




**DISTANCE EDUCATION IN POST-ANESTHESIA RECOVERY DURING THE  
COVID-19 PANDEMIC: PERCEPTIONS OF STUDENTS AND NURSES**  
**EDUCAÇÃO A DISTÂNCIA EM RECUPERAÇÃO PÓS-ANESTÉSICA DU-  
RANTE A PANDEMIA COVID-19: PERCEPÇÕES DE ESTUDANTES E EN-  
FERMEIROS**  
**EDUCACIÓN A DISTANCIA EN LA RECUPERACIÓN DE LA ANESTESIA  
DURANTE LA PANDEMIA DE COVID-19: PERCEPCIONES DE LOS ESTU-  
DIANTES Y LAS ENFERMERAS**

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**ABSTRACT**

**Objectives:** to analyze nursing students' and nurses' perceptions of the educational process of a Post Anesthesia Care Unit (PACU) course in distance format during the COVID-19 pandemic; to evaluate participants' performance in the proposed course. **Methods:** Cross-sectional study, with convenience sample of nursing students and nurses, from October to November 2020, included 73 participants of a refresher course on PACU. The evaluation was performed by a validated electronic questionnaire, which assessed previous experiences with distance education and knowledge needs related to PACU with analysis of performance in the pre- and post-test of the classes of the course. Data were analyzed by descriptive statistics and mixed effects model, with a statistical significance level of 5%. **Results:** Of the 73 participants, 65 were nurses and eight, nursing students, with 26 (35.6%) preferring the distance format for a refresher course. Significant ( $p < 0.001$ ) score increases were observed in all tests for the lectures given, with an overall mean score on the pre-test of 48.97 (SD=12.3) and 80 (SD=9.8) on the post-test. **Conclusion:** Self-perceived improvement in the participants' knowledge during the DE course on PACU was evidenced, especially in those who did not have specialization in the area.

**Descriptors:** Postanesthesia Nursing; Recovery Room; Education, Nursing, Continuing; Perioperative Nursing; Education, Distance.

## RESUMO

**Objetivos:** analisar a percepção de estudantes de enfermagem e enfermeiros quanto ao processo educativo de um curso de sala de recuperação pós-anestésica (SRPA) à distância durante a pandemia de COVID-19; avaliar o desempenho dos participantes no curso. **Métodos:**

Estudo transversal, com amostra por conveniência de estudantes de enfermagem e enfermeiros, de outubro a novembro de 2020, com 73 participantes de um curso de atualização sobre SRPA. A avaliação foi realizada por questionário eletrônico validado, mensurando experiências com educação a distância e necessidades de conhecimento relacionadas à SRPA, com análise de desempenho no pré e pós-teste das aulas do curso. Os dados foram analisados por estatística descritiva e modelo de efeitos mistos, com nível de significância estatística de 5%.

**Resultados:** Dos 73 participantes, 65 eram enfermeiros e oito, estudantes de enfermagem, sendo que 26 (35,6%) preferiram o formato a distância para um curso de atualização. Ocorreu aumento de pontuação significativo ( $p < 0,001$ ) em todos os testes das aulas ministradas, com pontuação média no pré-teste de 48,97 (DP=12,3) e 80 (DP=9,8) no pós-teste. **Conclusão:** Evidenciou-se a melhora autopercebida do conhecimento dos participantes durante o curso EaD sobre SRPA, sobretudo, daqueles que não tinham especialização na área.


**Descritores:** Enfermagem em Pós-Anestésico; Sala de Recuperação; Educação Continuada em Enfermagem; Enfermagem Perioperatória; Educação a Distância.


