MedCrave
Step into the World of Research
International Journal of Complementary & Alternative Medicine

Case Series

Open Access
CrossMark

Basic Body Awareness Therapy in women with chronic pelvic pain associated with endometriosis: case series

Abstract

Background and purpose: Endometriosis is one of the main causes of Chronic Pelvic Pain (CPP) in women. While conventional tools exist to address the disease, there is evidence of the need for psychotherapeutic and interdisciplinary approaches that comprehensively treat and support patients, considering that their symptoms vary widely and affect not only physical but also mental health. Therefore, the objective of this study is to evaluate the effectiveness of Basic Body Awareness Therapy (BBAT) in women with chronic pelvic pain associated with endometriosis, aiming to provide them with a comprehensive approach to their symptoms based on body awareness, breathing, and balance.

Materials and methods: A descriptive study, a case series type, was conducted involving 8 women diagnosed with endometriosis with a duration ranging from 4 to 10 years and pelvic pain symptoms ranging from 2 to 5 years. The intervention consisted of twelve physiotherapy sessions based on Basic Body Awareness Therapy (BBAT), with a frequency of two sessions per week and a duration of two hours each.

Results: The obtained data included both qualitative and quantitative information, among which it stands out that the patients decreased their average score on the Body Awareness Scale – Interview (BAS-I) by 70.69%. Additionally, all movements assessed with the Body Awareness Rating Scale – Movement Quality and Experiences (BARS-MQE) showed improvements ranging from 6.0% to 13.21%. This demonstrates an increase in body and movement awareness, particularly in the ability to identify and differentiate the location and type of pain, enhancements in physical capacity, reduction in feelings of fear, guilt, and anger, and symptom control related to depression and anxiety.

Conclusion: BBAT is a useful and safe tool that can be beneficial for patients with endometriosis and CPP. It is crucial that the methodology be adapted to the specific needs of the population and culture, and that treatments be longer in terms of time and cycles to achieve lasting gains.

Keywords: Basic Body Awareness Therapy, chronic pelvic pain, endometriosis, pain management, awareness, movement awareness, physiotherapy

Volume 17 Issue 2 - 2024

Paula Andrea González-Barrera
Physiotherapy, Universidad del Rosario, School of Medicine and Health Sciences, Colombia

Correspondence: Paula A González B, Bogota, Universidad del Rosario, School of Medicine and Health Sciences, Colombia, Tel +57 3212044171, Email paugonza95@gmail.com

Received: February 16, 2024 | **Published:** March 08, 2024

Abbreviations: BBAT, Basic Body Awareness Therapy; CPP, Chronic Pelvic Pain; CNS, Central Nervous System; WHO, World Health Organization; ASOCOEN, Asociación Colombiana de Endometriosis e Infertilidad; BARS- MQE, Body Awareness Rating Scale – Movement Quality And Experiences; BAS-I , Body Awareness Scale – Interview

Introduction

Endometriosis is a disorder in which there is abnormal growth of endometrial tissue outside the uterine cavity,[1] causing a chronic inflammatory reaction that can lead to the formation of scar tissue (adhesions, fibrosis) within the pelvis and in other areas of the body. As a result, intense pain can occur with or without menstruation and for long periods, along with fatigue, depression, and anxiety.[2] According to the World Health Organization (WHO), endometriosis is a chronic disease that affects 10% of women and girls of reproductive age worldwide and is considered the most common cause of female chronic pelvic pain (CPP).

According to Juan Diego Villegas and his team, chronic pelvic pain is defined as "pain present for more than 3 months, localized in the anatomical area of the pelvis, the anterior abdominal wall below the navel, the perineum, the genital area, the lumbosacral region, or the hip."[3] Studies have shown that there is a vicious circle where chronic pelvic pain produces psychological disorders (anxiety and depression) that increase pelvic pain, and this increase, in turn, worsens the symptoms of the psychological disorder.[4] Similarly, it is known that levels of anxiety and depression are higher in patients with some pathology associated with chronic pain,[5] a recurrent predisposition in patients diagnosed with endometriosis.

