







Original Article

## Contributions of auriculotherapy to the health of nursing professionals in perioperative units: a qualitative study\*

Contribuições da auriculoterapia à saúde de profissionais de enfermagem de unidades perioperatórias: estudo qualitativo

Contribuciones de la auriculoterapia a la salud de los profesionales de enfermería en unidades perioperatorias: estudio cualitativo

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### Abstract

**Objective:** to analyze the contributions of auriculotherapy to the health of nursing professionals in perioperative units. **Method:** exploratory, descriptive study developed with eight nursing professionals from perioperative units of a teaching hospital in the central region of Rio Grande do Sul. Data collected with semi-structured interview. Discursive textual analysis was applied. **Results:** a central category was built: repercussions of auriculotherapy for perioperative nursing professionals; it was unitized into a base unit and three categories of analysis. **Conclusion:** auriculotherapy proved to be a beneficial practice for the health of perioperative nursing professionals, while helping to relieve symptoms such as anxiety, stress, tiredness, irritability, bruxism and gastrointestinal discomforts, as well as improving sleep, interpersonal relationships with family members and the work team, reducing tobacco use and weight loss. This research reveals auriculotherapy as a promising practice for the health of perioperative nursing workers. **Descriptors:** Auriculotherapy; Perioperative Nursing; Nurse Practitioners; Nursing; Qualitative Research

### Resumo

**Objetivo:** analisar as contribuições da auriculoterapia à saúde de profissionais de enfermagem de unidades de perioperatório. **Método:** estudo exploratório, descritivo, desenvolvido com oito profissionais de enfermagem de unidades de perioperatório de um hospital de ensino da região central do Rio Grande do Sul. Dados coletados com entrevista semiestruturada. Aplicou-se análise textual discursiva. **Resultados:** construiu-se categoria central: repercussões da auriculoterapia para profissionais de enfermagem perioperatória; ela foi unitarizada em uma unidade de base e três categorias de análise. **Conclusão:** a auriculoterapia demonstrou-se uma prática benéfica para a saúde dos profissionais de enfermagem perioperatória, ao passo que auxiliou no alívio de sintomas como ansiedade, estresse, cansaço, irritabilidade, bruxismo e desconfortos gastrintestinais, bem como proporcionou melhora do sono, do relacionamento interpessoal com familiares e equipe de trabalho, na redução do uso de tabaco e na perda de peso. Esta pesquisa revela a auriculoterapia como prática promissora à saúde do trabalhador de enfermagem perioperatória.

**Descritores:** Auriculoterapia; Enfermagem Perioperatória; Profissionais de Enfermagem; Enfermagem; Pesquisa Qualitativa

## Resumen

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**Objetivo:** analizar los aportes de la auriculoterapia a la salud de los profesionales de enfermería en unidades perioperatorias. **Método:** estudio exploratorio, descriptivo, desarrollado con ocho profesionales de enfermería de unidades perioperatorias de un hospital universitario de la región central de Rio Grande do Sul. Datos recolectados a través de entrevistas semiestructuradas. Se aplicó análisis textual discursivo. **Resultados:** se construyó categoría central: repercusiones de la auriculoterapia para los profesionales de enfermería perioperatoria; se unificó en una unidad base y tres categorías de análisis. **Conclusión:** la auriculoterapia demostró ser una práctica beneficiosa para la salud de los profesionales de enfermería perioperatoria, ya que ayudó a aliviar síntomas como ansiedad, estrés, cansancio, irritabilidad, bruxismo y malestar gastrointestinal, además de mejorar el sueño, las relaciones interpersonales con los familiares y el equipo de trabajo, reduciendo el consumo de tabaco y la pérdida de peso. Esta investigación revela la auriculoterapia como una práctica prometedora para la salud de los trabajadores de enfermería perioperatoria.