## RESUMEN


**Objetivos:** analizar la percepción de los estudiantes de enfermería y de las enfermeras sobre el proceso educativo de un curso sobre la unidad de recuperación posanestésica en formato de aprendizaje a distancia durante la pandemia de COVID-19; evaluar el rendimiento de los participantes en el curso propuesto. **Métodos:** Estudio transversal, con muestra por conveniencia de estudiantes de enfermería y enfermeros, de octubre a noviembre de 2020 y con uso de formulario electrónico para 73 participantes de un curso de actualización sobre recuperación posanestésica. La evaluación se realizó mediante un cuestionario validado, en el que se evaluaron las experiencias previas con la educación a distancia y las necesidades de conocimiento relacionadas con la recuperación posanestésica con el análisis del rendimiento en el pre y el post- test de las clases del curso de actualización. Los datos se analizaron mediante estadísticas descriptivas y un modelo de efectos mixtos, con un nivel de significación estadística del 5%. **Resultados:** De los 73 participantes, 65 eran enfermeras y ocho, estudiantes de

enfermería, y 26 (35,6%) prefirieron el formato a distancia para un curso de actualización. Se observó un aumento significativo de la puntuación ( $p<0,001$ ) en todas las pruebas de las clases impartidas, con una puntuación media global en el pretest de 48,97 (SD=12,3) y 80 (SD=9,8) en el post-test. **Conclusión:** Se evidenció la mejora autopercebida del conocimiento de los participantes durante el curso EaD sobre SRPA, sobre todo, de aquellos que no tienen especialización en el área.

**Descriptores:** Enfermería Posanestésica; Sala de Recuperación; Educación Continua en Enfermería; Enfermería Perioperatoria; Educación a Distancia.

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### INTRODUCTION

Digital technologies have enabled new possibilities of access to information, interaction, and communication provided by computers and have given rise to new forms of learning in contemporary society.<sup>1</sup> The Internet, as a convergence of the multiple layers of digital technologies, has made networking and open access to information possible, generating transformations in various segments of society, including educational processes.<sup>1</sup>

Distance Education (DE) is emerging as an educational modality that allows the democratization of teaching, in which educators and students break the space-time paradigm.<sup>2</sup> DE can be developed in different virtual environments, which must be previously planned and based on educational principles.<sup>3</sup>

Learning can occur in a collective and integrated way, articulating information and people who are in different places and different ages, areas, and levels of education.<sup>1</sup> Moreover, the technologies and the teaching process must accompany the transformations that society has been going through, with the need for modifications in the method in line with the new generations' ways of learning.<sup>4</sup>

In Brazil, the development of DE initially occurred in the areas of secondary and technical professional training, with experiences through printed material, radio, and television.<sup>2</sup> In 1996, the Law of Directives and Bases legally validated DE at all educational levels, and

Administrative Rule No. 4,059/2004 of the Ministry of Education regulated the execution by higher education institutions of offering subjects in the distance learning module, fully or partially, provided that this offer does not exceed 20% of the total workload of the course.<sup>5-6</sup>

There are several experiences of using virtual learning environments as support in face-to-face, distance, or semi-presential courses, which highlights the importance of analyzing the effectiveness of these actions, reflecting on the practices regarding the possibilities and limitations for learning, and validating their results.<sup>3</sup>

The convergence of face-to-face and distance learning is sought, in the sense of greater interactivity in the teaching methods used and interaction in individual or collaborative studies. However, conducting DE requires access, competence, and skills from professors to deal with technologies.<sup>7</sup>

According to Ordinance No. 198/2004 of the Ministry of Health, the National Policy of Education for Health (PNEPS) was established, aiming at the strategy of the Brazilian Unified Health System (SUS) for the training and development of workers for the sector, in addition to articulating and stimulating the transformation of health and health education practices in the SUS and educational institutions.<sup>8</sup> Continuing education in health constitutes an instrument for improving the quality of care by articulating strategies that facilitate the inclusion of the educational process in the daily lives of nursing professionals and learning about the teamwork process.<sup>9</sup>

In perioperative nursing, continuing education is an important tool for developing and training processes and technology, evaluating teaching-learning, using DE as an essential mechanism for training nurses, and facilitating access to knowledge in the workplace.<sup>10</sup>

Despite the relevance of the scientific knowledge of professionals to act with excellence in the care in the Post-Anesthesia Care Unit (PACU), studies on continuing education with professionals who work in this sector are still incipient, highlighting the need for further research in this area to improve care practice.