To this day, there are various medical treatments for managing endometriosis; however, it often recurs, and pain management remains a significant challenge as it is not always effective. Research has shown that these patients experience hypersensitivity in the central nervous system (CNS) due to the inflammation mechanisms triggered by endometriosis, causing normal bodily functions to be perceived as painful.[6] Additionally, they may feel and interpret pains and other sensations more intensely in different parts of the body that are not directly related to the initial endometriosis. As a solution, patients develop compensatory and dysfunctional movement strategies that further exacerbate their discomfort.[7]

In line with the above, women with endometriosis and chronic pelvic pain experience consistent physical and mental exhaustion,[8] which is reflected in feelings of insecurity, frustration, lack of understanding, and social and occupational isolation. These effects have repercussions on their quality of life and well-being and result in social, economic, and public health consequences. At the same time, it challenges women and their environments to navigate a chronic illness that can be highly disabling when not diagnosed early or

managed comprehensively.[9]

While conventional tools exist to address the disease, it is evident that psychotherapeutic and interdisciplinary approaches are needed to comprehensively treat and support patients.[10] Similarly, women need to develop coping mechanisms and adaptation strategies that promote their physical, mental, and emotional well-being and allow them to navigate the illness as effectively as possible.8 For this reason, it is necessary to provide them with comprehensive tools that address all dimensions and enable them to be present in their bodies, understanding and responding to their own needs.

There are a variety of body awareness strategies that treat individuals suffering from multiple health problems associated with long-term musculoskeletal disorders, chronic pain, psychosomatic disturbances, and mental health disorders.[11–13] From the field of physiotherapy, focusing on movement as its object of study and its specialization in mental health, the Basic Body Awareness Therapy (BBAT) methodology emerges. BBAT guides patients to find resources to maintain functional movement through their own body awareness and quality movement, thereby promoting physical, mental, and relational processes affected in such pathologies. This premise underlies the development of this research.

Basic Body Awareness Therapy (BBAT) was created by Nordic physiotherapists in the mid-20th century. It is a therapeutic strategy that aims to improve movement quality through balance, breathing, and awareness, with the goal of optimizing the relationship between the body and mind.[14] It is based on the loss of contact of the individual with their physical body, physiological and mental processes, and the external environment and its social relationships,[15] leading to a distorted perception of reality. Sessions are conducted individually and in groups, and being a comprehensive strategy, it requires an initial analysis of the current state and the specific needs of the patient and/or group.

Today, BBAT has a wealth of scientific research supporting its effectiveness in various disorders and health conditions in European countries.[13,16– 20] In recent years, significant efforts have been made to expand its reach to other continents and countries worldwide, especially in Latin America, where there has been a recurring need for comprehensive methodologies that address the human being from a bodily perspective and serve as a useful tool in processes that, in many cases, have not made significant progress with other conventional treatments.[21]

Materials and methods

Descriptive study, case series type, involving 8 women diagnosed with endometriosis and experiencing pain for more than 3 months. The treatment was conducted by a physiotherapist trained in BBAT, and participants were informed about the requirements for the process and the necessary commitment from the outset. Emphasis was also placed on daily practice and at-home exercises.

In the first and last sessions (individual sessions), the health status of each patient was assessed through the following tests:

1. **Body Awareness Rating Scale – Movement Quality and Experiences (BARS-MQE):** A test composed of 12 movements that allow evaluation of the patient's movement quality in two parts. Each item provides quantitative and qualitative data.

   a. Part 1. Quantitative: Movement is observed and evaluated. The most healthy and functional movement is scored based on how the movement is performed in relation to space, time, and energy. It is scored on a scale from 1 to 7, where 1 is the most pathological and disharmonious, 7 is the healthiest and most harmonious, and 4 is the midpoint of the scale where centering, balance, breathing, and awareness exist.16, 22 Additionally, it provides a range from the biomechanical perspective (movement 1 to 3) to the physiological perspective (movement 3 to 5) and from there to the psychological perspective.14

   b. Part 2. Qualitative: After completing the movement, the patient is invited to reflect on their movement awareness, asking them "How was this movement for you?" All responses are noted.22

2. **Body Awareness Scale – Interview (BAS-I):** Developed by physiotherapist Gertrud Roxendal in 1997, it is a combination of items from the Comprehensive Psychopathological Rating Scale (CPRS), created by Asberg,23 and bodily items included by Roxendal. It is a structured interview consisting of 20 items divided into psychological, physiological, and bodily attitude symptoms. Each item is rated on a scale of 4, where 0 indicates absence of the symptom, and 3 represents the highest severity of the symptom.16, 24 A lower score in the post-evaluation compared to the pre-evaluation indicates an improvement in the individual's body awareness and symptom management. These tests yielded qualitative and quantitative data, allowing for a comprehensive analysis of the changes perceived and not perceived by the patients, which will be presented and analyzed in the following section (Results).

Participants

Women affiliated with the Colombian Association of Endometriosis and Infertility (ASOCOEN) were recruited via email and social media. Inclusion criteria were: being of legal age, diagnosed with endometriosis, experiencing pelvic pain for more than 3 months, willing to participate in a physiotherapy program in mental health, living in Bogotá or its nearby surroundings, and being available on Tuesdays and Saturdays from 10:00 am to 12:00 pm.