**Descriptor:** Auriculoterapia; Enfermería Perioperatoria; Enfermeras Practicantes; Enfermería; Investigación cualitativa

## Introduction

Health care environments are permeated by factors that interfere with workers' health.<sup>1</sup> In the hospital context, for example, work overload, human resources deficit, input limitations, high patient turnover, urgencies and emergencies, and interpersonal conflicts are experienced. Sometimes, all these situations are added to personal concerns.<sup>2-3</sup> In this sense, the nursing team, the main category that develops day-to-day care for patients, is affected by such conditions, which have repercussions on their physical, psychological and mental health.<sup>2-3</sup>

The perioperative environments, in turn, are configured as hospital scenarios in which the nursing team is more exposed to conditions unfavorable to its health, such as stress and high psychological demands, which has repercussions on a low control over its demands.<sup>2-4</sup> The experience in these conditions interferes with the health of the nursing team,<sup>5-6</sup> as well as goes against the National Occupational Health Policy, which stimulates actions and interventions that favor the recovery of injuries in work contexts.<sup>7</sup>

Therefore, actions that favor the health promotion of the workers are important. In this sense, national<sup>8-9</sup> and international<sup>10</sup> evidences have demonstrated the effectiveness of auriculotherapy in reducing physical, psychological and mental health problems of health professionals. The literature reveals that this practice favors the relief of chronic pain in the spine,<sup>9</sup> of anxiety,<sup>10-11</sup> of stress<sup>9-10</sup> and burnout,<sup>10-11</sup> as well as improving mood,<sup>9</sup> sleep<sup>12</sup> and quality of life.<sup>9</sup>

Auriculotherapy is an ancient practice that considers the ear a microsystem with specific points that, when stimulated, trigger responses to the central nervous system that provide improvements in disorders of the human organism.<sup>13</sup> It is part of Integrative and Complementary Practices (ICPs) and can be applied following the assumptions of the French line or Traditional Chinese Medicine (TCM).<sup>11-13</sup> Also, it is a safe, low-cost intervention, with few side effects and can be applied in a short time and in the work environment itself, characteristics<sup>8-11</sup> that contribute to adherence to this non-pharmacological therapy.

Based on the above, while the contributions of auriculotherapy to the health of nursing professionals are verified, studies in perioperative environments, as well as that have contemplated perceptions of participants are incipient in the Brazilian reality,<sup>11-14</sup> which reveals a gap in technical-scientific knowledge. In addition, this research is in line with the United Nations Sustainable Development Goals (SDGs), since it contemplates SDG 8, item 8.8, which deals with the need to protect labor rights, as well as provide safe and protected work environments for all workers.<sup>15</sup> In view of the above, the relevance and pertinence of this study are justified.

Based on the above considerations, the objective is to analyze the contributions of auriculotherapy to the health of nursing professionals in perioperative units.

## Method

This is an exploratory, descriptive research with a qualitative approach. The Consolidated criteria for reporting qualitative research (COREQ) checklist was used to assist in the transparency of the writing of this manuscript.<sup>16</sup> This article was extracted from a matrix project, entitled: "Effectiveness of auriculotherapy in reducing health problems for hospital workers", and includes one of the proposed objectives.

The study scenario was the perioperative units of a teaching hospital in the central region of Rio Grande do Sul. Nursing professionals who were working in the Surgical Block (SB), in the Anesthesia Recovery Room (ARR), in the General Surgery Unit or in the Materials Processing and Sterilization Unit (MPSU) participated. These units provide assistance, directly and indirectly, to patients who need surgical interventions, in the pre-, trans- and postoperative periods.

The sample for this study was constituted through a draw, considering participants from a previously developed experimental stage, which included 27 nursing professionals, randomized into two groups; at the end, 11 were part of the intervention group and another 13 were part of the placebo group (there were two losses to follow-up and another participant did not complete all sessions). They were also informed that they could or could not be selected for the interviews. All study participants received eight auriculotherapy sessions, using semi-needles, two applications per week, lasting approximately 10 to 15 minutes, lasting approximately 10 to 15 minutes, in their own workplaces. The ear points *shen men*, brainstem, kidney, sympathetic and liver were used for the intervention, and the cheek, external nose, rectum, ankle and trachea points were used for the placebo. Professionals were instructed on the necessary care to avoid falling and/or moving the ear points. Auriculotherapy was applied by previously qualified therapists. Thus, eight professionals participated in the qualitative stage, four belonging to the intervention group and four to the placebo.