Given the current educational transformations experienced by society, associated with a pandemic context that implies actions for social distancing, and through the indispensability of the constant improvement of professionals, the importance of evaluating DE strategies aimed at the continuing education of nursing professionals working in PACU is justified. In this sense, the objectives of this study were: to analyze nursing students' and nurses' perceptions of the educational process of a post-anesthesia care unit (PACU) course in distance format during the COVID-19 pandemic; to evaluate participants' performance in the proposed course.

## METHOD

### Study type

The quantitative, prospective, cross-sectional study, described based on the STROBE guideline.

### Data collection

Data collection was conducted during the COVID-19 pandemic from October to November 2020. Data were collected through pre- and post-class tests during the course and, after its

completion, by completing an electronic form via e-mail, carrying a link to an invitation letter, the data collection instrument, and the informed consent form.

The survey was sent to the students two months after they finished the course because a portion of the students did not finish the course on time and had one more month after the deadline. The time spent by the participant answering the survey form was approximately twenty minutes.

### **Structure of the Post-anesthesia Care Unit (PACU)course**

The main researcher proposed the PACU course in partnership with the Brazilian Society of Surgical Center Nurses, Anesthetic Recovery and Material and Central Sterile Supply Department (SOBECC), considering the guidelines recommended by the association and the need for continuing education of the nursing teams working in PACU. The course was advertised on the association's website.

The course on PACU corresponded to 10 hours, divided into five classes, in an asynchronous format and composed of themes related to assistance in the immediate post-operative period (Nursing care in PACU, namely: physical structure and evaluation; nursing care in PACU: discomforts; nursing care in PACU: complications; quality indicators in PACU; and risk management in PACU).

At each class, a structured questionnaire with four or five learning questions was administered to each participant before and after the class (pre- and post-test, respectively), for which a score of zero to one hundred was assigned. The questionnaire was not a pass criterion, but the student needed to complete all the quizzes and classes to obtain the course completion certificate.

On the platform used for the DE course, the students had a forum area to post their questions, which the researcher fully answered.

### **Sample**

The convenience sample was composed of 65 nurses and eight nursing students who participated in a continuing education course on nursing care in PACU promoted by the Association of Surgical Center Nurses, Anesthesia Recovery and Central Sterile Supply Department (SOBECC), from June 29, 2020, to July 27, 2020, in DE modality. The inclusion criteria adopted were completing the course and all the proposed activities, and completing the electronic data collection form.

The course established a workload of 10 hours, divided into five classes, composed of themes related to PACU. A structured questionnaire with four or five learning questions was applied to each participant before and after the class (pre-and post-test, respectively), which were scored from zero to one hundred.

### **Data collection instrument**

The student's performance during the course was evaluated through the learning questions applied to each class. The questions were applied in a pre-and post-test format, measuring the variation in scores after each topic was covered.

The learning questions were multiple-choice, with the same content in the pre-and post-test, allowing the student to evaluate his or her development after the post-test had been administered.

The data collection instrument, sent via electronic form, was composed of sociodemographic information, academic background, questions related to participation in the distance learning course, previous experiences with DE and knowledge needs related to assistance in the PACU (Appendix A). The construct was submitted to face and content validity by a group of three judges, with a minimum master's degree and a mean time of professional experience in the Surgical Center (OR) and PACU area of 22.3 years. The items were assessed for clarity, relevance, and comprehensiveness, obtaining mean scores of 0.80, 0.84 and 0.82, respectively.

**Data analysis**

The data were entered into a Microsoft Excel® spreadsheet, and the analyses were performed using the R 4.0.5 software by a statistical professional. The data were analyzed using descriptive statistics (measures of central tendency, absolute and relative frequency) and inferential statistics. The paired t-test was used to evaluate the performance of the participants in the pre- and post-tests. The analysis of the influencing factors for the participants' performance was carried out by using Mixed Effects Model. A statistical significance level of 5% was adopted.

**Ethical considerations**

The study was approved by the Ethics and Research Committee of the University of São Paulo School of Nursing (Approval number 4,303,605 - CAAE 35817020,0,0000,5392).

