

Investigating the Therapeutic Potential of a New Aspect on Bailotherapy

Abstract

In the realm of mental health, depression stands as a pervasive and debilitating condition affecting millions worldwide, with women being disproportionately impacted. Despite advancements in treatment modalities, many individuals continue to grapple with the debilitating effects of depression, underscoring the need for innovative and holistic approaches to supplement conventional therapies. In recent years, the therapeutic potential of dance has garnered increasing attention as a promising intervention for enhancing mental well-being. Particularly within the context of women's health, dance offers a multifaceted approach that intertwines physical activity, artistic expression, and social engagement, fostering a unique environment conducive to healing and self-discovery.

Keywords

Dance • Therapy • Bailotherapy • Depression • Women • Caribbean beat©

Rhythms of Resilience: Exploring Dance as a Therapeutic Pathway for Women's Mental Health Beyond 40

This exploration aims to uncover the intricate connection between dance and women's mental health, particularly focusing on its ability to alleviate symptoms of depression. By investigating the physiological, psychological, and social mechanisms behind the therapeutic effects of dance, this endeavor seeks to reveal how rhythmic movement positively influences mood regulation, stress management, and overall emotional wellness among women [1]. Additionally, by analyzing empirical evidence from various sources and personal accounts, this endeavor aims to highlight the diverse ways in which dance acts as a

Commentary

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catalyst for empowerment, resilience, and self-expression, providing a transformative route to recovery for individuals grappling with depression [2]. Through a comprehensive synthesis of existing literature and firsthand accounts, this paper aspires to shed light on the transformative potential of dance as a holistic therapeutic modality for women struggling with depression.

In the mosaic of mental health challenges, depression emerges as a significant and often underrecognized burden, particularly among women entering the pivotal phase of life beyond 40, characterized by unique socio-cultural, biological, and psychosocial dynamics, faces a myriad of stressors ranging from familial responsibilities and career transitions to physiological changes and societal expectations. Amidst this intricate tapestry of experiences, the prevalence and impact of depression loom large, casting shadows on the well-being and vitality of countless women traversing this transformative stage of life. Against

the backdrop of shifting roles, evolving identities, and the relentless march of time, women over 40 stands at a crossroads where the interplay of internal and external factors can profoundly influence mental health outcomes. While depression manifests differently across diverse age groups, the nuanced challenges and vulnerabilities faced by women in this demographic demand careful consideration and targeted interventions to mitigate the insidious grip of this debilitating condition [3].

When investigating depression in women aged 40 and older, it is beneficial to analyze the complex interplay of biological, psychological, and socio-environmental factors that affect their mental well-being [4]. Dance therapy, a form of expressive therapy that integrates movement and dance into psychotherapeutic practice, has garnered significant attention in recent years for its potential efficacy in addressing various mental health concerns, including depression [5]. While research into the effectiveness of dance therapy for depression spans across diverse demographics, including children, adolescents, and adults of both genders, there is a growing interest in understanding its impact, particularly among older women [6,7]. Depression is affecting individuals of all ages, backgrounds, and genders. However, older women are often at a higher risk of experiencing depression due to factors such as social isolation, loss of loved ones, chronic health conditions, and societal pressures related to aging [8].

Traditional treatment approaches for depression typically involve medication, psychotherapy, or a combination of both. While these interventions can be effective for many individuals, some may seek alternative or complementary therapies to supplement their treatment regimen [9,11]. Dance therapy offers a unique approach to addressing depression by harnessing the power of movement, creativity, and self-expression. Advocates of dance therapy argue that the embodied nature of the practice allows individuals to access and process emotions that may be difficult to verbalize. Through guided movement exercises, improvisation, and choreographed routines, participants have the opportunity to explore and release pent-up feelings of sadness, anxiety, and despair [5]. Several studies have investigated the effectiveness of dance therapy for depression across different age groups

and populations. While findings vary, there is a growing body of evidence suggesting that dance therapy can be a valuable adjunctive treatment for depression, offering benefits beyond traditional therapeutic modalities.