Qualitative data collection was developed from January to March 2023. After defining the participants of this stage, the professionals were personally invited to participate in a semi-structured interview in their own workplace, so that they could be absent from their activities without prejudice to them. There were no refusals to participate in the study. A specific script for this research was tested through a previous

pilot test and developed by the research team. This was composed of questions for sociodemographic and labor characterization of the participants, as well as the following questions: How did you feel before the application of auriculotherapy? How did you feel or feel after the auriculotherapy intervention?

The interviews were conducted by a researcher with a PhD in Nursing and a undergraduate student in Nursing with experience in this technique, with the aid of a voice recording device, and lasted a mean of 23 minutes, according to the circumstances of the interviewees and the subject under discussion. They were carried out in health/continuing education rooms of the studied scenarios, and these places were reserved, which favored the privacy of shared information, as well as being free of noise, characteristics that helped to promote communication and data production. After that, the transcripts of the interviews were carried out in full, using Microsoft Office Word®. In addition, all audio responses were independently reviewed by two members of the research team. Necessary adaptations with regard to language additions were made. Theoretical saturation was achieved when there was a repetition of aspects related to the contributions of the application, before and after, of auriculotherapy, that is, when no new elements emerged from the testimonies.<sup>17</sup>

All testimonies were exhaustively analyzed based on the assumptions of Discursive Textual Analysis.<sup>18</sup> This is an analysis consisting of a self-organized process from which understandings emerge through a recursive sequence of three components: unitarization, establishment of relationships and communication.<sup>17</sup> The analysis of data from the matrix project made it possible to construct three central categories and, from these, three base units and ten categories of analysis originated. This article presents the results of a central category, a base unit and its respective categories of analysis.

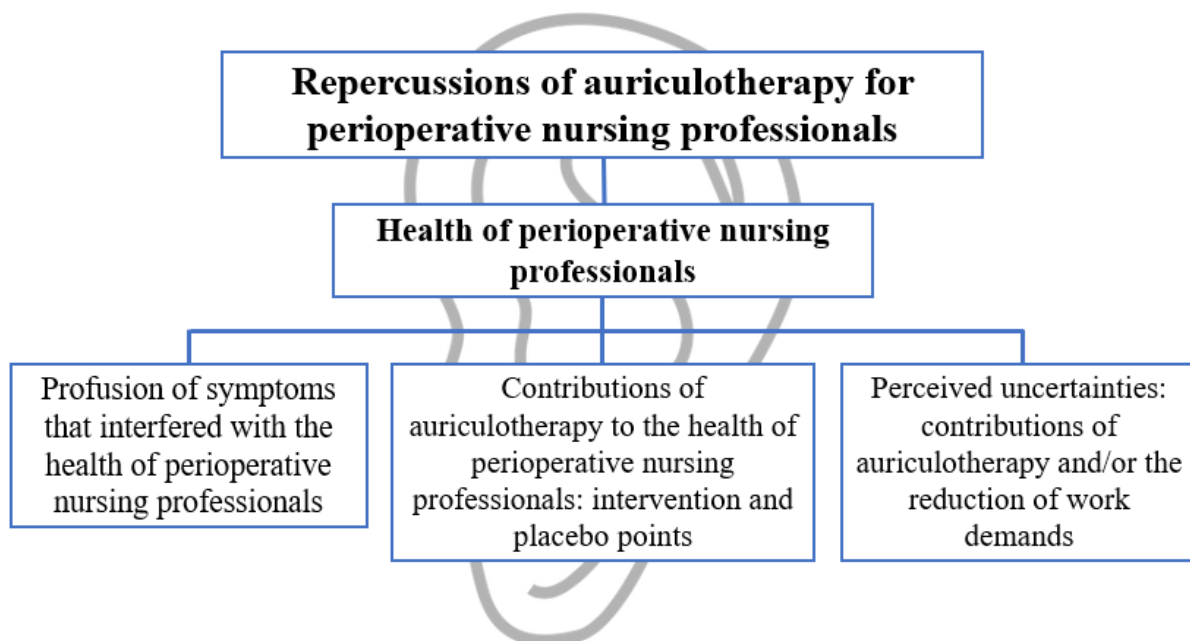
The ethical recommendations involving investigations with human beings were followed, according to Resolutions 466 of 2012 and 510 of 2016, and the research was previously approved by the institution's Research Ethics Committee, in March 2020, under Opinion number 3.897.861 and CAAE: 22328819.8.0000.5346. Participation took place after acknowledgment, acceptance and signing of the Informed Consent Form. To ensure the anonymity of the participants, they were assigned the letters "B", representing Block, and "P", Participant, followed by digits. The codes B1P4, B1P2, B2P2

