





ORIGINAL

## Educational intervention on alternative therapies for arthropathies

### Intervención educativa sobre las terapias alternativas para las artropatías

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#### ABSTRACT

A pre-experimental before-after study was carried out to evaluate the effectiveness of the application of an educational intervention program to increase knowledge related to alternative therapies for arthropathies in clinic 5 of the Baraguá polyclinic, in the period from January 2021 to January 2022. The universe was constituted by 236 patients belonging to this area, a sample of 70 patients was chosen by means of a simple random sampling. The Mc. Nemar statistical test was used to find significant differences between the level of knowledge before and after the intervention. The participants had a low level of knowledge about alternative treatments for their pathologies. It was possible to increase the level of knowledge since almost all the patients finished the research with an adequate general level of knowledge.

**Key words:** Educational Intervention; Alternative Therapies; Knowledge Level.

#### RESUMEN

Se realizó un estudio pre-experimental de tipo antes-después para evaluar la efectividad en la aplicación de un programa de intervención educativa para elevar conocimientos relacionados con las terapias alternativas para las artropatías en el consultorio 5 del policlínico Baraguá, en el período comprendido entre enero 2021 a enero 2022. El universo estuvo constituido por 236 pacientes pertenecientes a esta área, se escogió una muestra de 70 pacientes mediante un muestreo aleatorio simple. Se empleó la prueba estadísticas Mc. Nemar para hallar diferencias significativas entre el nivel de conocimientos antes y después de la intervención. Los participantes presentaban un nivel de conocimientos bajo sobre los tratamientos alternativos de sus patologías. Se logró elevar el nivel de conocimientos ya que la casi la totalidad de los pacientes terminó la investigación con un adecuado nivel general de conocimientos.

**Palabras clave:** Intervención Educativa; Terapias Alternativas; Nivel de Conocimiento.

#### INTRODUCTION

The early manifestations of Traditional Asian Medicine consist of legends that have undergone distortion through oral translation. Contemporary research has provided confirmation that acupuncture origins can be traced back to the period of disintegration of early human communities, specifically during the late Neolithic era, spanning from 8000 to 2000 BC.<sup>(1)</sup>

The earliest techniques of therapeutic massage were developed and taught in ancient China through Taoist schools. The oldest known writings on this subject were authored by Nei Tsing, a historical figure from the 18th

century AD. Furthermore, the idea of the existence of energy currents or “meridians” traversing the human body can be traced back to at least the 15th century BC. Since then, the Chinese populace recognized that massage played a vital role in stimulating the circulation of “chi”. However, it was the monks who had a higher level of proficiency and specialization in determining what type of therapy should be applied in each case. With the passage of time, it was also noted that meridians could be stimulated through various methods, with notable techniques including the application of needles (acupuncture), metallic objects, magnetic minerals (magnetotherapy), carved stones, polished pieces of wood, or even the use of fingers.<sup>(2)</sup>

In the backdrop of its 29th World Health Assembly convened in Geneva, Switzerland, in 1978, the World Health Organization (WHO) officially acknowledged, for the first time, the significance of traditional and natural medicine practitioners, along with the medicines and techniques they use. These resources are some of the most substantial assets available in the pursuit of the objective of health for all.<sup>(3)</sup>

The WHO advocates for the appropriate utilization of traditional medicine systems into primary healthcare programs. It promotes the exploration of their potential utility and recognizes traditional medicine as one of the fundamental pillars upon which primary healthcare should be constructed.<sup>(4)</sup>

In Cuba, oral antecedents exist regarding the practice of Traditional Chinese Medicine in the city of C3rdenas, situated in Matanzas province. Dr. Cham Bom Bian worked there, and his remarkable achievements were notable in the final decade of the 19th century. From his work, the renowned saying emerged: “Not even the Chinese doctor can save him”, underscoring his high qualifications as a physician. During the 1940s and 1950s, professors from the Faculty of Medicine at the University of Havana, Dr. Domingo Ramos Delgado and Dr. Juan B. Kour3 Esmeja, founded a Free School of Medicine that provided lectures on Traditional Medicine.<sup>(5)</sup>

In 1990, a rapid process of development and implementation of medicinal plants, acupuncture, and other natural resources commenced, guided by an approach that encompasses research, the training of human resources, production, and the integration of these practices into healthcare. A year later, all of these activities evolved into a government-prioritized program aimed at the integration of Natural and Traditional Medicine (NTM) within the national healthcare system, an initiative that has seen continuous enhancement over the years. Since 1997, a branch program within the Ministry of Public Health (MINSAP) has been dedicated to NTM research.<sup>(6)</sup>