With the interested women who met the inclusion criteria, an informative talk was conducted to explain the process. A total of ten (10) women enrolled, of which eight (8) decided to start the process and two (2) declined, leaving a total of 8 Colombian women aged between 36 and 46 years, diagnosed with endometriosis for 4 to 10 years, and experiencing pain symptoms for 2 to 5 years. Additionally, it was observed that 4 out of the 8 women were diagnosed with anxiety and/or depression, and all reported pain in the pelvis and/or abdomen, lower back, and legs (Table 1).

Group therapy

The intervention consisted of ten (10) group BBAT sessions and two (2) individual sessions. In total, twelve (12) sessions were conducted between March and April 2023, with a frequency of two sessions per week and a duration of 120 minutes each.

The sessions were divided into three parts. In the first part, greetings were exchanged, and reflections on the changes perceived after therapy were discussed. In the second part, direct BBAT movements were performed, including body scanning, stretching, spinal mobilizations, breathing exercises, body-ground and chair relations, midline work, centralization, weight transfer, and movement fluidity in supine, seated, and standing positions (Figure 1). Finally, feedback on the sessions was provided, along with some recommendations, and the session concluded with a farewell.

Table 1 Patient data

Patient	Age	Ocupation	Diagnosis	Pain?	Where?
Patient 1	44	Independent	Endometriosis, myomatosis	Yes	Stomach, pelvis.
Patient2	46	Independent	Endometriosis, anxiety	Yes	Stomach, buttocks, head.
Patient 3	39	Biomedical Engineer	Endometriosis	Yes	Pelvis, legs.
Patient 4	37	Independent	Endometriosis, myomatosis, anxiety, severe depression	Yes	Plevic pain.
Patient 5	43	Lawyer	Endometriosis, anxiety	Yes	Stomach, pelvis, legs.
Patient 6	44	Home – Housewife	Endometriosis, anxiety, depression	Yes	Stomach, pelvis, legs.
Patient 7	36	Social worker	Endometriosis, adenomyosis Sacroiliitis, lumbar disc disease	Yes	Throughout the body.
Patient 8	36	Certified Public Accountant	Deep endometriosis, diffuse adenomyosis, arterial hypertension.	Yes	Stomach, back, pelvis.

Figure 1 Supine, seated, and standing positions.

Ethics

Written informed consent was obtained from each patient, informing them of the purpose of the process, the tests to be performed in the first and last sessions, and the implications of participating in it. Additionally, the use of anonymity through the noun "patient (x)" was explained to them, with the aim of safeguarding and respecting their process and personal data. Similarly, a written informed consent for the use of image and video rights for academic purposes was signed.

Results

The sessions were structured so that each group member could participate individually in the movements while also sharing and reflecting with the other participants. Overall, all participants showed and perceived improvement in their body awareness, movement quality, and pain perception. This was evidenced both quantitatively and qualitatively in the tests applied and analyzed below: BAS-I and BARS-MQE.

Quantitative results

After completing the group sessions, all eight patients showed a significant decrease in their total score on the Body Awareness Scale – Interview (Figure 2), with an overall average of 70.69% and a range between 57.14% and 87.80%. Thus, relevant changes were observed in the three psychological, physiological, and bodily attitude items, particularly in the following sub-items:

- **Psychological items:** feelings of anxiety, concerns about trivial matters, low mood, and difficulty with concentration.
- **Physiological items:** hypochondriacal ideation, muscle tension, aches and pains, and sleep disturbances.
- **Bodily attitude items:** body description.

Similarly, changes were observed in the BARS-MQE scale considering the pre- and post-evaluation. In this case, changes were noted in relation to participants' body awareness in various postures, as well as their movement quality expressed as improved perception, sensitivity, and awareness of their own body and movement, alongside free and rhythmic breathing, increased postural stability, and the ability to maintain an upright position and listen to the changes, signals, and limits of their own body. Below is the group average per movement (Figure 3), where greater changes were evident in Movement M.1, with an average of 13.21%, and lesser change in Movement M.7 with 6.0%

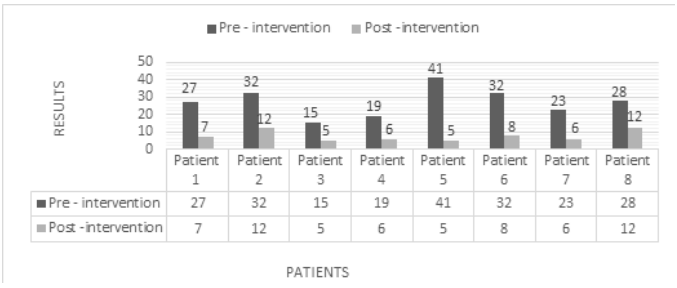

Figure 2 Pre- and post-intervention BAS-I results.

