

RESEARCH PAPER (ORIGINAL) 

Rehabilitation nursing practice and the contribution of osteopathy

A práxis da enfermagem de reabilitação e os contributos da osteopatia

La práctica de la enfermería de rehabilitación y las contribuciones de la osteopatía

Artur José Caldas¹

 <https://orcid.org/0000-0002-9559-968X>

Clara de Assis Coelho de Araújo²

 <https://orcid.org/0000-0003-2295-0579>

¹Local Health Unit of Alto Minho – Community Care Unit of Melgaço, Melgaço, Portugal

²Health Sciences Research Unit: Nursing (UICISA: E). School of Health Sciences of the Polytechnic Institute of Viana do Castelo, Viana do Castelo, Portugal

Abstract

Background: Rehabilitation nursing is a nursing specialty that comprises specific knowledge and procedures to help individuals maximize their functional potential and independence. The rehabilitation nurse is able to use techniques and technologies other than those that are commonly used in their professional practice, namely osteopathic techniques, in order to enhance the effectiveness of care. **Objective:** To explore the experiences of rehabilitation nurses who use osteopathic techniques in their professional practice.

Methodology: Descriptive exploratory study using semi-structured interviews with 8 rehabilitation nurses with training and practice in osteopathy. They were recruited through the *snowball sampling* method. Data were processed using the content analysis technique.

Results: Participants believe that they provide more differentiated care when using osteopathic techniques.

Conclusion: The use of osteopathic techniques may constitute a new paradigm in rehabilitation nursing practice.

Keywords: rehabilitation nursing; osteopathic medicine

Resumo

Enquadramento: A reabilitação, enquanto especialidade de enfermagem, abrange conhecimentos e procedimentos específicos que permitem auxiliar as pessoas a maximizar o seu potencial funcional e independência. O enfermeiro especialista em enfermagem de reabilitação (EEER) tem a possibilidade de utilizar técnicas e tecnologias que não as comumente utilizadas no seu desempenho profissional, nomeadamente as da osteopatia, de modo a potenciar a efetividade dos cuidados.

Objetivo: Conhecer as vivências dos enfermeiros especialistas em enfermagem de reabilitação que utilizam técnicas osteopáticas na sua prática profissional.

Metodologia: Estudo exploratório descritivo, com recurso à entrevista semiestruturada a 8 enfermeiros, especialistas em enfermagem de reabilitação com formação e prática em osteopatia, recrutados através do método de amostra *bola de neve*. A técnica de tratamento de dados escolhida foi a análise de conteúdo.

Resultados: Os participantes consideram que superam os cuidados que prestam, aquando da utilização de técnicas osteopáticas.

Conclusão: Considera-se que o recurso a técnicas osteopáticas, pode constituir um novo paradigma na práxis da enfermagem de reabilitação.

Palavras-chave: enfermagem em reabilitação; medicina osteopática

Resumen

Marco contextual: La rehabilitación, como especialidad de enfermería, abarca conocimientos y procedimientos específicos que permiten ayudar a las personas a maximizar su potencial funcional y su independencia. El enfermero especialista en enfermería de rehabilitación (EEER) tiene la posibilidad de utilizar técnicas y tecnologías distintas de las utilizadas habitualmente en su desempeño profesional, en particular las de la osteopatía, a fin de aumentar la eficacia de la atención.

Objetivo: Conocer las experiencias de los enfermeros especialistas en enfermería de rehabilitación que utilizan técnicas osteopáticas en su práctica profesional.

Metodología: Estudio exploratorio descriptivo, en el que se recurrió a la entrevista semiestructurada a 8 enfermeros especialistas en enfermería de rehabilitación con formación y práctica en osteopatía, reclutados mediante el método de muestreo de bola de nieve. La técnica de tratamiento de datos elegida fue el análisis de contenido.

Resultados: Los participantes consideran que superan los cuidados que proporcionan cuando utilizan técnicas osteopáticas.