**RESULTS**

The electronic form was sent to 188 graduates of the course and 73 (38.82%) participants returned, 65 of whom were nurses and eight nursing students. The mean ages were 36.9 (SD=9.26) and 30.0 (SD=8.7) years, respectively. Regarding origin, 71.0% of the nurses and 87.5% of the students were from Brazil's south and southeast regions. The professionals had graduated on average 9.2 years ago (SD=7.11), and 58.5% had ORN Specialty (Operating Room Nursing Specialty) area, besides another specialty course in nursing (49.0%). The students were between the fifth and eighth semesters.

About the evaluation of the workplace, the professionals worked mainly in public institutions (63.0%), in the OR and PACU units (38.0%) and with a mean of 7.43 years (SD = 6.59), and 73.77% of professionals did not receive training in the workplace, and the incentive for professional updating occurred mainly through the release for participation in scientific events (82.2%) (Table 1).

Table 1. Type of institution, work sector, length of professional experience, and institutional support for professional updating. São Paulo, SP, Brazil, 2020.

Variables	n	%
<b>Institution</b>		
Public	41	63
Private	20	31
Was not working in the area	4	6
<b>Job Sector</b>		
OR	17	26

PACU	5	8
CSSD	1	2
Outpatient OR	1	2
OR and CSSD	1	2
OR and PACU	25	38
Teaching	8	12
Others	4	6
Not working in the area	3	5

**Training offered at the work institution\***

Yes	16	26.22
No	45	73.77

**Encouragement from the institution for professional updating\***

Yes	45	73.77
No	17	26.23

**Type of institutional stimulus for updating**

Release of the professional to participate in an event	37	82.2
Cost by the institution	1	2.2
Release and funding	5	11.1
Others	2	4.4

\* Only professionals working in the area at the time of the survey were included

Legend: OR+ Operating Room; PACU = Post-anesthesia Care Unit; CSSD = Central Sterile Supply Department

Among the professionals working in assistance, 23 (35.0%) considered that their knowledge was partial, and two (3.0%) reported having no knowledge for professional practice in the PACU. Among them, 22 (88.0%) evaluated that the execution of constant training in the workplace would improve their performance in PACU and 19 (76.0%) cited continuing education programs as one of the main factors for improvement. Almost half of the participants (43.8%) had already taken some distance learning course in OR, PACU, and Central Sterile Supply Department, and 31 (42.4%) individuals considered that this teaching method favored their updating because it was possible to define the place and time they wanted to study.

Of the total respondents, 26 (35.6%) preferred DE as a refresher course, and 32 (43.8%) chose the mixed-mode (face-to-face and distance learning). Moreover, 58 (79.5%) participants considered access to recorded classes and complementary reading essential in a distance learning course.

As for the number of hours spent per week for study, the average among the participants was 3.4 hours per week, with 22 (29.7%) reporting that they could spare up to two hours per week for a distance learning course.

Table 2 shows the performance of professionals in the pre- and post-test of the classes taught in the course on PACU and the themes they considered necessary to improve their performance in the assistance. The score increase was significant ( $p<0.001$ ) in all classes taught during the course, with a higher score increase in classes 3 and 4.

Table 2. Participants' performance in each of the five thematic classes offered in the DE course on PACU. São Paulo, SP, Brazil, 2020. (n=73)

Themes of the classes	Pre-test		Post-test		<i>p value</i> *
	Average	Median	Average	Median	
	(SD)		(SD)		
1: Physical structure; patient admission and discharge in the PACU	54.84 (25.5)	50	72.58(19.0)	75	< 0.001
2: Discomfort in the PACU	44.19 (19.2)	40	64.84(20.1)	60	< 0.001
3: Complications in the PACU	47.09 (20.8)	40	85.8(18.6)	100	< 0.001
4: Quality indicators in PACU and care protocols	28.7 (27.0)	20	81.6(22.9)	90	< 0.001
5: Risk management in the PACU	70 (22.8)	80	95.16(9,4)	100	< 0.001

\* Paired t-test

Thirty-two participants (43.83%) evaluated the need to acquire more knowledge, mainly about the theme "Complications in the PACU".