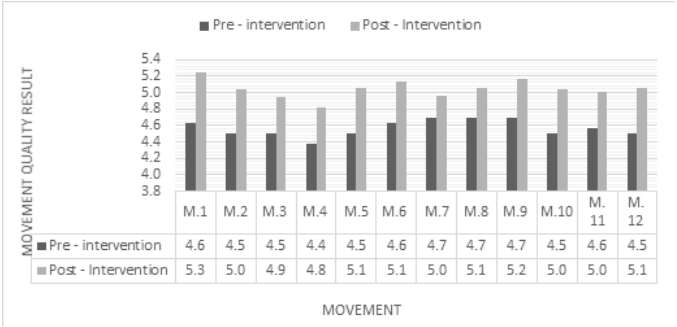

Figure 3 Group average BARS per movement.

Qualitative results

The main qualitative findings obtained from the Body Awareness Rating Scale – Movement Quality and Experiences (BARS-MQE) will be presented through four categories: a) Physical perceptions, b) Characteristics of body awareness, c) Self-awareness, categories taken from the research "Meeting current needs in mental health physical therapy: a qualitative study of students' experiences" by Cristina Bravo and her team25; and d) Change in attitude towards oneself, the environment, and pain, also with quotes alluding to the reflections expressed by the patients, representing each category.

The first three categories refer to the quality of movement experiences perceived by the patients during the sessions, while the last category describes changes in attitude towards themselves, their environment, and symptoms of pain.

1. **Physical perceptions:** alludes to the biomechanical and physiological perspectives experienced in movement, including pain, balance, bodily perceptions, coordination, elasticity, trajectory, and movement form (spatial and temporal aspects of human movement).
    a. **Pain:** "pain in the pelvis and abdomen" (patient 3), "I felt pain in the neck and lower back" (patient 4), "the pain lingers over time", "I feel a lot of pain all over my body" (patient 8), "pain in the ankles due to poor posture" (patient 6).
    b. **Bodily perceptions:** "I felt that I released the jaw tension" (patient 1), "my belly is a balloon that expands" (patient 2), "I connected with myself regarding present sensations" (patient 3), "the heart beats strongly and the breathing accelerates", "I can follow the midline throughout the movement", "my intestine moves" (patient 8), "when stretching in the star position I felt that I illuminated the space more and the light that came out was green", "I feel anchored to the floor, the breathing flows with me and my movements" (patient 5).
    c. **Balance:** "I felt that I don't have the same balance walking to the right side as to the left" (patient 5), "I have better balance moving to the left side than the right" (patient 1), "I remember that the first day I could hardly move because I felt very dizzy, and look today I can move without fear of falling and without feeling that dizziness or vertigo that overwhelmed me" (patient 5).
    d. **Coordination:** "coordinating the cross movement, left arm with right leg and vice versa, is complex and even more so when the speed increases" (patient 3). "I have to concentrate a lot to achieve the movement I want and not get lost" (patient 8).
    e. **Elasticity:** "before, I felt a lot of stiffness in my hands, it was hard for me to open them, now I feel my arms loose and the movement very fluid" (patient 1), "I feel more relaxed, calm, and like I grew haha" (patient 2), "I feel that the left arm stretches much more than the right" (patient 8).
    f. **Trajectory and shape:** "I perceive that every day I can stretch more and more, and the tensions I felt before are decreasing" (patient 1), "I felt the movements more fluid and larger" (patient 5).
2. **Characteristics of body awareness:** refers to the experience of body awareness in relation to being present in the body, emotional factors, and concentration.
    a. **Emotions in the body**: "I felt that my body releases and rests" (patient 8), "I perceive many emotions in my chest, sometimes I feel like I'm suffocating, but I breathe and concentrate on doing the exercises and they pass" (patient 5), "I perceive many pleasant sensations when stretching completely" (patient 2), "I am much more aware of the presence of emotions in my physical body" (patient 4), "on a scale of 1 to 10, I came with depression at 8 and I'm leaving with a 3, anxiety at 9 and now I'm at a 4" (patient 6).
    b. **Embodied presence:** "I perceived parts of my body that I didn't before" (patient 4), "my feet are like a suction cup in relation to the ground" (patient 2), "I felt a little overwhelmed when I realized that I wasn't following the rhythm of the sound "M" from the other participants" (patient 4).
    c. **Concentration:** "I find it too difficult to concentrate when we say the letter "M", it's like my sound doesn't connect with the group's" (patient 4), "I find it hard to stop talking and expressing" (patient 5), "I perceive that by concentrating on the breath, the movement becomes more fluid" (patient 2).
3. **Self-awareness:** refers to the awareness that patients have in relation to the present person and unity in movement.
    a. **Consciousness:** "I really wasn't present in my body, I wasn't aware of how I move and the postures I carry every day, what a relief to feel myself" (patient 8), "I am even more aware of taking care of my physical body, but also the mental one" (patient 6), "I felt how the breath accompanied the movement" (patient 7), "now I am aware of parts of the body that I had forgotten" (patient 3), "I was disconnected from the sensitive part of feeling my physical body, not from the emotion" (patient 7).
    b. **Awareness of time:** "while I'm in therapy, time stops, it's a space for me outside of everyday life" (patient 6).
    c. **Self-relationship:** "many times I felt like I didn't connect with the world and even less with myself, today I feel like I'm me all the time... I feel different being in the same body" (patient 5), "when I entered through that door and connected with what was happening here in therapy, the world disappeared and time stopped" (patient 2), "it was very hard for me to leave home to come here, I even doubted it, but once I took the step for my well-being everything flowed" (patient 4), ... "I stopped being a robot, I learned not to burden myself and to feel vulnerable" (patient 7).
4. **Attitude change towards oneself, the environment, and pain:** refers to the perceived changes in attitude towards themselves, the environment in which they live, and their pain. This includes perspectives on their diagnosis and hope regarding it.
    a. **Attitude towards oneself:** "BBAT made me value my body much more today, to take care of it like the most sacred temple I have" (patient 7), "today I thank myself for challenging myself to be here, to want to keep learning and improving my well-being, leaving home to come to therapy has been worth it, it's not a sacrifice" (patient 4), "it awakened a new ... patient 3 ... I had silenced a lot before" (patient 3).
    b. **Attitude towards their environment:** "Before starting the process, I felt a lot of frustration because people didn't understand the physical pain and discomfort I have to deal with daily. Today, I understand that only I can feel it, and it depends on me to set limits and take care of myself" (patient 8). "I felt very insecure talking to people, and thanks to sharing and reflections with my peers, today I feel I can speak up and