Conclusión: Se considera que el uso de técnicas osteopáticas puede constituir un nuevo paradigma en la práctica de la enfermería de rehabilitación.

Palabras clave: enfermería en rehabilitación; medicina osteopática

Corresponding author:

Artur José Caldas

Email: enfartur1974@gmail.com

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Introduction

Rehabilitation is the process to help a person reach his or her full physical, psychological, social, vocational, and educational potential, consistent with his or her physiological or anatomical impairment or environmental limitations, desires, and life plans based on the holistic concept, using a combination of specialties from various health professionals (Santos, 2016).

Based on the assessment of the health status of an individual, the rehabilitation nurse (*enfermeiro especialista em enfermagem de reabilitação*, EEER) prepares and negotiates the individual intervention plan where he or she should include short- and long-term physical, social, and behavioral objectives, based on the identified disabilities and needs.

The Portuguese Order of Nurses (OE) was questioned about the possibility of EEER using techniques learned in an osteopathy course in their clinical practice and issued the following opinion: “The specialist nurse in rehabilitation nursing has the right to freely exercise the profession, particularly as regards interventions using new techniques and technologies, such as osteopathic techniques” (OE, 2016, p. 3).

In view of the above, the interest arose to explore the experiences of EEER who use osteopathic techniques in their professional practice, with the following general objective: To explore the experiences of EEER who use osteopathic techniques in their professional practice.

The following specific objectives were set in order to reach the general objective: To analyze the experience of EEER with patients while using osteopathic techniques; To identify perceived advantages and constraints in the use of osteopathic techniques in nursing rehabilitation practice.

Background

The rehabilitation process, whose objectives are focused on the development of each individual’s potential, increases independence in every dimension of the human being (Santos, 2016).

“As a multidisciplinary specialty, rehabilitation comprises a body of specific knowledge and procedures that can help people with chronic, acute diseases or their sequelae to maximize their functional potential and independence” (Regulamento n.º 392/2019 de 3 de maio, p. 13565).

The specialist nurse is the nursing professional who has “extensive knowledge in a specific field of nursing, . . . translated into a set of specialized skills in an area of intervention” (Regulamento n.º 122/2011 de 18 de fevereiro, p. 8648) and “designs, implements, and monitors differentiated nursing rehabilitation plans, based on the individual’s actual and potential problems” (Regulamento n.º 122/2011 de 18 de fevereiro, p. 13565).

The techniques used in osteopathy add a considerable number of resources that EEER can use in their clinical practice, including joint mobilization and manipulation,

techniques for trigger points, visceral and craniosacral techniques, muscle energy techniques, and myofascial techniques.

In this context, the rehabilitation process requires the use of interdisciplinary techniques and actions with the common purpose of improving/restoring impaired functions. There has been an increasing demand for complementary therapies by the populations over the years. The reasons for seeking and using these therapies are identical to the reasons which lead people to seek conventional medicine, that is, the search for a cure or health (Xavier, 2001).

The healthcare professional is responsible for enhancing their skills to improve patient outcomes through self-training and reflection on their practice with a view to “fully meeting patients’ needs and expectations” (Lacerda, 2005, p. 20).

According to Pestana (2016), the EEER is responsible for the continuous improvement of their professional practice in rehabilitation nursing, which requires the continuous acquisition of updated knowledge and skills to enhance their critical judgment, reflection-based practice, and decision-making to be able to care for people with special needs, throughout the life cycle and in all care delivery settings, promoting functionality and skills development. From the perspective of osteopathy, any changes in tissue mobility can affect the functioning of all body systems at any time. It is assumed that any changes in the mobility of the locomotive system can lead to a pathological situation that may or may not be osteopathic (Barreto, 2014). It differs from allopathy, mainly in the focus on body mechanics and the manipulation methods used in both diagnosis and treatment (Ricard & Vaca, 2017).

