



# Benefits of auriculoacupuncture in nursing professionals working at COVID-19 in light of the Comfort Theory

*Benefícios da auriculoacupuntura em profissionais de enfermagem atuantes na COVID-19 à luz da Teoria do Conforto*

*Beneficios de la auriculopuntura en profesionales de enfermería que prestan servicios vinculados al COVID-19 a la luz de la Teoría del Confort*

Geórgia Alcântara Alencar Melo<sup>1</sup>

José Claudio Garcia Lira Neto<sup>2</sup>

Marina Guerra Martins<sup>3</sup>

Francisco Gilberto Fernandes Pereira<sup>4</sup>

Joselany Áfio Caetano<sup>5</sup>

1. Universidade Federal do Ceará, Programa de Pós-Graduação em Enfermagem. Fortaleza, CE, Brasil.

2. Universidade Federal do Piauí, Curso de Bacharelado em Enfermagem. Floriano, PI, Brasil.

3. Universidade Federal do Ceará, Curso de Graduação em Enfermagem. Fortaleza, CE, Brasil.

4. Universidade Federal do Piauí, Curso de Bacharelado em Enfermagem. Picos, PI, Brasil.

5. Universidade Federal do Ceará, Programa de Pós-Graduação em Enfermagem. Fortaleza, CE, Brasil.

## Corresponding author:

Francisco Gilberto Fernandes Pereira.  
E-mail: gilberto.fp@hotmail.com.

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## ABSTRACT

**Objective:** To analyze the benefits of auriculoacupuncture in nursing professionals working in the COVID-19 pandemic in the light of Katherine Kolcaba's Theory of Comfort. **Method:** Descriptive research with a qualitative approach, carried out with 33 nursing professionals working to combat COVID-19. The testimonies were collected through interviews after conducting auriculoacupuncture sessions, then organized and analyzed according to Bardin's content analysis, anchored in the Comfort Theory. **Results:** Three thematic categories emerged: "Auriculoacupuntura as a measure of comfort"; "(Dis) Physical and psychospiritual comfort and performance in assisting COVID-19"; and, "From organizational support to individual commitment to health". It appears that the subjects reported an improvement in their self-perception of comfort, with emphasis on the physical and psychospiritual domains, such as improvement in anxiety, pain and quality of sleep. Institutional integrity appears as an ally to health-seeking behavior. **Final considerations and implications for practice:** Auriculoacupuncture was perceived as beneficial for improving the feeling of physical and psycho-spiritual comfort by nursing professionals.

**Keywords:** Acupuncture, Ear; Nursing Theory; Coronavirus Infections. Nursing.

## RESUMO

**Objetivo:** analisar os benefícios da auriculoacupuntura em profissionais de enfermagem atuantes na pandemia COVID-19 à luz da Teoria do Conforto de Katherine Kolcaba. **Método:** pesquisa descritiva com abordagem qualitativa, realizada com 33 profissionais de enfermagem atuantes no combate à COVID-19. Os depoimentos foram coletados por meio de entrevista após a realização de sessões de auriculoacupuntura, em seguida organizados e analisados segundo a análise de conteúdo de Bardin, com ancoragem na Teoria do Conforto. **Resultados:** emergiram três categorias temáticas: "Auriculoacupuntura como medida de conforto"; "(Des)Conforto físico e psicoespiritual e atuação na assistência à COVID-19"; e, "Do apoio organizacional ao comprometimento individual com a saúde". Verifica-se que os sujeitos declararam melhora no autopercepção de conforto, com destaque para os domínios físico e psicoespiritual, como a melhora da ansiedade, dores e qualidade do sono. A integridade institucional aparece como aliada ao comportamento de procura de saúde. **Considerações finais e implicações para a prática:** A auriculoacupuntura foi percebida como benéfica para melhorar a sensação de conforto físico e psicoespiritual pelos profissionais de enfermagem.