trust more" (patient 1), "Empathy was key in my process, thank you for helping me believe in myself, in my body, and in those around me" (patient 5), "These therapies have truly been an opportunity to meet people who feel like me, frustration and anger at society's lack of understanding of our condition. Empathy has made this a rewarding experience" (patient 2). "Without fear of success" (patient 3). "I understood that each of us feels differently but that we are much more united than a diagnosis" (patient 3), "It helped me realize that I am not alone in this journey" (patient 6).

c. **Attitude towards pain:** "I have learned that pain is not a limitation to do what I want. Thank you for reminding me of the importance of moving consciously" (patient 1). "The pain has increased so far, but I feel I can identify exactly where it hurts and manage it with this tool" (patient 4). "I wasn't aware that the stress of my job was affecting my pre-existing pain with the diagnosis. Today, I know I have tools like breathing and movement to manage it" (patient 8). "The pain has decreased a lot; now it's only located in my abdomen" (patient 4). "When I am aware of my movements, the pain and discomfort decrease, and I am also able to release and let go" (patient 5), "I feel like I broke barriers, lost fears by feeling my body through the pain, I grew a lot by facing the pain, by feeling where it was specifically and not generalized" (patient 7).

The qualitative and quantitative data refer to the success of the therapy in the process with the patients, as they demonstrate a significant improvement in the four dimensions: physical, physiological, psychological, and existential/relational. Likewise, they are reflected in the positive comments towards the therapy process and the relationship with their bodies and environment. At the same time, there is a change in attitude towards the diagnosis and how to face it through tools like BBAT, despite directly and indirectly associating the methodology with other techniques such as yoga and Chi Kung.

Discussion

Through the conducted study, the aim is to determine the effectiveness of BBAT in women experiencing chronic pelvic pain associated with a diagnosis of endometriosis. The goal is to provide these women with a physiotherapeutic strategy that addresses their symptoms comprehensively and from their own resources. This is crucial considering the vicious cycle wherein chronic pelvic pain eventually leads to a psychological disorder that exacerbates the pain, further worsening the symptoms of the psychological disorder.[4]

One of the most relevant findings is the increased perception of pain in relation to the ability to identify and differentiate the location and type of pain. This translates into an enhanced awareness of their body and movement, as also concluded in the study "Pain requires processing - How the experience of pain is influenced by Basic Body Awareness Therapy in patients with long-term pain." They expressed that BBAT is useful for individuals to process their pain because they confront it rather than ignore it. This is because they perform movements without any imposed standards; instead, they execute them as best as possible using their own resources salutogenesis.[26, 27]