According to the World Health Organization (2010), osteopathy uses a wide variety of manual techniques to improve the impaired or altered function of related components of the somatic, skeletal, arthroal, myofascial, vascular, lymphatic, and neural systems.

In a literature review with the purpose of systematically reviewing and summarizing the primary research literature on patient experience and expectations about osteopathic manipulative treatment, Lam, Banihashem, Lam, Wan, and Chow (2019) concluded that the primary literature reported mainly positive patient experience and expectations about the osteopathic manipulative treatment.

In accordance with Regulamento n.º 392/2019 de 3 de maio, knowledge advancement requires EEER to participate in research projects aimed to increase knowledge and develop skills within their area of expertise, as well as include the new research findings in their clinical practice. Ricard and Vaca (2017) highlight the body of evidence on the osteopathic approach, of which an example is the International Journal of Osteopathic Medicine that publishes exclusively research studies in this area.

Research question

What is the experience of EEER who use osteopathic techniques in their professional practice?



Methodology

Given the fact that the objective was to explore the experiences of EEER who use osteopathic techniques in their professional practice, an exploratory-descriptive study was conducted to identify, categorize, and describe a population or conceptualize a situation (Fortin, 2009).

Sampieri, Collado, and Lucio (2013) reported that “it is advisable to select the qualitative approach when the subject of study has been little explored, or research has not been done about it in a specific social group” (Sampieri et al., 2013, p. 376), which is the case of this study because no studies conducted on this topic in Portugal were identified.

This study is based on the qualitative paradigm because the researcher observes, describes, and interprets with the purpose of understanding the phenomenon as it is experienced and reported by the participants (Fortin, 2009). The target population, which according to Fortin (2009) consists of the elements who meet the pre-established selection criteria, is composed of nurses with the following criteria: Specialist nurses in rehabilitation nursing; Osteopathy training of 2,000 hours or more; Use of osteopathic techniques in their professional practice.

The participants in this study were recruited through the *snowball sampling* method which, according to Bernard (2006), is a network sampling method used for studying populations that are hard to find or study or when the size of the population is unknown.

The sample is closed when there is data saturation, which is in line with Fontanella, Ricas, and Turato (2008), because the information provided by the participants would not add any new information.

This study used interviews because it is the most commonly used method in exploratory-descriptive studies and it is generalized in almost all sectors of the population, obtaining higher response rates than the questionnaire (Fortin, 2009).

The interview was built taking into account the research objectives of exploring the experiences of EEER who use osteopathic techniques in their professional practice. The interviews were then transcribed, which constitutes an important research step and should not be regarded as a mere technical detail between the interview and data analysis (Azevedo et al., 2017). Data were collected between April and September 2018, after previous contact with the participants, at a place, date, and time chosen by them.

Given that the data in this study result from personal perceptions obtained through the application of semi-structured interviews, content analysis was considered to be the most appropriate method for processing these data. After transcription, data were analyzed using NVivo® software which, according to Sampieri et al. (2013, p. 477), “is an excellent analysis software that is useful for creating hierarchical databases . . . encodes meaning units . . . based on the scheme drawn up by the researcher . . . one of its strengths is to create matrices”.

The categories of analysis were elaborated in line with the recommendations of Sampieri et al. (2013) for this methodological activity.

The ethical principles were met. Permission was requested for data collection by means of an informed consent form, after the participants were informed about the purpose of the study and that the interview would be recorded, as well as that anonymity and data confidentiality were ensured.

The project which gave rise to this research study obtained the favorable opinion of the Ethics Committee of the Health Sciences Research Unit: Nursing (UICISA: E) of the Nursing School of Coimbra (Opinion No. P524/10-2018).

Results

A total of eight EEER with experience in using osteopathic techniques participated in the study: six men and two women. Four participants had a bachelor's degree in nursing and four had a master's degree, with one participant holding a master's degree in an area other than nursing. Participants were aged between 33 and 60 years, with six participants being in the age range of 30-40 years.