In analyzing the total performance of professionals in the five classes given, the mean obtained in the pre-test was 48.97 (SD=12.3) and 80 (SD=9.8) in the post-test (Figure 1). The mixed-effect model indicated that there was no association between the overall performance of professionals throughout the course and the variables age, type of institution, and time working in the area while having a specialty in OR indicated less knowledge gain in relation to professionals who did not have this type of training ( $p<0.001$ ).



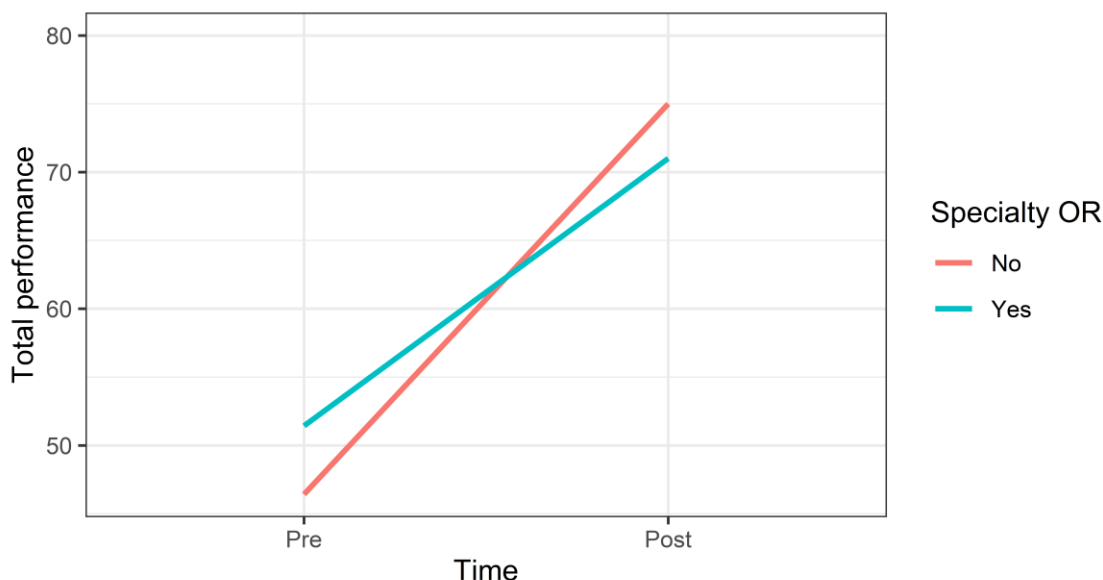


Figure 1. Total performance of professionals participating in the PACU course (n=62) according to pre- and post-test time.

## DISCUSSION

This study indicated the limitations of perioperative nurses to improve their practice and improve care due to difficulties in access to continuing education in their workplaces. In addition, it was evidenced the limited financial support from health institutions for professionals to participate in events or external courses that contribute to their professional development. Thus, the updating of their practices and the execution of immediate postoperative care based on recent scientific evidence are limited. It is also noteworthy that this study presented as a limitation the execution of the research in a single scenario in a convenience sample; however, the findings may generate subsidies for future analyses in different healthcare institutions.

It was found that perioperative nurses were interested in participating in distance learning courses as an opportunity to update themselves and meet the needs of specialized assistance that re-present the care of surgical patients. In addition, DE allows other teaching-learning strategies, stimulating student autonomy in the knowledge construction process, associating spaces for discussion and reflection on daily work and professional practices, and not only the transfer of knowledge and updates, as often occurs in traditional teaching methods.<sup>11</sup>

It is noteworthy the low supply of permanent educational activities in health services of the professionals participating in the research, and these nurses reported a deficit of knowledge in some specific respects that involve their daily work, especially in relation to the theme of "complications in the PACU". Thus, the proposal of a learning course emerges as a viable educational tool for continuous updating and improvement, contributing to the safety of interventions and advancement of perioperative nursing performance. This research revealed an improvement in the knowledge of study participants after DE, observed through the results obtained in the pre-and post-test, in agreement with previous studies that have evidenced an increase in the knowledge of nurses after the implementation of DE programs as continuing education strategies, in addition to an improvement in the perception of professionals regarding confidence for practical performance and satisfaction with educational activities at work.<sup>12-13</sup>