Simultaneously, other patients reported a decrease in pain in the sense that they perceived greater control over it, as well as a change in attitude and approach towards it. This finding aligns with a previous study in physiotherapy with women experiencing chronic pelvic pain, where they expressed that "the pain itself is no longer the main problem, but rather the behavioral consequences generated by the pain." 21 This indicates that managing symptoms related to central sensitization, which many patients experience, will yield better results.[3] Therefore, when these symptoms are identified and managed properly, patients gain confidence in their bodies and seek strategies to address their symptoms globally rather than separately. This may even improve their body image through the postural model of the body, perceptions, attitudes, emotions, and relationships with their own body and environment. [28]

The participants expressed a heightened awareness of their bodies and what occurs around each position and conscious movement. This improvement is reflected in their physical abilities, expressed biomechanically and physiologically as enhanced elasticity, form, energy, and freedom of movement. They also experienced increased balance, coordination, and endurance, as well as mental capacities related to feelings of calmness, relaxation, or heaviness.[29] This suggests that engaging in this practice for a short period, as Cristina Bravo found in her study of BBAT with students,[16] enables individuals to connect with their own bodies. However, achieving a complete learning process for quality movement requires many more interventions over time because it is necessary to establish the ability to perform conscious movements voluntarily.[30]

Similarly, it was observed that symptoms related to depression and anxiety were managed as individuals became aware of them and recognized their own resources for handling them, such as free and conscious breathing. This technique, as James Nestor describes in his book "Breath: The New Science of a Lost Art,"[31]"allows for the expansion of the lungs, the development of the diaphragm, oxygenating the body, penetrating the autonomic nervous system, stimulating the immune response, and readjusting the chemical receptors in the brain". This brings about significant changes in the psychological sphere, manifested in the intervention as pain and muscle tension management, changes in perception of emotions and sensations within the body, enthusiasm for therapy, and an increase in hope and coping with the illness.[32,33]

In terms of the psychosocial and existential dimension, the patients referred to empathy and group cohesion as the tools that allowed them to gain confidence in the therapy, their peers, and the process itself, indispensable variables for the development of other therapeutic factors.[34] These factors impact feelings of acceptance and respect for each other's process, mutual assistance, and support. [35] This led to a decrease in feelings of fear, guilt, and anger, and broke down feelings of isolation, actions that, as Monica Mattsson and colleagues suggest, 28 open the door to discussing hidden issues and experiences that have physical and psychological impacts. Addressing these issues contributes to the reduction of symptoms, including chronic pain and those related to mental disorders.[20]

Similarly, the participants emphasized the importance of having tools like BBAT accessible to everyone. To achieve this, it is crucial to continue fostering comprehensive spaces and policies grounded in prevention and health promotion,[36] as well as timely diagnosis and treatment that focus on a person-centered approach to well-being and a biopsychosocial model of care necessary for these chronic conditions.[37] It's not just about chronic pelvic pain, adhesions, and physical discomfort, but also about the mental health problems and disorders that develop and require accurate diagnosis and treatment. This underscores the need for guarantees in respecting patients' rights and their quality of life, as well as a broader and more complex conceptualization of the individual and their disorder.[38]

It is essential to emphasize the need to evaluate both the intrinsic and extrinsic factors of the target population in order to design

viable and adaptable sessions that address current needs and those that arise during the interventions. Similarly, recognizing the importance of a co-therapist or the need to complement the treatments being carried out by the patients, for their well-being as guided by Sophia Vinogradov and Irvin D. Yalom in their Brief Group Psychotherapy Guide.[34] Additionally, acknowledging the significance of multidisciplinary work is crucial. It may happen that during our session, other situations come to light that require support from other areas outside our expertise but are important in the patient's process, such as gynecology, psychology, psychiatry, social work, nutritionists, among others.[39]

Therefore, after the experience with the patients, the implementation of BBAT therapy, and the analysis of the quantitative and qualitative results obtained, it is clear that there will always be external factors that, in one way or another, as therapists, we cannot control and directly or indirectly affect the process. For example, the limited resources available to patients to undergo comprehensive, multidisciplinary, and multimodal treatment,[3] which are required on a large scale for these chronic diseases. Similarly, the inefficiency of the healthcare system regarding guaranteeing the fulfillment of patients' rights also plays a significant role.

Therefore, the work of physiotherapists goes far beyond just an intervention, as processes like these speak to the need to continue creating strategies that help women understand their illness and accompany them on their path of adaptation, acceptance, and treatment.8 This opens the doors to a world of possibilities to address, where the current needs of patients serve as the basis for building national and international projects and policies that respond to them. Additionally, conducting research and initiatives to evaluate and generate integrative, innovative, and more efficient approaches is crucial.