With regard to the number of hours of osteopathy training, it varied between 2,000 and 3,600 hours. All participants had vast experience in rehabilitation nursing and in the use of osteopathic techniques.

An analysis of the frequency of the words most often used by the participants showed that the most common word was *techniques* (289 times), followed by *rehabilitation* (197), *osteopathic* (167), and *nursing* (114), as can be seen in the word cloud in Figure 1 (the visualization of key words – word cloud – was automatically generated by the Nvivo software program, according to the words used by the participants, so it was not possible to translate it to English).

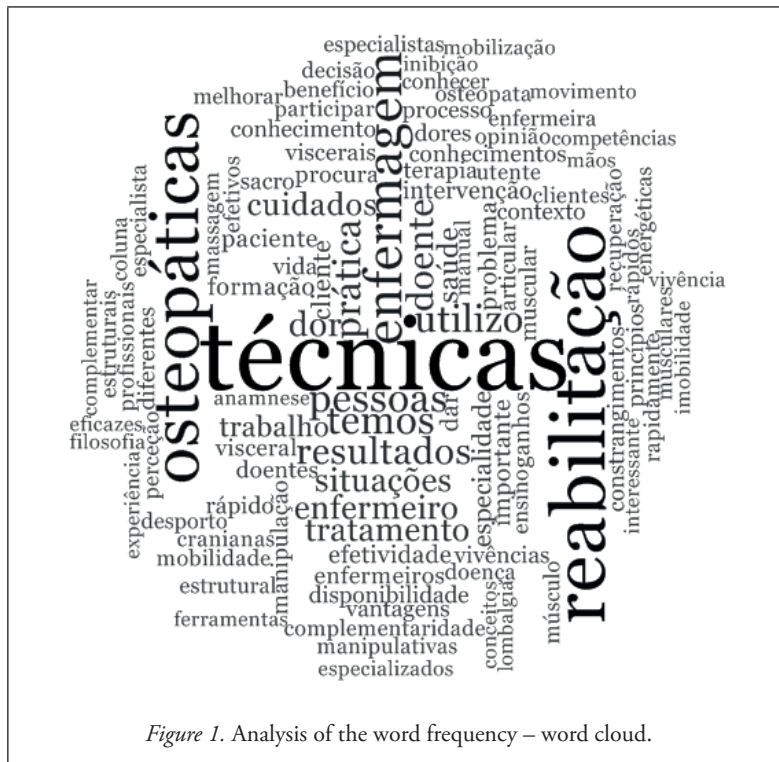
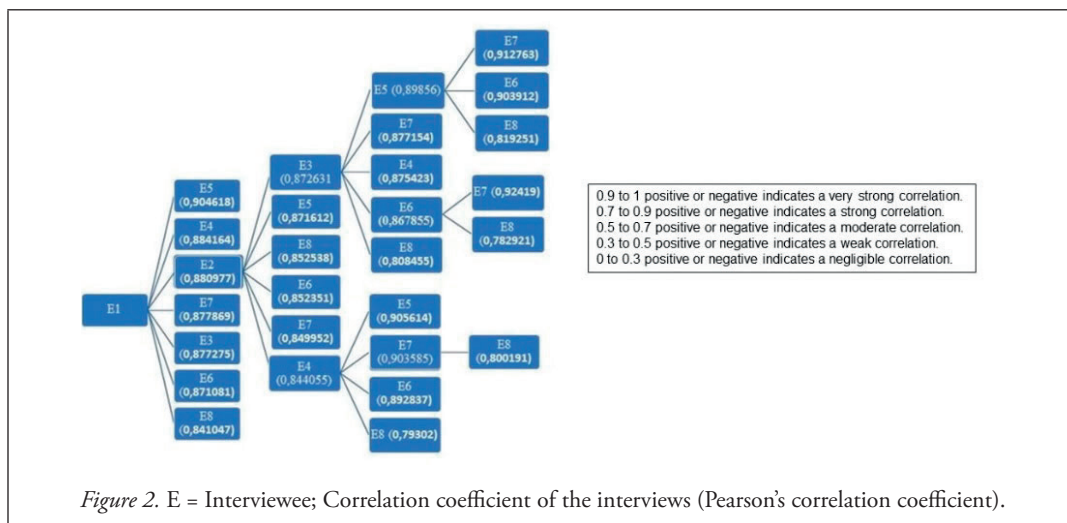