This trend, along with others of the contemporary medicine, was integrated not as an alternative method driven by economic considerations or to address supply-related issues but as a genuine scientific discipline that necessitates ongoing study, improvement, and development, owing to its demonstrated ethical and scientific advantages.<sup>(7)</sup>

The knowledge and application of procedures and techniques in the realms of health promotion, disease prevention, diagnosis, treatment, and rehabilitation that NTM encompass are oriented towards extending life expectancy and, more significantly, elevating the quality of life. This holds profound significance for less developed nations, as it enables the promotion of the utilization of cost-effective and easily accessible medications and other resources that are attainable by all, irrespective of the level of industrial pharmaceutical production achieved within each country.<sup>(8)</sup>

The primary objective of this article is to address the existing lack of knowledge concerning the level of awareness about alternative treatments to medication therapy for arthropathies among patients at the FMO#5 (Family Medical Office) in the Baragu3 Polyclinic healthcare area. This lack of information underscores the necessity to investigate and comprehend the current situation, as well as identify potential solutions that could enhance the quality of life for these patients. In this context, the article posits a hypothesis that the design and implementation of an educational intervention proposal could substantially augment the knowledge level of FMO#5 patients concerning alternative therapies for the treatment of arthropathies.

In order to accomplish the overall objective of this research, an assessment of the level of knowledge regarding alternative therapies for arthropathies will be conducted among the patients of FMO#5 at Baragu3 Polyclinic. This evaluation will yield valuable insights into the present circumstances, pinpoint areas necessitating improvement, and establish the foundations for the creation of a highly efficient educational intervention. The study not only seeks to augment patients' knowledge of alternative therapies but also aspires to stimulate their active engagement in the management and treatment of arthropathies, thereby promoting comprehensive care and enhancing their overall quality of life.

## **METHODS**

A pre-experimental before-after study was conducted with the objective of evaluating the efficacy of implementing an educational intervention program to enhance the level of knowledge about alternative therapies for arthropathies in the patients of FMO#5 in the Baragu3 health area, during the period from January 2021 to January 2022.

The universe comprised a total of 236 patients, from which all individuals of both genders, aged 30 years or older, employed as agricultural workers and dispensarized in the same region, and afflicted with some

form of arthropathy, were included. Employing a simple random sampling technique, a sample of 70 patients, accounting for 30 % of the total universe, was selected.

*Inclusion criteria*

- Patients aged 30 years or older diagnosed with either acute or chronic joint disease.
- Patients residing in the area of the family medical office during the study period.
- Patients willing to participate in the study and who signed an informed consent form (see Annex 1).

*Exclusion criteria*

- Patients who moved out of the study area.
- Individuals who declined to participate in the study.
- Patients with any cognitive impairment or psychiatric condition that would prevent them from answering the questionnaire (see Annex 2).
- Temporary residents in the healthcare area (foreigners and Cubans).

*Exit criteria*

- Patients who deceased during the study.
- Patients opted to withdraw from the study voluntarily.
- Patients who failed to attend on two or more occasions during the study period.

The data collection sources included a questionnaire (see Annex 2), serving as the primary data-gathering instrument for this research. This questionnaire was administered both before and after the intervention and was designed by the author, receiving approval from experts within the Baraguá polyclinic health area. It was applied during consultations and on the spot. Furthermore, the Family Health History (FHH) and individual medical records were used.

In consideration of the requirement for a swift and cost-effective information gathering process, an initial questionnaire (see to Annex 2) was initially administered. Subsequent to this, an educational intervention program (see Annex 3) was executed, designed to enhance the level of knowledge of alternative therapies for arthropathy treatment within the study sample. Following the completion of the intervention, the same questionnaire was administered once more, two weeks after its conclusion, in order to address the specific objectives of the study.

**Application of the educational intervention**

Stages: diagnostic, actual intervention, and assessment.