Continuing education within the health services is configured as a tool to respond to the concrete needs of professionals and the community, among them the updating and training of the team, directly impacting on the way these professionals care.<sup>14</sup>

Professionals who did not have specialty course in OR had a greater gain in knowledge after the execution of the course on PACU when compared to those already specialists, which demonstrates the importance of promoting continuing education courses, highlighting, in this case, the performance of professional associations and societies as agents for the improvement of the exercise of the profession and improvement of care practices. The assurance of competence for the execution of nursing care practice is a shared responsibility that involves professionals, associations and regulatory entities for the search and promotion of continuing education actions that ensure qualification for the adequate exercise of the profession.<sup>15</sup>

According to the PNEPS, continuing education is characterized as learning work that must be based on the problematization of the work process and consider that the training and development needs of workers are based on the health needs of people and populations. Moreover, continuing education in health aims to transform professional practices and the organization of work itself, which professionals see as a possibility for updating, obtaining, and expanding knowledge, as well as a tool for changing practices.<sup>16-17</sup>

In this context, the planning of continuing education activities in health services should consider the learning needs and perspectives of professionals to update and improve care practices, requiring continuous monitoring by the institutions of the daily performance of collaborators and points for improvement regarding knowledge, skills and competencies for performance based on the real needs of the patients assisted.<sup>18-19</sup> Furthermore, the dissemination and organization of educational activities should be compatible with the workload and daily routine of professionals, so that all have access to and become involved with the proposal.<sup>20</sup>

The permanent education of nurses in service promotes a collective construction of appreciation based on the perception of the space in which they are inserted, in addition to favoring their involvement and responsibility with their professional education, often placing them as a facilitator of the educational action aimed at the nursing team.<sup>14</sup>

In addition to the need for knowledge and the development of learning through technological resources in the last decades, distance professional updating has allowed flexibility in the access to knowledge and information.<sup>16</sup> In the present study, the participants considered the blended learning modality (face-to-face and distance learning) as preferable for taking a refresher course. They mentioned that distance learning courses allow the definition of the place and time they wish to study, indicating that DE offers flexibility in the learning process and the possibility of alignment with the professionals' workload.<sup>21</sup>

Studies show that there is considerable potential for permanent educational actions by digital means, such as the use of applications, creation of virtual environments, and access to digital materials (video classes, multimedia), which constitute facilitating tools for the process of professional education, development of skills, and improvement of working professionals.<sup>21-</sup>

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Moreover, with the advance of the pandemic of COVID-19, distance learning has assumed a significant role in the maintenance of educational actions, requiring the adaptation of teachers to develop teaching strategies aimed at the virtual environment and the involvement of students to adapt to the new learning reality.

The present study is limited by the sample size, which restricts the generalization of the results. However, the investigation highlights the importance of future research in different

practice settings that evaluate the impact of continuing education activities on the improvement of daily nursing care.

## CONCLUSION

The self-perceived improvement in the participants' knowledge during the DE course on PACU was evident, especially in those with no specialty in the area. In addition to the teaching modality being evaluated by the participants as an opportunity for continuing education in line with their work routine.

It is noteworthy that, when the pandemic context of the year 2020 is adopted as a landmark, the DE modality has assumed a significant role, being characterized as an alternative for the maintenance of teaching activities and continuing education.

## CONTRIBUTIONS

Continuing education is important to improve the quality-of-care practice, and the digital media can be a relevant tool to improve the team's knowledge.

## CONFLICT OF INTEREST

Nothing to declare.

## FUNDING

Nothing to declare.