Figure 2 shows that the interviews' contents reveal a very strong (0.9 to 0.1 positive or negative) and strong

correlation (0.7 to 0.9 positive or negative), according to Pearson's correlation coefficient.



From the analysis of the transcriptions, the number of recording units associated with each of the subcategories and corresponding thematic area were calculated. The results are shown in Table 1. With regard to the research question, the participants addressed the thematic areas Experience in the use of osteopathic techniques through: Motivation for its use (15 recording units; knowledge acquisition, influence of other professionals, family influence, new approaches, due to sports, and observed outcomes); Type of clinical situations (25 recording units; balance changes, learning difficulties, concentration deficit, dyslexia, musculoskeletal, neurological, visceral, pain, sports injuries,

immobility syndrome, and other situations); Type of osteopathic techniques used (33 recording units; deep transverse massage, lymphatic techniques, inhibitory techniques, structural techniques, myofascial techniques, muscle energy techniques, craniosacral techniques, somato-emotional techniques, visceral techniques); Principles underlying their use (22 recording units; complementary of techniques, patient consent, perceived effectiveness, ethical principles, patient assessment); Place of use (8 recording units; private office, primary care, private hospital); Frequency of use (10 recording units; always, often, almost always); Perceived advantages in the use of osteopathic techniques through Complementarity (7

recording units); Effectiveness of care (8 recording units); Shorter recovery time (8 units of registration); Economic gains (5 recording units); New philosophy of caring (5 recording units); Patient satisfaction (1 recording units); Resource optimization (2 recording units); Patient outcomes (7 recording units); and Perceived constraints in the use of osteopathic techniques where their absence is consensual (8 recording units).

Table 1

Thematic areas, categories, subcategories of the content analysis of the participants' narratives and frequency of the recording units

Thematic Area	Categories	Subcategories	No.
Experience of the specialist nurse in rehabilitation nursing in the use of osteopathic techniques	Motivation for its use	Knowledge acquisition	5
		Influence of other professionals	2
		Family influence	1
		New approaches	1
		Due to sports	4
		Observed outcomes	2
	Type of clinical situations	Balance changes	2
		Learning difficulties	1
		Musculoskeletal	7
		Neurological	1
		Visceral	2
		Pain	5
		Sports injuries	2
		Immobility syndrome	2
Type of osteopathic techniques used	Other situations	3	
	Deep transverse massage	1	
	Lymphatic techniques	1	
	Inhibitory techniques	2	
	Structural techniques	4	
	Myofascial techniques	5	
	Muscle energy techniques	6	
	Craniosacral techniques	8	
	Somato-Emotional techniques	1	
	Visceral techniques	5	
Principles underlying their use	Complementarity of techniques	5	
	Patient consent	5	
	Perceived effectiveness	5	
	Ethical principles	1	
	Patient assessment	6	
Place of use	Private office	6	
	Primary care	1	
	Private hospital	1	
Frequency of use	Always	2	
	Often	4	
	Almost always	4	
Perceived advantages	Complementarity	7	
	Effectiveness of care	8	
	Shorter recovery time	8	
	Economic gains	5	
	New philosophy of caring	5	
	Patient satisfaction	1	
	Resource optimization	2	
Patient outcomes	8		
Perceived constraints	No constraints	8	
TOTAL		165	

Discussion

The results of the interviews' content analysis allowed describing the participants' experiences of using osteopathic techniques, including the motivation, the type of situations, the type of techniques used, the principles underlying their use, the place of use, and the frequency of use.