Among older women, in particular, dance therapy may hold promise as a holistic approach to addressing both the physical and psychological aspects of depression [8,9], [11,12]. One study published in the *Journal of the American Geriatrics Society* examined the effects of a twelve-week dance therapy program on depressive symptoms among older women living in assisted living facilities. The participants engaged in weekly dance sessions led by a trained dance therapist, focusing on a combination of structured movement sequences and free-form improvisation. The results indicated a significant reduction in depressive symptoms among the participants, along with improvements in overall mood, self-esteem, and quality of life [13]. Another study, published in the *Journal of Women & Aging*, explored the experiences of older women who participated in a dance therapy group specifically tailored for individuals with depression. Through qualitative interviews and thematic analysis, the researchers found that dance therapy provided a sense of joy, connection, and empowerment for the participants [14].

Many described feeling more alive, confident, and emotionally resilient as a result of their participation in the program. While these studies offer promising insights into the potential benefits of dance therapy for depression among older women, further research is needed to fully understand its mechanisms of action and long-term effects [9]. Additionally, there is a need for larger-scale randomized controlled trials to validate these findings and establish dance therapy as an evidence-based intervention for depression in this population. Beyond its therapeutic benefits, dance therapy also has the potential to address broader societal issues affecting older women, such as ageism, body image concerns, and social isolation. By creating supportive and inclusive environments where women can express themselves freely through movement, dance therapy promotes a sense of belonging, dignity, and vitality in later life.

Dance therapy not only addresses mental health concerns but also offers physical health benefits. Engaging in regular physical activity, such as dancing, can improve cardiovascular health, flexibility, strength, and overall fitness levels. For older women, maintaining physical health is crucial for preserving independence and quality of life [4], [15,16]. Also involves learning movement sequences, coordinating movements with music, and improvising creatively. These activities stimulate cognitive functions such as memory, attention, and executive function, which may be particularly beneficial for older adults in reducing the risk of cognitive decline and dementia. Participating in group dance therapy sessions fosters social connection and a sense of community among older women. Building relationships with peers who share similar. Dance therapy provides a safe and supportive environment for expressing and regulating emotions. Women may find it easier to connect with their feelings and process emotional experiences through movement, as opposed to traditional talk therapy [17,20].

Learning to express emotions in healthy ways can enhance emotional resilience and coping skills experiences can reduce feelings of loneliness and isolation, which are common risk factors for depression in older adults. Engaging in creative and meaningful activities like dance therapy can instill a sense of purpose and meaning in life. For women who may be transitioning into retirement or facing changes in roles and identity, dance therapy offers an opportunity to rediscover passions, talents, and strengths. Dance therapy promotes a positive body image and self-acceptance by focusing on the joy of movement rather than external appearance. Through dance, women can develop a greater sense of body awareness, appreciation, and acceptance, leading to increased self-confidence and self-esteem. Furthermore, dance has cultural and generational significance in many societies, serving as a form of heritage and connection to one's roots. Older women may find meaning and fulfillment in exploring dance forms that resonate with their cultural background, fostering a sense of pride and belonging [21]. As awareness of its benefits continues to grow, dance therapy may become an increasingly accessible and valued resource in the mental health care landscape, offering hope and healing to those in need.

Epidemiology of Depression in Women

Depression is a prevalent mental health disorder affecting individuals worldwide. However, its epidemiology manifests differently across various demographic groups, with women being particularly vulnerable. With epidemiological studies consistently reporting higher prevalence rates compared to men, globally women are approximately twice as likely as men to experience depression during their lifetime. According to the World Health Organization (WHO), depression is the leading cause of disability among women worldwide. The prevalence of depression in women varies across different life stages. Adolescence marks the onset of depression, with girls experiencing higher rates of depressive symptoms compared to boys [2,3]. During adulthood, particularly in the reproductive years, women face unique challenges such as hormonal fluctuations, pregnancy, postpartum period, and menopause, all of which contribute to an increased risk of depression. Socio-cultural factors significantly impact the epidemiology of depression in women. Gender roles, societal expectations, discrimination, and unequal access to resources and opportunities contribute to women's susceptibility to depression. Additionally, experiences of trauma, violence, and abuse further exacerbate their risk of developing depressive disorders.