A larger sample size is required to uncover more significant relationships in the data. Additionally, a method or software for a more in-depth analysis of the qualitative and quantitative data is needed in terms of sensitivity, accuracy, and bias. Particularly, addressing biases related to qualitative data obtained through applied tests is crucial. Responses may lean towards general agreement or disagreement with peers rather than reflecting the individual's own true and genuine opinion. This potential bias needs careful consideration, as it can directly impact the study results.

Conclusion

The results of the tests demonstrate changes in learning, body awareness, and movement quality of the patients, attributed to the rigorous work in each of the sessions, the monitoring and control of the execution of each movement, the adaptation of the methodology to socio-cultural factors, and the specific needs of the patients. These factors allowed for the enhancement of both individual and group processes of the patients, leading to successful outcomes. Thus, the mental health program focused on BBAT has had an impact on the lives of patients requiring physiotherapeutic support to improve their movement quality through learning from their own experiences and bodily resources. However, it is crucial for the methodology to adapt to the specific needs of the population and culture.

It is considered necessary for treatments to be longer in terms of duration and cycles to achieve lasting gains. Specifically for these patients, working on body awareness may not reduce the adhesions caused by endometriosis itself, but it does contribute to managing other symptoms associated with it, such as chronic pelvic pain and its direct relationship with mental disorders. Moreover, it reinforces self-confidence and eradicates fear of movement and feelings of isolation. Similarly, it allows patients to better perceive and understand their bodies, a fundamental strategy for choosing better treatments and tools according to their individual needs.

Acknowledgments

I would like to express my gratitude to each of the participants in the study and to the Continuing Education program, the International Certification in Basic Body Awareness Therapy (BBAT) from the Escuela Colombiana de Rehabilitación, especially to Instructor Daniel Catalán Matamoros for his guidance and support throughout this process.

Conflicts of interest

The author reports no conflict of interest.

Funding

None.

References

1. Wedel Herrera K. Chrinic pelvic pain. *Revista Médica Sinergia*. 2018;3(5).
2. Organización Mundial de la Salud. Endometriosis.
3. Villegas Echeverri D, López Jaramillo JD, Herrera-Betancourt AL, López Isanoa JD. Chronic pelvic pain: Beyond endometriosis. *Revista Peruana de Ginecología y Obstetricia*. 2016; 62(1): p. 61-68.
4. Rivera Gutierrez A, Ugalde Gonzalez F. Endometriosis: A look behind the stigma. *Revista Ciencia y Salud Integrando Conocimientos*. 2021;5(4):53–62.
5. Banks SM, Kerns RD. Explaining high rates of depression in chronic pain: A diathesis-stress framework. *Psycholog Bullet.* 1996;119(1):95–110.
6. Olsen L, Strand L, Skjaerven H, et al. Patient education and basic body awareness therapy in hip osteoarthritis - a qualitative study of patients' movement learning experiences. *Disabil Rehabil*. 2017;39(16):1631–1638.
7. Mediavilla D. Endometriosis: science begins to reveal the mystery of a disease that affects millions of women.
8. Gulias SS. Psychotherapeutic approach to endometriosis in women of childbearing age. Tesis. Buenos Aires: Universidad de Belgrano - Facultad de Humanidades - Licenciatura en Psicología; 2023.
9. Zondervan KT, Becker M, Koga , et al. Endometriosis. *Nature Reviews Disease Primers*. 2018;4:1–9.
10. Artacho Cordón F, Lorenzo Hernando E, Pereira Sánchez A, et al. Current concepts in pain and endometriosis: diagnosis and management of chronic pelvic pain. *Clínica e Investigación en Ginecología y Obstetricia*. 2023;50(2).
11. Bravo C, Skjaerven H, Espart A, et al. Basic body awareness therapy in patients suffering from fibromyalgia: A randomized clinical trial. *Physiother Theory Pract*. 2019;35(10):919–929.
12. Bravo C, Skjaerven LH, Guitard Sein-Echaluce. Effectiveness of movement and body awareness therapies in patients with fibromyalgia: a systematic review and meta-analysis. *Eur J Physic Rehabilit Med*. 2019;55(5):646–657.
13. Catalan-Matamoros D, Gomez Conesa A. Conclusions and recommendations from the 6th International Conference of Physiotherapy in Psychiatry and Mental Health (ICPPMH*). Fisioterapia*. 2016;38(5):219–223.

14. Catalán Matamoros D. Physiotherapy in mental health: historical background. *Revista Colombiana de Rehabilitación*. 2019;18(2):162–180.

15. Skjaerven LH, Kristoffersen K, Gard G. How can movement quality be promoted in clinical practice? A phenomenological study of physical therapist experts. *Physic Ther*. 2010;90(10):1479–1492.