**Palavras-chave:** Acupuntura Auricular; Teoria de Enfermagem; Infecções por Coronavírus; Pandemia; Enfermagem.

## RESUMEN

**Objetivo:** analizar los beneficios de la auriculopuntura en profesionales de enfermería que prestan servicios vinculados a la pandemia de COVID-19 a la luz de la Teoría de la comodidad de Katherine Kolcaba. **Método:** investigación descriptiva con enfoque cualitativo, realizada con 33 profesionales de enfermería que trabajan para combatir COVID-19. Los testimonios se recopilaron a través de entrevistas después de realizar sesiones de auriculopuntura, luego se organizaron y analizaron de acuerdo con el análisis de contenido de Bardin, anclado en la Teoría del Confort. **Resultados:** surgieron tres categorías temáticas: "Auriculopuntura como medida de confort"; "(In) Comodidad física y psicoespiritual y desempeño en la asistencia al COVID-19"; y, desde el apoyo organizacional hasta el compromiso individual con la salud. Se advierte que los sujetos informaron una mejora en su autopercepción de comodidad, con énfasis en los dominios físicos y psicoespirituales, como la mejora en la ansiedad, el dolor y la calidad del sueño. La integridad institucional aparece como un aliado del comportamiento de búsqueda de salud. **Consideraciones finales e implicaciones para la práctica:** los profesionales de enfermería percibieron la auriculopuntura como beneficiosa para mejorar la sensación de confort físico y psicoespiritual.

**Palabras clave:** Acupuntura Auricular; Teoría de Enfermería; Infecciones por Coronavirus; Pandemias; Enfermería.

## INTRODUCTION

Sars-Cov-2 (COVID-19), which is a coronavirus infection, is an emerging infectious disease that had its first recorded case in the city of Wuhan, China, and has since spread worldwide reaching the pandemic epidemiology status, with a mortality rate of nearly 2% and high infectivity.<sup>1</sup>

The increasing records of the number of cases in Brazil since the first positive patient in March 2020<sup>2</sup> raised an important reorganization of the health system with the creation of a specific network to diagnose and treat patients, which also brought with it the need to remodel work processes and many challenges for the professionals regarding the clinical management of that hitherto unknown disease.

In this context, many challenges were presented to the actors of the health system, from the biological risk of occupational exposure for the worker, as to the drastic change in the work routine, which in the face of a situation of infectious and unknown illness has triggered some physical disorders and psychological problems in professionals, mainly motivated by anxiety and stress.<sup>3</sup>

In situations of disarrays in the usual way of working, such as in the case of catastrophes, emerging diseases, epidemics and pandemics, the levels of work stress can become more pronounced as the fear of the unknown and physical and psychological morbidities soon become more recurrent and accentuated due to stress, which directly affects the feeling of comfort and its determinants.<sup>4</sup>

Comfort is herein understood, based on a mid-range nursing theory that is Katharine Kolcaba's Theory of Comfort, as a sensation caused by an experience that strengthens the feeling of relief, tranquility and transcendence, where the physical, psycho-spiritual, sociocultural and environmental contexts of the person must be considered.<sup>5</sup> Thus, given that it is a human need, it is considered that the health professional needs strategies to increase their comfort level and at the same time reduce stress levels, culminating in better care production.

Among the strategies that may come to promote comfort, the Integrative and Complementary Practices (*Práticas Integrativas e Complementares*, PICs) stand out, which have proven efficacy and effectiveness in several health areas, and have consolidated themselves as a care approach in Brazil,<sup>6</sup> through the National Policy of Integrative and Complementary Practices (*Política Nacional de Práticas Integrativas e Complementares*, PNPIC), instituted by Ordinance No. 971, of May 3<sup>rd</sup>, 2006.

Thus, among the various types of PICs, auriculotherapy is presented as an effective treatment for improving the control of anxiety, mood and sleep quality.<sup>7</sup> In addition, this practice stands out as a therapeutic technique that presents concrete scientific evidence regarding insomnia and chronic or acute pain, when associated with conventional treatments,<sup>8</sup> therefore configuring itself as an intervention possibility to be used in the professionals who work on the front line of COVID-19 in hospital areas to improve sleep patterns and stress control.

Based on this context, when identifying the exposed problem, the question is: What are the benefits produced by auricular acupuncture in terms of comfort for nursing professionals working to combat COVID-19?

The interest in studying this question is expressed because the emergence of a pandemic such as COVID-19 exposes professionals daily to risks, both biological and psychic, which may come to compromise the quality of life of the worker, collimating in serious consequences not only for their health, but also for the assistance provided.

