors, considering in the background the specific training necessary for "teaching". Nóvoa (2017) argues that training is fundamental to building teaching professionalism, and not just to preparing them from a technical, scientific, or pedagogical point of view. For the author (NOVOA, 2019), it is necessary to invest in teacher training, as this is a central point in the defense of public schools and the teaching profession, and there cannot be good teacher training if the profession is weakened; just as the profession will not be able to strengthen as long as it is limited to which subjects it will teach or the pedagogical techniques that should be used in the classroom.

Even with the positive evaluation of most elements of the teaching-learning process, the participants highlighted weaknesses that should be the subject of reflection. Among them, the need for dialogue between management and students stands out, since dialogical practices experienced in the training process can raise awareness of their reproduction in work relationships. Furthermore, they record suggestions for increasing workload and subjects to increase access to the knowledge that professional activity requires. These are important suggestions that should be considered by management to increase the quality of the training offered.

## FINAL CONSIDERATIONS

Understanding and discussing meeting the pedagogical needs of technical training in mid-level nursing is necessary, as it is the largest category within the nursing team. Aligning the pedagogical project with the regulation of professions and the needs of society is essential for the success of professional training and the quality of the training received in the technical nursing course can directly impact the health actions provided to the population.

The study points out that the technical training experienced was essential to enter the world of work, without the need to look for a job for a long period. The constant changes in the nursing profession mean that the school seeks to offer quality education that meets the needs and demands of society. However, the low remuneration of nursing technicians stands out, highlighting the professional devaluation that persists, even if the value of their work is recognized. SUS would be impacted by the increase in the number of professionals and better remuneration so workers could have an exclusive employment contract and would not need to double their working hours in another contract or in the same institution to earn better income.

In the speeches of the graduates, we observed feelings of gratitude, overcoming, and personal development, generated from the positive change that the profession brought about in their lives, revealing that training enables the acquisition of professional knowledge and the possibility of ascending to a profession which still has relative job security, since graduates work with formal work records, whether public or private. Furthermore, they reveal the meaning of work in life, by producing subjectivities, social insertion, and possibilities for professional advancement and social recognition, that is, allowing the humanity that resides in subjects to be experienced and for them to reproduce socially.

The role of teachers in the lives of the participants was highlighted, as the majority considered professors prepared and dedicated to the profession; however, there were also situations in which a lack of preparation in some subjects was mentioned, which certainly left to collaborate in the training of technicians.

Based on the perception of the graduates, the teaching-learning process experienced in the studied course was sufficient for working in the profession and the world of work; despite specific observations from graduates about the lack of dialogue between the course's pedagogical coordination

and students, the lack of pedagogical teaching material in the laboratory and because some graduates consider the number of practical classes to be low, they are considered capable of performing the role and took for professional life, an enormous sense of respect, admiration and gratitude for professors and the school.

The research shows the importance of public professional training in preparing people for health care. It reveals the social value that training processes add to the life experience of graduates and strengthens the certainty of the necessary participation of public authorities in this act in all areas that require it. It is a condition for economic and social development, from micro to macro-geographical space.

The limitations of the study were due to the difficulty in locating all graduates and the number of complete responses, which were 42.24% of the questionnaires sent. There is little production on nursing technician course graduates so they could be used in comparison and collaboration to build the discussion. Furthermore, data collection and discussion of results took place during the Covid-19 pandemic, when most graduates worked on the front line, with an exhausting workload, which led to a reduction in the time to respond to the survey, like the researcher who was working as a clinical nurse during this arduous journey.

We suggest not only to the State Government but also to schools and professors to carry out similar research so that it is possible to evaluate and re-evaluate the quality of education offered and strengthen the construction of the nursing technician profession. It is known that professional education lacks evaluation processes, and initiatives can contribute to building national evaluation systems for this type of education.

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## **AUTHORS' CONTRIBUTION**

Author 1 - Worked on building the project, collecting, systematizing, analyzing, interpreting data, and reviewing the final writing.

Author 2 - Participated in the construction of the project, collection, systematization, analysis, interpretation of data, and review of the final writing.

Author 3 - Actively participated in the analysis, interpretation of data, and review of the final writing.

## **DECLARATION OF CONFLICT OF INTEREST**

The authors declare that there is no conflict of interest with this article.

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