Hormonal fluctuations, particularly during menstruation, pregnancy, and menopause, can influence mood regulation and increase vulnerability to depression. Genetic predisposition and neurobiological differences between genders also contribute to variations in depression prevalence. Several risk factors contribute to the development of depression in women. These include a personal or family history of mental illness, chronic medical conditions, substance abuse, traumatic life events, interpersonal conflicts, and socioeconomic disadvantages. Additionally, women facing multiple stressors simultaneously are at a heightened risk of experiencing depression [19,22]. Despite the high prevalence of depression in women, numerous barriers prevent them from seeking and accessing adequate mental health care. Stigma, lack of awareness, financial constraints, childcare responsibilities, and cultural norms surrounding mental health contribute to underdiagnosis and undertreatment of depression in women.

Addressing the epidemiology of depression in women requires comprehensive public health interventions that address both individual and systemic factors. These interventions should encompass mental health education, destigmatization efforts, increased access to mental health services, integration of mental health care into primary care settings, and promotion of gender-sensitive policies and programs. Understanding the epidemiology of depression in women is essential for developing effective prevention and intervention strategies. By addressing the multifaceted determinants of depression, including socio-cultural, biological, and environmental factors, it is possible to reduce the burden of depression on women's health and well-being, ultimately fostering a more equitable and supportive society for all [4].

Bailotherapy

The term "bailotherapy" is derived from the original Spanish term "Bailoterapia," which combines "bailo" (meaning "I dance") and "terapia" (meaning "therapy"). It refers to "dance therapy" or "dance fitness therapy." Bailotherapy, has a deep historical lineage intertwined with various cultural and therapeutic traditions. Although the term "bailotherapy" may not have gained widespread recognition until recent times, the practice of using dance and movement for therapeutic purposes spans centuries [24].

The utilization of dance for healing traces back to ancient civilizations. In ancient Greece, dance held a pivotal role in religious ceremonies and healing rituals. Temple dancers, known as "therapeutae," performed intricate movements aimed at inducing trance states and facilitating healing. Similarly, ancient Egyptian depictions highlight dance as a method for physical and spiritual well-being. The formalization of dance movement therapy as a psychotherapeutic modality emerged in the 20th century. Trailblazers such as Marian Chace and Rudolf Laban laid the groundwork for the contemporary practice of integrating movement and dance into therapeutic settings. Chace, a dancer, and Laban, a movement theorist, explored the psychological and emotional dimensions of movement, contributing to the development of dance movement therapy as a distinct discipline [1], [23].

In the mid-20th century, dance therapy gained recognition as a legitimate form of psychotherapy. Figures like Mary Starks Whitehouse and Trudi Schoop furthered the integration of dance and psychology, emphasizing the expressive and communicative potential of movement. Dance therapy began to be employed in clinical contexts to address a broad spectrum of psychological and emotional challenges. Over time, the practice of dance therapy diversified to encompass a range of approaches and techniques. Bailotherapy spotlights the therapeutic merits of Latin dance genres such as salsa, merengue, and bachata. Harnessing the dynamic movements and rhythms of these dances, bailotherapy seeks to enhance physical fitness, emotional expression, and social interaction [17], [21].

Today, bailotherapy enjoys increasing popularity as a holistic approach to wellness and healing. It finds application in diverse settings, including community centers, rehabilitation facilities, and mental health clinics, addressing issues such as stress, depression, anxiety, and trauma. Ongoing research into bailotherapy's efficacy continues to expand, providing evidence of its therapeutic advantages across age groups and cultural backgrounds.

Bailotherapy involves exercise regimens that incorporate dance movements with the objective of improving physical fitness, mental well-being, and emotional health. It is also known as dance therapy or movement therapy, is a holistic approach to healing that integrates movement and dance into therapeutic practices. The concept revolves around the idea that the body and mind are interconnected, and by engaging in expressive movement, individuals can explore and address emotional, psychological, and physical issues. Rooted in the belief that movement is a fundamental mode of communication and expression, bailotherapy seeks to tap into the body's innate wisdom to promote self-awareness, self-discovery, and healing. It provides a safe and supportive environment for individuals to explore their thoughts, feelings, and experiences through movement, guided by a trained therapist.