- Diagnostic stage: The assessment of the level of knowledge regarding alternative therapies for arthropathy treatment was conducted through the administration of a questionnaire (see Annex 2). The author's knowledge gained through prior training on the subject was also considered, and workshops, group dynamics, and educational talks were organized to enhance comprehension of the topic. The development of the educational intervention program was predicated on the identified educational requirements.
- Intervention stage: The sample, comprising 70 patients, was stratified into 5 subgroups, each containing 14 patients, through the application of simple random sampling. The intervention program spanned 10 weeks, with two working sessions held per week for each subgroup. Each session encompassed lectures and participatory techniques, with a duration of 50 minutes.
- Assessment stage: The identical initial questionnaire was administered two weeks following the conclusion of the educational intervention. The gathered data were statistically processed to generalize the information. Subsequently, the results were scrutinized to address the study's objectives and provide conclusions and recommendations.

**Level of knowledge about alternative therapies for arthropathies**

The assessment was comprehensive, as it considered the 3 elements which will be discussed later, and a score of 30 and 40 points was assigned depending on the questions, with the following grading criteria:

- Satisfactory: When answered correctly as explained later and received a score of 70-100 points in the assessment.
- Unsatisfactory: When answered incorrectly as explained later and received a score less than 70 points in the assessment.

**Assessment by study variables**

Question 1

- Level of knowledge about alternative therapies for arthropathies.
- Question value: 40 points.
- Satisfactory: if the correct item is identified.
- Unsatisfactory: if the correct item is not identified.

Question 2

- Level of knowledge about the advantages of using alternative therapies. The items 1, 2, 3, 4, 5, and 7 should be identified.
- Question value: 30 points (5 points for each correct item).
- Satisfactory: if 6 items are identified correctly.
- Unsatisfactory: if 3 items are identified correctly.

Question 3

- Level of knowledge about modalities of alternative therapies. The items 1, 2, 5, 6, and 7 should be identified.
- Question value: 30 points (6 points for each correct item).
- Satisfactory: if 5 items are identified correctly.
- Unsatisfactory: if 3 items are identified correctly.

The McNemar test will be utilized to assess whether the initial response rate is equal to the final response rate. For this purpose, individuals' knowledge regarding the five variables under study will be categorized as either satisfactory (1) or unsatisfactory (0). This classification streamlines the statistical analysis of the results for each variable per individual in SPSS.

The research was conducted in compliance with the four fundamental ethical principles inherent in studies involving human subjects: respect for autonomy, beneficence, non-maleficence, and justice. The included patients participated voluntarily in the study and signed an informed consent form (see Annex 1), thereby formalizing legally their willingness to partake in and collaborate in the research. Subsequently, they were duly instructed regarding the study's characteristics, objectives, and potential benefits. The patients' integrity was upheld throughout the research, ensuring the utmost confidentiality of all personal information obtained during the study. The questionnaire employed clear, practical, and comprehensible language.

**RESULTS AND DISCUSSION**

**Table 1.** Level of knowledge before and after the educational intervention. FMO #5, of Baraguá Polyclinic, Ciego de Ávila 2022

Level of knowledge		Assessment				McNemar's test
		Before		After		
		N	%	N	%	
Level of knowledge about alternative therapies for arthropathies	Satisfactory	3	4,3	49	70	p=0,00
	Unsatisfactory	67	95,7	21	30	
Level of knowledge about the utilization of alternative therapies in the treatment of arthropathies	Satisfactory	1	1,4	49	70	p= 0,01
	Unsatisfactory	69	98,6	21	30	
Level of knowledge about modalities of alternative therapies	Satisfactory	0	0	27	38,6	p=0,622
	Unsatisfactory	70	100	43	61,4	

Source: Questionnaire.

Table 1 displays the distribution of patients according to the level of knowledge assessed before and after the implementation of the intervention strategy.

At the outset of the intervention, merely 3 patients exhibited a satisfactory level of knowledge about alternative therapies for arthropathies, constituting a mere 4,3 % of the total, an exceedingly low percentage in contrast to the patients who possessed an unsatisfactory level of knowledge, encompassing 95,7 % of the total. However, upon the completion of the program and the intervention strategy, the proportion of patients who attained a satisfactory level of knowledge surged to 70 %. This positive change in the level of knowledge was deemed significant based on the interpretation of the results of the utilized statistical test.

In the initial assessment of the utilization of alternative therapies in the treatment of joint diseases, it

can be observed that only 1 patient possessed satisfactory level of knowledge, representing 1,4 % of the total, whereas the remaining 69 patients had no knowledge of the topic, accounting for 98,6 %. After the questionnaire was repeated, 49 patients acquired satisfactory level of knowledge, elevating the percentage to 70 %, while the level of knowledge of the remaining 30 % (21 patients) kept unchanged. This change was deemed significant based on the interpretation of the results of the applied statistical test.