Therefore, the theme under study is of fundamental importance for the context of quality of care in the pandemic scenario, since these workers are routinely exposed to situations of physical and mental exhaustion, and need strategies to reduce stress and improve their comfort condition in order to perform their tasks with good concentration, accuracy and assertiveness.

The objective was to analyze the benefits of auricular acupuncture in nursing professionals working in the COVID-19 pandemic in the light of Katherine Kolcaba's Theory of Comfort.

## METHOD

This is a descriptive survey with a qualitative approach carried out from March to June 2020 in a tertiary level hospital, a reference for infectious diseases which serves the entire state of Ceará and is one of the poles of reception, testing and treatment for patients with COVID-19

The study population corresponded to 138 nursing professionals working at the referred hospital and who, therefore, work on the front line of care for patients with COVID-19. From this population, 58 subjects participated in the intervention who sought spontaneous demand for auricular acupuncture care. The inclusion criteria were defined as follows: being a member of the nursing team and acting in direct care to patients with COVID-19. Exclusion occurred for those professionals who were away from work functions with a record of leave with the institution's human resources sector.

It is noteworthy that Nursing was the professional category chosen because it represents the class with the largest number of workers in contact health, and also because it is continuously in direct care to the patient, exposing it to biological and psychological risks more frequently.

It is noteworthy that, during the application of the research protocol, 25 professionals were unable to continue the study because they contracted the coronavirus infection and consequently needed to leave work and remain under social isolation. Thus, the group of subjects participating in the research consisted of 33 nursing professionals.

Data collection was carried out using the following protocol: 1) disclosure made to the nursing coordination for all the professionals in this professional category about the auricular acupuncture date and time and that it would happen due to spontaneous demand for four weeks, once a week; 2) those who attended were submitted

to an anamnesis using a structured questionnaire-type instrument, containing socio-professional questions and identifying potential problems related to comfort and its physical, psycho-spiritual, socio-cultural and environmental domains; 3) then, the auricular acupuncture session was indicated, performed individually and focused on the detected problems.

At the end of the four sessions, the subjects were submitted to an assessment of the therapy performed with the following guiding question: What benefit(s) could you report after performing auricular therapy? This question was sent by a message application to all the participants, who were able to return the answer in text or audio formats. All the audio responses were transcribed and reviewed by two members of the research team independently. To guarantee the anonymity of the participants, they were assigned the letter E representing Nursing (*"Enfermagem"* in Portuguese) and a number from 1 to 33, example: E1, E2 and so on.

For organizing and analyzing the material, it is noteworthy that the testimonies were organized into categories and subcategories, according to Bardin's Content Analysis technique and the phases of the thematic analysis: pre-analysis; exploration of the material; and, treatment of the results.<sup>9</sup> All the testimonials were thoroughly analyzed based on the assumptions of Katharine Kolcaba's Theory of Comfort,<sup>5</sup> due to producing theoretical support for the comfort construct proposed in this research, where the physical, psycho-spiritual, sociocultural and environmental domains of comfort and their relations with auricular acupuncture were considered, with theoretical saturation<sup>10</sup> being considered when no new elements emerged from the testimonies.

The ethical precepts that involve research with human beings were preserved, since the research was approved by the Research Ethics Committee of the institution where the study was located, with opinion No. 4,149,550, in July 2020.

## RESULTS

Regarding the socio-professional description, it was verified that the majority of the participants were female (92.3%), nursing technicians (61.5%), involved in hospital care (80.8%), worked in the morning shift (65.4%) and worked in intensive care units (50.0%), followed by clinical units (34.6%). In addition, the mean age was 39.11 ( $\pm 12.09$ ) years old, with a service time of 175.76 ( $\pm 149.69$ ) months and a workload of 49.96 ( $\pm 12.72$ ) weekly hours. The following are the categories and subcategories that emerged from content analysis.

### Category 1: Auricular acupuncture as a measure of comfort

In the first category, speeches about unveiling auricular acupuncture were expressed as an accessible therapeutic technique, hitherto unknown in terms of its experimentation by the subjects, and which showed itself capable of producing positive effects on comfort during work activities.