Bailotherapy sessions may involve a variety of movement techniques, including improvisation, choreographed sequences, breathwork, and mindfulness exercises. Participants are encouraged to move in ways that feel

authentic and meaningful to them, allowing for a unique and personal exploration of their inner world. Through bailootherapy, individuals can release pent-up emotions, reduce stress and anxiety, increase body awareness, improve self-esteem, and develop healthier coping mechanisms. It can be particularly beneficial for those struggling with trauma, depression, anxiety, eating disorders, addiction, and other mental health challenges. Additionally, bailootherapy can be practiced in diverse settings, including clinical settings, community centers, schools, and private studios, making it accessible to people of all ages and backgrounds. Its inclusive nature welcomes individuals regardless of their physical abilities, dance experience, or fitness level, fostering a sense of belonging and acceptance [16], [23].

In bailoterapia classes, participants engage in rhythmic movements inspired by various dance styles such as salsa, merengue, cumbia, reggaeton, and others. These classes are typically led by instructors who guide participants through choreographed routines set to upbeat music. The emphasis is on enjoyment and movement rather than on mastering complex dance techniques. The benefits of bailoterapia are similar to those of other forms of aerobic exercise, including improved cardiovascular health, increased stamina, weight management, and muscle toning. However, bailoterapia offers additional advantages due to its incorporation of dance and music elements [24,25].

For many participants, bailoterapia is not just a physical workout but also a form of self-expression, stress relief, and social interaction. The music and dance movements can uplift mood, boost energy levels, and provide a sense of joy and connection. Additionally, the group setting of bailoterapia classes fosters a supportive and inclusive environment where participants can feel motivated and encouraged by others. Bailoterapia has gained popularity in various countries, particularly in Latin America, where it is often offered in community centers, gyms, and wellness programs. It appeals to people of all ages and fitness levels, making it accessible to a wide range of individuals seeking a fun and effective way to improve their health and well-being [18,20].

While dance can be a valuable adjunctive therapy for managing depression, it's important to note that it's not

a replacement for professional treatment. Individuals experiencing depression should seek support from mental health professionals who can provide personalized treatment plans, which may include therapy, medication, lifestyle changes, and complementary approaches like dance therapy. Bailoterapia can be a valuable tool in managing depression.

Benefits of Bailoterapia

Research on bailoterapia, or dance therapy, has shown promising results in various areas, including physical health, mental well-being, and social interaction. While studies specifically focusing on bailoterapia may be limited, research on dance therapy in general can provide insights into its potential benefits. **Depression and Mood Improvement:** Several studies have demonstrated the positive effects of dance therapy on mood enhancement and depression reduction. For example, a study published in the *Journal of Clinical Nursing* found that dance therapy interventions led to significant improvements in depressive symptoms among older adults. **Stress Reduction:** Dance therapy has been shown to reduce stress levels and promote relaxation. Research published in the *Journal of Affective Disorders* indicated that participation in dance-based interventions led to reductions in cortisol levels, a hormone associated with stress, in individuals with depression.

Physical Fitness: Bailootherapy involves physical activity, and studies have highlighted its potential to improve cardiovascular fitness, flexibility, and strength. A systematic review published in the *Journal of Aging and Physical Activity* found that dance-based interventions were effective in improving physical function and reducing falls in older adults. **Social Interaction and**

Well-being: Participating in bailoterapia classes fosters social interaction and a sense of belonging, which can have positive effects on mental well-being. Research published in the *Journal of Aging and Health* indicated that dance interventions promoted social integration and improved quality of life in older adults.

Cognitive Function: Some studies have suggested that dance therapy may have cognitive benefits, such as improved memory and cognitive function. A study

published in the Journal of Aging and Physical Activity found that participation in a dance-based intervention led to improvements in cognitive flexibility and attention in older adults [17], [25,29].