and B2P3 belonged to the intervention group participants, and the codes B1P1, B1P3, B2P1 and B2P4 to the placebo participants.

## Results

Eight nursing professionals working in the perioperative units participated in the study. Of these, seven (87.5%) were female, married (n=3; 37.5%) or single (n=3; 37.5%), with children (n=8; 100%). Regarding the professional category, six (75%) were nursing technicians and two (25%) were nurses, of whom the largest portion worked in the morning shift (n=4; 50%). They were satisfied in their sector of activity (n=7; 87.5%) and had no intention of leaving their job (n=5; 62.5%).

The data analysis of this article allowed the construction of the central category entitled: "Repercussions of auriculotherapy for perioperative nursing professionals". This was unitized into a base unit and three categories of analysis (Figure 1).



**Figure 1** – Schematic representation between central category, base unit and analysis categories

Profusion of symptoms that interfered with the health of perioperative nursing professionals

From the participants' reports, it was noticed that, prior to the auriculotherapy intervention, they had symptoms that negatively interfered with their health, both in the

work environment and in their personal lives.

*[...] I was reaching my limit, I couldn't stop, I couldn't sleep or eat, I vomited, there was a burning sensation and pain in my stomach, I couldn't rest. I had bruxism the entire time, always clenching my teeth, my breathing was shallow, I was constantly panting and short of breath, crying from time to time [...]. (B1P4)*

*[...] I felt anxiety, I ate and smoked too much, I was exhausted, I was always tired [...] irritated, for anything I would get irritated, I would get nervous and take it out on other people, even at home, with my wife, when I spoke. (B2P3)*

*[...] I was very stressed and tired, because it's not just our routine here at the service, there's a routine outside, we end up exhausting ourselves and breaking out everywhere. (B1P3)*

*I was much stressed, very tired, because it's not just our routine here inside the service, there's the routine out there, we end up exhausting ourselves and bursting anywhere [...]. (B2P1)*

*Many times, at dawn, I would wake up with a nightmare and it would take me a long time to fall asleep again. (B2P4)*

Contributions of auriculotherapy to the health of perioperative nursing professionals: intervention points and placebo

The results emerged from the participants' statements indicate that, after receiving auriculotherapy, both in the intervention group and in the placebo group, it was possible to perceive the relief of symptoms that had negative repercussions on their health.