Thus, two subcategories emerged, where the first demonstrates the initial contact with auricular acupuncture and personal satisfaction with the results obtained after its completion. It becomes evident that the professionals express the desire to continue using this technique for other situations in their daily lives.

#### Subcategory 1A – Knowing and experiencing auricular acupuncture

It was very gratifying for me (...) it was really, really good (E1).

I'd never done it, but I liked it a lot (E2).

I'll certainly continue the treatment as soon as possible after COVID-19 (E3).

I had already had a previous experience with auriculotherapy (...) but I had no idea of the importance (...) generally, due to not knowing, due to the lack of knowledge, we end up not giving much importance (E5).

I had already done acupuncture, but auriculotherapy, right, that she's doing, I hadn't experienced this yet (...) you left this legacy of us, we are sensitive to seek auriculotherapy (E6).

I already knew only through the literature, but I had never done any auriculotherapy procedures and any type of acupuncture (E7).

I didn't know about this therapy (E9).

I already knew acupuncture, I did it once, but it wasn't with the spheres, it was with the seeds and I could see the difference in the result (E12).

I had already heard about ear acupuncture, but I didn't believe in the results (E14).

This therapy has just brought me well-being (E33).

In subcategory 1B, the testimonies that denote the comfort levels felt by the nursing professionals after the auricular acupuncture sessions were grouped. Some participants experienced comfort as a form of relief, that is, a specific need was met, immediately generating a sense of well-being. It is also reported that in the reports it was possible to identify comfort as a level of tranquility, since the increase in the feeling of self-confidence and improvement in quality of life express a lasting and contentment feeling.

#### Subcategory 1B – Expression of relief and tranquility as comfort levels

It was a very relevant experience, mainly because the question of well-being on this hectic life in this period of a very stressful pandemic, we practically cannot do it, at least I wasn't able to relax or feel good (E5).

So it was a treatment that really had an impact on improving my quality of life (E6).

So it made an immense change even in my personal life, I felt more confident, I'm more confident, do you understand? (E9).

I felt really good after the auriculotherapy sessions, more relaxed (E15).

## **Category 2: Physical and psycho-spiritual (dis) comfort and performance in the assistance to COVID-19 patients**

In this category, the factors related to the comfort needs felt by the professionals are concentrated and those which, perhaps, became more accentuated during their performance in the scenario of combating the COVID-19 pandemic, and the improvements caused after the performance of auricular acupuncture.

In subcategory 2A, comfort needs were mentioned as feelings of discomfort by the research subjects, highlighting that the main ones expressed in their statements were the following: pain, anxiety, stress, fear, despair, helplessness, difficulty in reconciling sleep and psychological upheaval. Thus, it is noticeable that the physiological, physical and psychological needs were the most recurrent.

### **Subcategory 2A – Sensations of discomfort perceived while working in the pandemic**

I felt some pain in my lower back and anxiety mainly due to the issue of eating out of hours and that momentary stress that ends up leading us to be eating insatiably (E5).

I was feeling very agonized by the whole situation of so many people falling sick with this pandemic, which made us afraid for ourselves and for our loved ones (E8).

In 25 years of profession I have never felt so lost, insecure and very afraid, you know that feeling of despair, because that's how I felt (E15).

Because I work in a referral hospital for infectious diseases (...) what made me more impotent was seeing the loneliness of those people, especially the older adults, I was sure I couldn't stand it (...) and it was consuming me, I was no longer reconciling my sleep, I was in a state of psychological distress, triggering anxiety. I was not well, especially at night (E33).

It was possible to identify that the physical and psycho-spiritual domains were repeatedly reported as improved after the auricular acupuncture sessions. Pain relief, which was accentuated by the more exhausting workday, the improvement in the quality and quantity of sleep, the reduction of anxiety associated with decreased hunger, the feeling of lightness and rest were found in the statements.

### **Subcategory 2B – Physical and psycho-spiritual comfort improved with auricular acupuncture**

I improved a lot from the pain in my shoulder, from my headaches, from my anxiety attacks, from stress (E1).

I managed to sleep better, the pains stopped after 24 hours (...) and hunger practically ceased (E5).