With the application of the initial questionnaire, it was evident that no patient possessed a satisfactory level of knowledge about the different modalities. After the intervention program was concluded and the questionnaire was applied a second time, this figure improved, with 27 patients demonstrating a satisfactory increase in their level of knowledge, constituting 38,6 % of the total, while the remaining 61,4 % did not achieve a satisfactory change in their knowledge. Nonetheless, the percentage of patients with a satisfactory level of knowledge increased after the educational intervention was implemented. It is important to note that this positive change in knowledge was not deemed statistically significant based on the interpretation of the results of the applied statistical tests.

**Table 2.** Effectiveness of the educational intervention in increasing the level of knowledge about alternative therapies for arthropathies, before and after the educational intervention. FMO #5 of Baraguá Polyclinic, Ciego de Ávila 2022

Effectiveness of the educational intervention	Assessment				McNemar's test
	Before		After		
	N	%	N	%	
Satisfactory	3	4,3	49	70	p=0,00
Unsatisfactory	67	95,7	21	30	
Total	70	100	70	100	

Source: Questionnaire.

Table 2 displays the assessment of the general level of knowledge considering multiple aspects and measured before and after the intervention program was conducted.

Before the intervention commenced, only 3 patients (4,3 % of the total) demonstrated a satisfactory overall level of knowledge, while 67 patients or 95,7 % of the patients, answered the questionnaire incorrectly, as shown in previous tables. However, upon the completion of the program, the number of patients with satisfactory overall knowledge increased to 49 or 70 % of the total sample, indicating a significant positive change in knowledge as indicated by the results of the statistical test.

Based on the outcomes depicted in the thesis, a notable enhancement in the patients' level of knowledge concerning alternative therapies for arthropathies is evident following the implementation of the intervention strategy. Comparable findings were noted in studies conducted in similar settings.<sup>(9)</sup>

Overall, the findings illustrate that the implemented intervention strategy had a beneficial influence on the patients' level of knowledge of alternative therapies for arthropathies. A noteworthy rise in the proportion of patients exhibiting satisfactory knowledge in the diverse areas assessed was evident, signifying the effectiveness of the educational program. Nonetheless, it is essential to emphasize the necessity to continue working in the domain of alternative therapy modalities, as a statistically significant advancement in this aspect was not attained. Similar results were reported by Díaz et al. in studies involving older adults.<sup>(10)</sup>

These results underscore the significance of intervention programs and continuous education in the field of alternative therapies, equipping patients with increased knowledge and comprehension of accessible treatment alternatives. Moreover, these findings indicate the necessity of formulating specific strategies to address the recognized knowledge deficiencies, such as in the realm of alternative therapy modalities. Ultimately, it emphasizes the significance of integrating natural and traditional medicine into the healthcare system and patients.<sup>(11,12,13,14)</sup>

## CONCLUSION

The educational intervention proved to be effective to enhance the level of knowledge about alternative therapies among the study sample, as indicated by the results of the statistical test used.

## RECOMMENDATIONS

To all healthcare professionals in the Baraguá municipality and the Ciego de Ávila province in general, it is recommended to apply educational interventions focused on alternative therapies for arthropathies, to enhance their knowledge in this domain and have another tool in our hands for the treatment of various diseases, in the face of the shortage of medications that has been affecting the country.

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## FINANCING

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## CONFLICT OF INTEREST

None.

## AUTHOR'S CONTRIBUTION

*Conceptualization:* Yoel Mora Ignacio.

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*Research:* Yoel Mora Ignacio.

*Methodology:* Yoel Mora Ignacio.

*Project Management:* Yoel Mora Ignacio.

*Original drafting:* Yoel Mora Ignacio.

*Drafting-revising and editing:* Yoel Mora Ignacio.

## ANEXO 1

### CONSENTIMIENTO INFORMADO

Consentimiento informado Boleta de disposición de los pacientes para participar en la investigación.

Yo: \_\_\_\_\_, después de saber en qué consiste la investigación, estoy plenamente de acuerdo en que se me realice este estudio. Y para que aquí conste, firmo el presente el día \_\_\_\_ del mes de \_\_\_\_\_ del año 202\_\_.