*[...] It changed the way I reacted to the problem [...] even my sleep improved, I had episodes of insomnia, now I sleep better, I even sleep late, I feel much more psychologically organized [...]. (B1P2)*

*[...] I was fine, I was able to relate to the team again, very close to what I normally am [...]. (B1P4)*

*[...] Regarding smoking, my wife saw that I was smoking a lot and eating less, I ended up losing weight, I lost a lot of weight, I stopped eating [...]. (B2P3)*

*[...] Now I'm better, I'm actually trying to look for another job to see if I can be a little calmer, less anxious. (B1P1)*

*[...] I think I've become calmer, I see things and I don't stress as much as I used to, I don't get too anxious; everything has its time, I feel better after auriculotherapy [...]. (B1P3)*

Perceived uncertainties: contributions of auriculotherapy and/or reduction of labor demands

It is worth mentioning that one participant in the intervention group and two in the placebo group did not identify whether auriculotherapy contributed to their health,



or if the perceived improvements/reductions would have happened due to other factors. In addition, one participant associated the relief of negative symptoms with the reduction of responsibilities in the period investigated.

*[...] Auriculotherapy didn't work for me [...] the stress and exhaustion were relieved a little; The problem is that the stress generated here is very great. (B2P2)*

*I didn't notice a big difference after the treatment, I was very irritable because I was overwhelmed and no one helped me. (B2P1)*

*The relief came after the sessions ended, but it coincided with a phase in which my commitments and responsibilities decreased. [...]. (B2P4)*

However, auriculotherapy has been shown to be beneficial for the relief of symptoms of anxiety and stress; insomnia, bruxism and gastrointestinal discomforts. It also favored interpersonal relationships with family and nursing staff, and encouraged the reduction of tobacco use and weight loss.

## Discussion

It was evidenced that the investigated nursing workers who worked in the perioperative period presented physical and psychological symptoms, directly interfering in their health and well-being, as well as in interpersonal relationships. The hospital environment, especially the perioperative scenario, requires constant attention from nursing professionals who work there to monitor the health status of patients, requiring preparation to act on possible complications at any time. In addition, they work in a closed environment, with different work routines, the presence of risks and a high level of technical and productivity requirements.<sup>19</sup>

Research shows that critical sectors, such as the operating room, the materials and sterilization center and the anesthetic recovery room, are more prone to illness among nursing professionals working in the sectors. This is because the characteristics of the work context, for example, poor natural lighting, restricted access of people, high-tech equipment, some with excessive noise, among others,<sup>20-21</sup> can favor the occurrence of symptoms harmful to the health of workers, such as stress, anxiety, minor psychological disorders and musculoskeletal disorders,<sup>19-21</sup> diseases that directly interfere with the quality of life.

In this context, it is important to reflect on the offer of strategies that promote



the health of these workers. This is noteworthy, since, for the provision of quality care, it is essential that the workers who work there are healthy and, thus, are able to promote humanization in the health service.<sup>22</sup> Thus, auriculotherapy is a safe and low-cost practice, with easy applicability, which contributes to a good acceptance among individuals.<sup>11</sup> It is worth mentioning that this integrative and complementary practice can be applied by nurses in their clinical practice, through their training.<sup>11,14</sup>

The findings of this study demonstrate that auriculotherapy had beneficial effects on the health of the perioperative nursing professionals investigated. Relief of anxiety and stress symptoms, improvement in sleep pattern, bruxism, gastrointestinal discomforts, and interpersonal relationships with family and nursing staff were perceived. It was also found to help reduce tobacco use and weight loss.

These findings are corroborated by other studies and reinforce the use of the practice in different health contexts.<sup>11</sup> In health professionals, network meta-analysis showed that auriculotherapy was effective in reducing anxiety and stress. When reporting to hospital care environments, scientific evidence indicates that it favors the health of the workers.<sup>8,11</sup>

It is worth noting that this practice uses the ear pinna and, through stimuli that this region exerts on the central nervous system, is capable of triggering a systemic effect on the body of individuals, through the release of neurotransmitters, favoring energy balance.<sup>19</sup> These stimuli can be developed by different materials, such as semi-permanent needles, mustard seeds and metal spheres. It is noteworthy that, in this study, we opted for the use of semi-permanent needles, which, despite being more invasive when compared to other materials, keep the ear points with constantly active stimuli.<sup>11</sup>