With regard to motivation, 50% of the participants mentioned knowledge acquisition as a decisive factor for them to become more professionally qualified.

As regards the influence of other professionals, a participant mentioned the previous formative experiences and another one mentioned the experience of observing another professional in the area of manual therapy, which sparked the interest about this area and, consequently, about the use of osteopathic techniques.

Today there is a growing interest in osteopathic techniques by EEER who carry out a sports activity due to the observed positive outcomes such as the athletes' fast recovery when using rehabilitation techniques combined with osteopathic practices, a fact which was mentioned by half of the participants.

As regards the type of situations in which EEER use osteopathic techniques, they are extremely diverse and reflect the wide range of situations where our performance can be more effective. Balance changes were mentioned by two participants. In fact, there is an association between osteopathy and the treatment of balance changes because, either due to visual, psychiatric, or even mobility issues, osteopathy is affordable and effective to reverse vertigo (Lima, 2018).

Other clinical situations mentioned in the narratives of seven participants are associated with the musculoskeletal disorders. This aspect is in line with the Portuguese Directorate-General of Health (DGS, 2008), according to which the osteopathic treatment promotes optimal function of the neuromusculoskeletal system that affects all body systems, including the visceral system, in the context of the holistic approach, through a biomedical-psychosocial model of health.

Spine disorders were the most often reported musculoskeletal situations by the participants, in particular neck pain (three participants), low back pain (four participants), and all situations involving pain.

Manual therapy is often used with the purpose of improving the range of motion, relieving pain, and restoring function. Different techniques are used to increase joint range of motion (ROM) and improve the function of the lumbar and cervical regions, such as the use of high-velocity, low-amplitude mobilization or manipulation techniques.

The participants mentioned several types of osteopathic techniques, namely craniosacral techniques (all participants), myofascial techniques (five participants), muscle energy techniques (six participants), structural techniques (four participants), and visceral techniques (five participants).

This study aimed to examine the principles underlying the use of osteopathic techniques by the participants. The

analysis showed that several principles are used, namely the complementarity of techniques (five participants), patient consent and perceived effectiveness (five participants), ethical principles (one participant), and patient assessment (six participants).

Data analysis revealed a constant concern with the perceived effectiveness of the techniques used in the observation of expected outcomes, which should enable the continuous improvement of practices.

Now is a time of transition where we are challenged to complement our performance, as EEER, with other techniques and technologies other than those that are commonly used.

As in every type of nursing care, patients must give their consent, which was another principle pointed out by the majority of participants (five), thus recognizing the value of patient autonomy.

In our practice, the premise is to negotiate the care plan drawn up based on the diagnosis. This aspect is clearly reflected in the participants' narratives when they mention patient consent as a principle underlying the use of osteopathic techniques, which is in line with the recommendations of the Directorate-General of Health health professionals respect their patients' privacy; patients or users in the therapeutic relationship. They respect the patients' ideas, desires, and rights, patients or users or clients, and obtain their consent, interact with and care for their patients with wisdom, prudence, dignity, respect, kindness, and maintain their confidentiality. (DGS, 2008, p. 1).

Only one participant mentioned the ethical principle of non-maleficence, but it is known that nursing practice in general is grounded in the ethical and deontological principles set forth in the code of professional conduct for nurses. Nurses base their practice in what is best for the patient while respecting human rights in their interpersonal relationships.

In the exercise of their functions, nurses should adopt a responsible and ethical conduct and act with respect for the legally protected rights and interests of citizens (OE, 2016).

Patient assessment is another aspect referred to as an underlying principle for the use of osteopathic techniques and is evident in the narratives of six participants. It allows nurses to perform the diagnosis, plan nursing interventions, monitor and assess the patient's evolution.