It relieved much of our pains and sufferings (E6).

I was really much better regarding the pains, I thought it was a differentiator in my life, sleep also improved a lot (E6).

It eased my insomnia, the shoulder pains that I have been feeling very intense I don't feel anymore today and with each session you do you only get better and better (E7).

My sleep improved a lot, the back pains, the stress then, not to mention! I was totally Zen (E12).

I was able to feel improvements in the pains I was feeling. I was feeling this pain in the hand that went to the arm and passed. Back pains also improved (E13).

I improved a lot from a low back pain that I felt, it improved my sleep (E14).

I was more relaxed, feeling light, I already felt sleepy after I did it (E17).

I didn't have headache and rested as I had never rested after the shift (E18).

## **Category 3: From organizational support to individual commitment to health**

This category seeks to represent the concepts of institutional integrity and health-seeking behavior present in the Comfort Theory. It is understood by the subcategories herein represented that, when the professionals receive the support of the institution with therapies and/or programs to improve their comfort and consequently reduce the sensation of discomfort, a trigger is fired so that the person is committed and motivated to strengthen their health.

Institutional integrity was perceived as contained in the statements present in subcategory 3A, that is, the professionals gratefully report the sensitivity of the institution's senior nursing management in recognizing the physical and psychological needs of the work team at the time of the pandemic, as well as reinforcing their involvement in indicating auricular acupuncture as a measure for comfort improvement.

### **Subcategory 3A – Institutional integrity**

This period of the pandemic, and we needed a job like this (E1).

I had COVID-19 (...) even returning to work afterwards, I lacked the air that is so precious (...). And then one day

help came when the Coordination team told me that I was going to participate in this treatment (E8).

I can only thank you for having started this whole process with us at a very difficult time that we were going through, which is the peak of COVID-19 (E14).

One of the concepts of the Comfort Theory is that of health-seeking behavior, which was strongly evidenced in the speeches that make up subcategory 3B, as the professionals who received the therapy were likely to continue the sessions to achieve better results in their self-care. This reinforces the ability that, when individuals reach satisfactory levels of comfort, they are able to adopt habits that improve their health and consequently their relationship with the body and the mind.

### Subcategory 3B – Health-seeking behavior

The experience was very good and so profitable that I'd like to continue (E4).

I'm really missing it and now I noticed a difference, right from that time now without doing it, I already woke up several times at night with cold or to go to the bathroom or to drink water (...) I hope I can continue the treatment (E12).

It was an alert for my self-care (E11).

I'm sure if I get the chance, I'll do it again whenever possible (E14).

I need to do it again, I got a lot better from the headache and I sleep a lot better (E19).

## DISCUSSION

The outcomes of the COVID-19 pandemic have shown themselves in multiple sectors of society, with its expressive incidence markedly registered in health sector workers, with 27,766 cases reported by nursing professionals and, of these, 288 deaths, with a lethality rate of 2.09%.<sup>11</sup>

Concomitantly with this epidemiological record, it is emphasized that these professionals are more vulnerable to experiencing emotional instability due to fear, anxiety and impotence and, when adding these feelings, to triggering physical symptoms such as fatigue, important changes in the quality and quantity of sleep, and muscle pain.<sup>12,13</sup>

The speeches reported in this study reinforce that there is a mix of feelings and changes in the work routines that end up generating physical and emotional stress, directly impacting on the self-perception of comfort in the work environment. The psychological experience lived by the nurses who directly care for patients with COVID-19 varies in 4 stages: in the first, negative emotions such as fear, fatigue, discomfort and helplessness; in the second, inclusion of certain self-control and psychological adjustment;

third, self-reflection and increased professional responsibility; and fourth, a mix of positive and negative emotions.<sup>14</sup>

Based on this observation, it is recommended to establish strategies to mitigate the risks to the mental and physical health of these workers, so that the interventions are adjusted to face this moment of health crisis. This statement produces a direct immersion in the proposal of actions to promote comfort, so that its expression as relief, tranquility and transcendence can be experienced by these professionals.<sup>15</sup>

In this sense, some strategies have been reported in Wuhan to improve the health status of these professionals, for example, reading books on mental health, psychotherapy and online help groups which have shown improvement in the relief of acute mental health disorders<sup>16</sup> which can be understood as the psycho-spiritual and sociocultural domain of the comfort.