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**Appendix A**

**Questionnaire: Distance learning for continuing education in post-anesthesia recovery:  
students and nurses' perception**

**date of birth:**                      **city:**                      **state:**

**How long have you been a nursing undergraduate? \_\_ years    \_\_ semester of graduation**

**Do you have specialty in nursing in surgical center, post-anesthesia care unit and/central  
sterile supply department?**

( ☐ ) yes    ( ☐ ) No              ( ☐ ) Not applicable

**Do you have any other complementary education?**

( ☐ ) Specialty in:

( ☐ ) Master's degree

( ☐ ) Doctorate

( ☐ ) Post-doctorate

( ☐ ) No

**ACTUATION**

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**Work Place:**    ( ☐ ) Public        ( ☐ ) Private        ( ☐ ) Not applicable

**Work Sector**

( ☐ ) Operating Room

( ☐ ) Post-anesthesia Care Unit

( ☐ ) Central Sterile Supply Department

( ☐ ) Outpatient Operating Room

( ☐ ) Endoscopy Service

( ☐ ) Other:

( ☐ ) Not applicable

**How long have you been working in this sector? \_\_\_\_\_**    ( ☐ ) Not applicable

**Have you participated in a distance learning course in perioperative nursing?**

( ☐ ) Yes, which thematic: \_\_\_\_\_

( ☐ ) No

**If yes, how long was the distance learning course taken? \_\_\_\_\_**

**In the healthcare institution where you work, are training and updates offered on nursing  
care in the operating room and post-anesthesia recovery?**

( ☐ ) Yes, which(are):    ( ☐ ) No    ( ☐ ) Not applicable

**Does the institution where you work stimulate professional updating, such as participation in congresses, specialty courses?**

☐ Yes   ☐ No   ☐ Not applicable

**If the answer to the previous question is yes, in what way is this incentive carried out by the work institution:**

☐ Release of the professional to participate in the event

☐ Cost by the institution

☐ Release and costing

☐ Other(s):

## **EXPERTISE FOR ASSISTANCE**

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**Do you believe you have the necessary knowledge to work in the post-anesthesia care unit?**

☐ Yes   ☐ No

**What do you consider necessary for better quality of care in the post-anesthesia care unit?**

☐ Constant training at the workplace

☐ Permanent education programs

☐ Specialty course

☐ Reading of scientific articles

☐ Adequate formation in graduation

☐ Evaluation of incidents that occurred in my sector

☐ Participation in scientific events/congress

☐ Having access to the quality indicators of my workplace

☐ Other(s)

## **LEARNING**

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**To take an updating course in post-anesthesia recovery, which teaching modality do you prefer?**

☐ In person

☐ Distance learning

**Do you believe that a distance learning course can help you in your professional updating process?**

☐ YES, because I define the place and time I want to study

☐ YES, because I have the opportunity to combine it with my work/graduation schedule

☐ YES, because I have autonomy in my learning process

☐ NO, because I depend on my effort and discipline to learn

- ☐ NO, because face-to-face teaching is more effective
- ☐ NO, because I can't organize my time to study
- ☐ NO, because I don't like the virtual interaction with the professor and colleagues
- ☐ I have no opinion about it

**What do you consider essential in a distance learning course?**

- ☐ Access to complementary reading
- ☐ Access to a study guide
- ☐ Recorded theoretical class
- ☐ Online theoretical class in real time
- ☐ Delivery of exercises on the content
- ☐ Individual feedback from the teacher
- ☐ Teacher's group feedback
- ☐ Access to commented answer keys
- ☐ Space for group discussion
- ☐ Other(s):

**In your daily routine, how many hours a week can you spare in taking a distance learning course?**

- ☐ One hour
- ☐ Two hours
- ☐ Three hours
- ☐ Four hours
- ☐ Five hours
- ☐ Six or more hours

**Do you believe that the course on post-anesthesia recovery unit that you attended contributed to the improvement of your practice/training?**

- ☐ Yes
- ☐ No, because:

**Regarding the content taught in the course, do you believe that it covered the main topics involving nursing care in the post-anesthesia care unit?**

- ☐ Yes
- ☐ No, because:

**What topics related to nursing care in the post-anesthesia care unit do you believe need improvement?**

- ☐ Nursing care in the post-anesthesia recovery room: physical structure and evaluation
- ☐ Criteria for evaluation at admission and discharge from PACU
- ☐ Nursing care in post anesthesia recovery room: discomforts

- ( ) Nursing care in post-anesthesia recovery room: complications
- ( ) Quality indicators in post-anesthesia recovery
- ( ) Risk management in post-anesthesia care unit
- ( ) Other(s):
- ( ) None, because I have enough knowledge to act

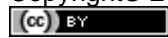
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