The results show that the participants use osteopathic techniques in different locations. Six participants used them in their own or in shared private offices. Only one participant used osteopathic techniques in primary care (Integrated Continued Care Team) and one participant used them in a private hospital. EEER have the right to freely exercise the profession (OE, 2016) as freelancers, under an employment contract, or as public servants, independently, in collaboration with one or several colleagues, or in association.

The content analysis of the eight interviews revealed that all participants mentioned complementarity, effectiveness of care, shorter recovery time, and observed patient out-

comes as perceived advantages in the use of osteopathic techniques.

Nurses develop their activity in a regime of functional complementarity with other health professionals, but with the same level of dignity and autonomy of professional exercise (Comissão de Especialidade de Enfermagem de Reabilitação, 2010).

All participants mentioned that effectiveness was a major advantage in the use of osteopathic techniques. The explanation is associated with the obtained outcomes, the impact of the measures on the health status of the populations in general and individual citizens in particular, that is, effectiveness (Amaral, 2014).

Nursing is encouraged to demonstrate the effectiveness and the quality of nursing care so it is imperative to demonstrate the value of its interventions. Five participants mentioned the economic gains as a perceived advantage in the use of osteopathic techniques as EEER.

The excellence of rehabilitation nursing can bring health gains that translate into a reduction of episodes of illness and temporary or permanent disability, as well as an increase in physical and psychosocial functionality, thus contributing to a better quality of life (DGS, 2013).

The use of osteopathic techniques by the EEER in this study represents a new philosophy of caring. Four nurses reported that these techniques offer a new way to see rehabilitation care through a similar caring process, representing another perspective of health and disease.

According to Barreto (2014), osteopathy is a system of evaluation and treatment, with its own philosophy and methodology, which aims to restore the function of the body structures and systems. Another aspect mentioned by two participants was resource maximization resulting from the use of osteopathic techniques. If the shorter recovery time, the observed patient outcomes, and the effectiveness of care are realities perceived by all participants, it is easily understood that the human, material, and, consequently, economic resources can be maximized.

EEER who use osteopathic techniques feel capable, confident, and without any pressure in the exercise of their specialized functions, which can be seen in all participants' narratives. They do not perceive any constraints in the use of osteopathic techniques because they are constantly concerned about receiving training to ensure compliance with the educational requirements and basic conditions for the exercise of the nursing profession.

The limitations of this study focused on the difficulty in finding literature on this topic given its topicality in relation to the use of osteopathic techniques in rehabilitation nursing practice.

Although the sample can be considered a limitation of this study, it is diversified because it meets the purpose of exploring the experiences of EEER about the advantages and constraints of using osteopathic techniques and their effectiveness in rehabilitation nursing care.

The development of this study was a relevant opportunity given the fact that the evidence about the contribution of osteopathic techniques in rehabilitation nursing interventions is unknown.

Conclusion

This study provides added value to rehabilitation nursing through the knowledge of the experiences of EEER who use specific techniques of another discipline in their specialized rehabilitation nursing practice.

EEER recognize the importance of broadening their horizons and investing in lifelong training to keep abreast of knowledge advances in the health-disease process with a view to patient satisfaction and excellence of care, at a time when society is becoming more demanding.

The conclusions drawn from this study are essential for better understanding this phenomenon in these nurses' professional performance and broadening horizons in their area of expertise. Studies should be conducted to further explore the influence of osteopathic techniques in rehabilitation nursing practice.

Author contributions:

Conceptualization: Caldas, A. J.

Data curation: Caldas, A. J.; Araújo, C. A.

Methodology: Caldas, A. J.; Araújo, C. A.; Supervision, Araújo, C. A.

Writing - original draft: Caldas, A. J.

Writing - review and editing: Caldas, A. J.; Araújo, C. A.

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