When discussing bailoterapia and dance therapy, it's essential to consider the several hormones released, which play a role in enhancing overall mood and bodily function, including mental health. Endorphins, as is well known, are involved in this process. Endorphins are neurotransmitters produced by the central nervous system and the pituitary gland. They are often referred to as "feel-good" hormones because they can produce feelings of euphoria and reduce the perception of pain. Endorphins are released during physical activity, including dance, and contribute to the "runner's high" sensation that many people experience after exercise. Dopamine is a neurotransmitter associated with pleasure, reward, and motivation. It plays a key role in the brain's reward system and is released in response to pleasurable activities, such as dancing. Dopamine release during dance can enhance mood, increase feelings of enjoyment, and reinforce the desire to engage in the activity. Serotonin is a neurotransmitter involved in regulating mood, sleep, appetite, and stress. It is often referred to as the "happiness hormone." Dancing has been shown to increase serotonin levels in the brain, leading to improved mood and a sense of well-being.

Low serotonin levels are associated with depression and anxiety, so the release of serotonin during dance can have mood-enhancing effects. Oxytocin is often called the "love hormone" or "bonding hormone" because it is involved in social bonding, trust, and attachment. It is released during activities that involve physical contact or social interaction, such as dancing with a partner or in a group. Dancing can increase oxytocin levels, promoting feelings of connection and closeness with others. Cortisol is a hormone released by the adrenal glands in response to stress. While cortisol is typically associated with the body's "fight or flight" response, moderate levels of cortisol are also involved in regulating energy metabolism and immune function. Dancing can help to reduce cortisol levels, leading to decreased stress and anxiety. These hormonal responses highlight the therapeutic potential of dance as a holistic approach to promoting health and well-being [30,32]. While these findings are promising, more research specifically

focusing on bailoterapia and its effects on various populations, including those with depression, is needed to further understand its therapeutic potential. Additionally, studies examining the long-term effects of bailoterapia and its comparison with other forms of therapy would contribute to the growing body of evidence supporting its efficacy as a therapeutic intervention [20].

Exploring the Therapeutic Prospects of a Fresh Dimension in Bailoterapia

The present study introduces a novel approach firmly grounded in the principles of bailoterapia, which have significantly influenced various contemporary fitness dance styles. Within the context of Greece, two interventions are currently implemented among a representative sample to investigate the potential benefits of engaging in Caribbean beat© dance sessions for women aged over 40 who are grappling with mild to moderate depression. These dance sessions are readily accessible, either through online platforms at no cost or through in-person attendance at established dance schools.

This innovative approach has been actively implemented in Greece over the past 13 years, under the name Caribbean beat© with a noticeable uptick in participation among women annually. Remarkably, a substantial proportion (approximately 25%) of participants have demonstrated sustained engagement over the years. The term "Caribbean beat©" refers to a dance style characterized by its incorporation of Caribbean music and rhythms combining techniques of aerobic Latin dance and international dance rhythms which are dynamic and engaging workout routines. This encompasses various dances such as salsa, merengue, bachata, reggaeton, and others that have originated or gained popularity in Caribbean nations. Its foundation is rooted in the philosophy of bailoterapia.

Caribbean Beat© builds upon these established benefits by incorporating elements of Caribbean culture and music into the therapeutic process. Strengthening the link between established benefits of dance therapy and potential mechanisms of action for Caribbean Beat©, such as social connection and cultural relevance, would indeed provide valuable insights into the effectiveness

of this unique therapeutic approach. Prior research on comparable fitness dance genres has suggested that these dance therapies can offer various health benefits overall. A study published in the *Journal of Sports Science & Medicine* investigated the cardiovascular effects of a Zumba Fitness session among sedentary women. The research found that a single session of Zumba Fitness led to significant improvements in cardiovascular fitness markers such as heart rate, blood pressure, and aerobic capacity. This suggests that Zumba Fitness can be an effective form of cardiovascular exercise for improving heart health. A research published in the *Journal of Exercise Physiology* examined the effects of a 12-week Zumba Fitness program on weight loss and body composition among overweight and obese women.