In this research, when using auricular acupuncture to improve comfort, there was a convergence in its results to those expressed in the literature, which records that auricular acupuncture demonstrated effective results for improving the mental level of quality of life, anxiety and pain when compared to auriculotherapy performed with seeds and tape.<sup>17</sup>

The conduction of auricular acupuncture sessions showed comfort results represented by relief and tranquility, since the specific need of each individual was satisfied by producing a feeling of calm and contentment in a short time. And yet, the appearance of the concept of health-seeking behavior present in the Comfort Theory<sup>5</sup> was perceptible when the speeches issued by the research subjects appear, expressing the need to improve their self-care.

As for the comfort domains proposed by Kolcaba,<sup>5</sup> there was an explicit manifestation of improvement in the physical domain according to the reports of reduced back pain and headache, increased hours of sleep and muscle relaxation. It is common for auricular therapies with the use of needles to be directly related to this type of improvement and, even depending on the protocol used and the combination with auriculotherapy with seeds, they may have mild hypnotic effects for up to three weeks.<sup>7</sup>

With regard to the psycho-spiritual domain, which represents the internal awareness of the self, including self-concept and the meaning of life, thematic analysis expressed the advent of positive feelings and self-control. There is evidence to support these reports, that is, ear acupuncture significantly reduces anxiety levels and, at the same time, generates greater involvement of the professional with productivity and organizational results.<sup>18</sup>

The testimonies did not present elements that would give meaning to the socio-cultural and environmental domains, which is probably related to the fact that the use of auricular acupuncture has more repercussions as a comfort measure for the field of introspection than the external intervening variables.

It is important to consider that comfort is a subjective phenomenon and that, for this reason, it is related to changes that depend on the subjects' ability to interact with themselves,

with the others around them, and with the environment, and should be encouraged as a positive experience even in adverse situations.<sup>19</sup>

To date, no records on using auricular acupuncture to improve the comfort of professionals working on the front line of COVID-19 have been found in the literature, thus evidencing the imminent need for studies with this therapeutic technique in the caregiver's care.

## FINAL CONSIDERATIONS AND IMPLICATIONS FOR THE PRACTICE

Auricular acupuncture was perceived as beneficial to improve the feeling of physical and psycho-spiritual comfort by the nursing professionals, thus presenting itself as a care strategy for the caregiver who acts on the front line in the fight against COVID-19. It is noteworthy that this is an unprecedented study conducted in Brazil.

This research thus indicates the relevance of using PICs in the context of care for the health professionals who work under conditions of intense stress, as well as indicating the need for the adoption of care routines to improve self-perceived comfort during work. One limitation of the study is the fact that the adjuvant resources that the professionals themselves used in their daily lives to combat stress and improve comfort were not verified in the research, therefore requiring a more detailed investigation to deepen on this phenomenon; it should also be noted that the study did not cover a strategy for the continuity of auricular acupuncture by the participating subjects.

## AUTHOR'S CONTRIBUTIONS

Study design. Geórgia Alcântara Alencar Melo.

Data collection or production. José Claudio Garcia Lira Neto. Marina Guerra Martins.

Data analysis. Francisco Gilberto Fernandes Pereira.

Interpretation of the results. Francisco Gilberto Fernandes Pereira. Joselany Áfio Caetano.

Writing and critical review of the manuscript. Geórgia Alcântara Alencar Melo. José Claudio Garcia Lira Neto. Marina Guerra Martins. Francisco Gilberto Fernandes Pereira. Joselany Áfio Caetano.

Approval of the final version of the article. Geórgia Alcântara Alencar Melo. José Claudio Garcia Lira Neto. Marina Guerra Martins. Francisco Gilberto Fernandes Pereira. Joselany Áfio Caetano.

Responsibility for all aspects of the content and integrity of the published article. Geórgia Alcântara Alencar Melo. José Claudio Garcia Lira Neto. Marina Guerra Martins. Francisco Gilberto Fernandes Pereira. Joselany Áfio Caetano.

## ASSOCIATED EDITOR

Cristina Rosa Baixinho

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