16. Bravo C, Skjaerven LH, Guitard Sein-Echaluce , et al. Experiences from group basic body awareness therapy by patients suffering from fibromyalgia: A qualitative study. *Physiother Theory Pract.* 2020;36(8):933–945.

17. Mannerkorpi K, Gard G. Physiotherapy group treatment for patients with fibromyalgia--an embodied learning process. *Disabil Rehabil*. 2003; 25(24): p. 1372-1380.

18. Leirvåg H, Pedersen G, Karterud S. Long-term continuation treatment after short-term day treatment of female patients with severe personality disorders: Body awareness group therapy versus psychodynamic group therapy. *Nord J Psychiatry*. 2010;64(2):115–122.

19. Gard G. Body awareness therapy for patients with fibromyalgia and chronic pain. *Disabil Rehabil*. 2005;27(12):725–728.

20. Dragesund T, Råheim M. Norwegian psychomotor physiotherapy and patients with chronic pain: patients' perspective on body awareness. *Physiother Theory Pract*. 2008;24(4):243–254.

21. Mattsson M, Wickman M, Dahlgrend L, et al. Physiotherapy as empowerment - treating women with chronic pelvic pain. *Advances in Physiotherapy*. 2000;2(3):125–143.

22. Skjaerven H, Gard G, Sundal MA, et al. Reliability and validity of the body awareness rating scale (BARS), an observational assessment tool of movement quality. *Eur J Physiother.* 2015;17(1):19–28.

23. Montgomery S, Asberg M, Träskman L, et al. Cross cultural studies on the use of CPRS in English and Swedish depressed patients. *Acta Psychiatrica Scandinavica*. 1978;271:33–37.

24. Gyllensten A. Terapia Básica de Conciencia Corporal: evaluación, tratamiento e interacción. Tesis Doctoral; 2001.

25. Bravo C, Skjaerven LH, Guitard L, et al. Meeting current needs in mental health physical therapy: a qualitative study of students' experiences. *Journal of Mental Health Training, Education and Practice.* 2022;17(5):429–442.

26. Lundwall A, Ryman A, Bjarnegård Sellius A, et al. Pain requires processing - How the experience of pain is influenced by Basic Body Awareness Therapy in patients with long-term pain. *J Bodyw Mov Ther*. 2019;23(4):701–707.

27. Antonovsky A. The salutogenic model as a theory to guide health promotion. *Health Promotion International.* 1996;11(1):11–18.

28. Mattsson M, Wikman M, Dahlgren L, et al. Body awareness therapy with sexually abused women: Part 1: Description of a treatment modality. *J Bodyw Mov Ther*. 1997;1(5):280–288.

29. Malmgren-Olsson EB, Armelius BA, Armelius K. A comparative outcome study of body awareness therapy, feldenkrais, and conventional physiotherapy for patients with nonspecific musculoskeletal disorders: changes in psychological symptoms, pain, and self-image. *Physiother Theory Pract*. 2001;17(2).

30. Hedlund , Gyllensten AL, Waldegren T, et al. Assessing movement quality in persons with severe mental illness - Reliability and validity of the Body Awareness Scale Movement Quality and Experience. Physiother Theory Pract. 2016;32(4):296–306.

31. Nestor J. Respira: La Nueva Ciencia de un Arte Olvidado Barcelona: Editorial Planeta; 2021.

32. Skatteboe UB, Friis S, Hope MK, et al. Body Awareness Group therapy for patients with personality disorders: 1. Description of the therapeutic method*. Psychother Psychosom*. 1989;51(1):11–17.

33. Sertel M, Tarsuslu T, Yümin EY. The effect of body awareness therapy on pain and body image in patients with migraine and tension type headache. *Body, Movement and Dance in Psychotherapy*. 2017;12(4):252–268.

34. Vinogradov S, Yalom D. Guía breve de psicoterapia de grupo Barcelona: Paidós Ibérica; 1996.

35. Rodríguez-Zafra M, García Galeán L. Group cohesion therapeutic factor and requirement for creating a therapy group. *Revista de Psicoterapia*. 2022;33(121):1–84.

36. Federación Mundial de la Salud Mental. Dia Mundial de la Salud Mental 2005.

37. Carratalá Marco A, Mata Roig G. Person-centered planning. Experience of the San Francisco de Borja foundation for people with intellectual disabilities. Madrid; 2012.

38. Lemos Hoyos M, Restrepo Ochoa DA, Richard Londoño C. Revisión crítica del concepto "psicosomático" a la luz del dualismo mente-cuerpo. Pensamiento Psicológico. 2008:4(10):137–147.

39. Servera Simó C. Effectiveness of the physiotherapy approach in improving the quality of life of women with endometriosis. Faculty of Nursing and Physiotherapy. *Physiotherapy (GFT2).* 2018.