Still with regard to the benefits found, the use of specific ear points can justify the improvement of psychological and physical symptoms, consequently, of relationships and habits reported by nursing professionals. The *shen men* and brainstem points were stimulated, which have a tranquilizing, analgesic and sedative action, as well as helping to reduce anxiety, stress and other emotional aspects of individuals; the kidney point has an energetic and invigorating function, favoring the conservation of health and brain function; the liver point has an important action in reducing irritability.<sup>13,22</sup> That is, the

effects identified and perceived by the participants meet the assumptions of TCM (Traditional Chinese Medicine).<sup>11,13</sup>

However, it was possible to notice that some participants in the placebo group also showed positive effects on the improvement of health-related symptoms. This effect may occur due to psychological mechanisms involved during the process, such as beliefs and previous experiences; in addition, placebos, through sensory and social stimuli, can induce biochemical and cellular changes, as well as simulate beneficial responses in the body of individuals.<sup>8,23</sup> A meta-analysis that evaluated the effectiveness of auriculotherapy in relation to anxiety and stress showed that performing auriculotherapy, including placebo, is more effective in reducing these outcomes, compared to not intervening.<sup>11</sup>

Integrative and Complementary Practices (ICPs) are inserted in the primary, secondary and tertiary scopes of the Unified Health System, with emphasis on Primary Care. In this scenario, the role of nurses in the context of ICPs, especially auriculotherapy, is due to the fact that they are the professional category that mostly applies this intervention.<sup>24</sup> These professionals are inserted in the different levels of the Health Care Network, whether in the hospital, outpatient or home area, and stand out due to their proximity to users, constituting potential diffusers of ICPs.

However, in addition to the legal support for the performance of acupuncture and auriculotherapy by nurses, the practices are recognized as nursing interventions in classifications that standardize the language, such as the International Classification of Nursing Practices – ICNP®<sup>25</sup> and the Nursing Interventions Classification – NIC.<sup>26</sup> The challenge facing these professionals is to emphasize their participation and actively disseminate the practice of auriculotherapy, both as members of the multidisciplinary team or as a liberal, autonomous, entrepreneurial and innovative professional. Therefore, it is necessary to give visibility to their activities developed through scientific studies, dissemination in health services, marketing on social media, presenting them as professionals who provide better quality of life to the individual, family and community.

Finally, while recommendations and guidelines for conducting and building qualitative research reports were followed, conducting the study in a health institution may have been a limitation. Also, the interviews were exclusive with nursing

professionals. These characteristics make it difficult to generalize the findings.

On the other hand, it is understood that the present investigation contributes to reflections and discussions about interventional strategies that favor the health of workers, especially in perioperative nursing. In view of the above, the nuances highlighted reinforce that auriculotherapy is an ancient practice, applied from a philosophically based diagnostic reasoning that meets the precepts of humanized and comprehensive care that underlie the practice of nursing. In view of the role of nurses at all levels of health care, the use of the practice can be widespread and, given the proof of its benefits, improve the health of the population and also favor the promotion of healthier work environments. This will strengthen the recognition of ICPs as a public health strategy in Brazil.

## Conclusion

This investigation made it possible to analyze the contributions of auriculotherapy to the health of nursing professionals in perioperative units. Auriculotherapy proved to be a practice that brings benefits to this population, while helping to relieve symptoms such as anxiety, stress, tiredness, irritability, bruxism and gastrointestinal discomforts, as well as improving sleep, interpersonal relationships with family members and work team, reducing tobacco use and weight loss. This research revealed auriculotherapy as a promising practice for workers' health.

Robust clinical research is suggested to evaluate the effectiveness of auriculotherapy for outcomes such as quality of life, stress, anxiety, depression and burnout, associated with physiological parameters, in perioperative nursing professionals and other categories and realities. Furthermore, there is a need for research with auriculotherapy that meets the criteria for critical evaluation of methodological quality, using a structured and systematized intervention manual to minimize biases, as well as investigations with mixed methods.

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