Firma del paciente \_\_\_\_\_

Firma del médico \_\_\_\_\_

## ANEXO 2

### CUESTIONARIO

Estimada/o paciente, nos encontramos realizando una investigación dirigida a un estudio para elevar el nivel de conocimiento sobre terapias alternativas para las artropatías en el CMF#5 del área de salud de Policlínico Baraguá. Esperamos su colaboración. GRACIAS.

1. ¿Conoce usted que son las terapias alternativas? Marque con una X.

- A.  Si
- B.  No

2. De los siguientes enunciados marque con una x los que usted considere constituyen ventajas de las terapias alternativas.

- 1.  Son métodos sencillos.
- 2.  Están al alcance de la población.
- 3.  Tiene menos complicaciones.
- 4.  Se usa en países desarrollados como subdesarrollados.
- 5.  Son más barato.
- 6.  Son más caro.
- 7.  Garantizan seguridad y confianza durante el tratamiento.
- 8.  Dolorosos.
- 9.  Por si solos producen la curación del enfermo.

3. De los siguientes incisos marque con una x los que usted considere constituyen modalidades de las terapias alternativas para el tratamiento de las artropatías.

- 1.  Digitopuntura.
- 2.  Fitofármacos.
- 3.  Antiinflamatorios.
- 4.  Analgésicos.
- 5.  Apucuntura.
- 6.  Moxibustión.
- 7.  Homeopatía

Nivel de conocimientos:

- Pregunta 1: Satisfactorio contestar incisos a, insatisfactorio contestar incisos b.
- Pregunta 2: Satisfactorio contestar inciso 1, 2, 5, 6, 7; insatisfactorio contestar inciso 3, 4.
- Pregunta 3: Satisfactorio contestar incisos 1, 2, 3, 4, 5, 7; insatisfactorio contestar incisos 6, 8, 9.

Calificación Final: Satisfactorio contestar correctamente 3 preguntas, insatisfactorio contestar incorrectamente menos de 3 preguntas.

## ANEXO 3

### DISEÑO DE INTERVENCIÓN EDUCATIVA

La estrategia de intervención consiste en el accionar encaminado a retribuir las necesidades educativas de los pacientes. Para la ejecución de este trabajo se utilizó un programa educativo para aplicar conocimientos sobre terapias alternativas para las artropatías en los pacientes.

Dinámica grupal con debate de situación.



- Debate y reflexión.
- Conferencia, juego de conocimientos.

En cada una de las sesiones de trabajo se irán abordando los problemas identificados, luego se procederá a precisar el conocimiento alcanzado por los pacientes.

Tema I: Presentación del programa.

- Sumario: Presentación del proyecto. Aplicación de los cuestionarios.
- Objetivo: Crear un ambiente de confianza, desinhibición, establecer reglas del grupo dentro de los pacientes a capacitar.
- Tipo de actividad: Dinámica de grupo.
- Duración: 50 minutos.
- Recursos: Hojas, lápices y bolígrafos.

Tema II: Generalidades sobre las terapias alternativas.

- Sumario: Generalidades sobre el tema.
- Objetivo: Conceptos, teorías y las principales enfermedades artropáticas en las que se pueden utilizar las terapias alternativas.
- Tipo de actividad: Conferencia
- Duración: 50 minutos.
- Recursos: Computadora, pendrive, lápices, bolígrafos y hojas.

Tema III: Ventajas de la utilización de las terapias alternativas.

- Sumario: Ventajas de las terapias alternativas.
- Objetivo: Lograr que los pacientes conozcan las ventajas de la medicina alternativa.
- Tipo de actividad: Clase taller.
- Duración: 50 minutos.
- Recursos: Computadora, pendrive, hojas, lápices, bolígrafos.

Tema IV: Modalidades de las terapias alternativas.

- Sumario: Modalidades de la medicina alternativa: fitoterapia, acupuntura, digitopuntura, moxibustión, etc.
- Objetivo: Dar a conocer las diferentes modalidades que se pueden utilizar como terapia alternativa para el tratamiento de las artropatías.
- Tipo de actividad: Clase teórico-práctica.
- Duración: 50 minutos.
- Recursos: Computadora, pendrive, lápices, bolígrafos y hojas

Tema V: Cierre y evaluación.

- Sumario: Reafirmación del contenido. Aplicación del cuestionario.
- Objetivo: Reafirmar los conocimientos adquiridos sobre las terapias alternativas.
- Tipo de actividad: Clase teórico-práctica.
- Duración: 50 minutos.
- Recursos: Hojas, lápices.

Frecuencia: A las 2 semanas de finalizada la intervención educativa.