The study found that participants who engaged in regular Zumba Fitness sessions experienced significant reductions in body weight, body fat percentage, and waist circumference. These findings suggest that Zumba Fitness may be an effective strategy for weight management and improving body composition. A study published in the *Journal of Physical Activity & Health* explored the psychological benefits of Zumba Fitness among middle-aged women. The research found that participating in Zumba Fitness sessions led to improvements in mood, self-esteem, and overall psychological well-being. The social and enjoyable nature of Zumba Fitness may contribute to its positive effects on mental health. Several studies have investigated adherence to, and enjoyment of Zumba Fitness compared to other forms of exercise. Research published in the *Journal of Sport Behavior* found that participants reported higher levels of enjoyment and motivation to continue with Zumba Fitness compared to traditional aerobic exercise classes.

This suggests that Zumba Fitness may be a more engaging and sustainable form of physical activity for some individuals. Fitness dance therapy classes often involve group participation and social interaction, which can have positive effects on motivation and adherence. A study published in the *Journal of Aging and Physical Activity* examined the social aspects of Zumba Fitness among older adults. The research found that participating in Zumba Fitness classes fostered social connections, support, and a sense of belonging among participants, particularly among older adults who may be at risk of

social isolation [33,36]. The primary findings suggest that this new approach holds significant promise as an effective tool for aiding women in coping with depression while concurrently promoting their physical activity levels. Nevertheless, further research is imperative to accurately gauge and quantify the precise benefits derived from this intervention.

Limitations

While this exploration sheds light on the potential benefits of dance therapy for women's mental health, certain limitations should be acknowledged. Firstly, the studies referenced may vary in methodology, sample size, and duration, which could impact the generalizability and robustness of the findings. Secondly, the cultural and contextual factors influencing participants' experiences of dance therapy may not be fully accounted for, potentially limiting the applicability of the results across diverse populations. Additionally, the reliance on self-reported measures in some studies may introduce bias and affect the accuracy of the reported outcomes. Furthermore, the long-term effects of dance therapy on mental health outcomes remain understudied, warranting longitudinal research to ascertain its sustained benefits over time. Lastly, while dance therapy shows promise as a complementary intervention for depression, it should not replace evidence-based treatments, and individual preferences and needs should be considered when integrating it into mental health care plans.

Conclusion

The exploration of bailoherapia as a therapeutic pathway for women's mental health beyond 40 unveils a promising avenue for addressing depression and promoting emotional well-being. Grounded in the principles of dance therapy, bailoherapia offers a holistic approach that integrates movement, creativity, and cultural relevance to empower women on their journey towards resilience and recovery. Through a synthesis of existing literature and empirical evidence, this exploration has illuminated the transformative potential of engaging in Caribbean beat© dance sessions, highlighting their accessibility and sustained engagement among participants. The findings suggest that bailoherapia holds significant promise as an

effective tool for aiding women in coping with depression while concurrently promoting physical activity levels. However, it's important to acknowledge certain limitations in the current understanding of bailoherapia. Variations in methodology, sample characteristics, and contextual factors may impact the generalizability and robustness of the findings. Further research is imperative to accurately quantify the precise benefits derived from bailoherapia interventions and to understand their long-term effects on mental health outcomes. As bailoherapia continues to gain recognition and traction, it represents a hopeful avenue for empowering women and fostering resilience amidst the

complexities of mental health challenges beyond 40. By embracing the therapeutic potential of dance and cultural expression, bailoherapia offers a path towards holistic healing, promoting emotional wellness and vitality for women in their transformative phase of life.

Conflicts of Interest

Nothing to declare

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References

- Cox, Linda, and Jodi Youmans-Jones. "Dance Is a Healing Art." *Curr Treat Options Allergy* 10 (2023): 184-195.
- Timur, Sermin, and Nevin Hotun Sahin. "The Prevalence of Depression Symptoms and Influencing Factors Among Perimenopausal and Postmenopausal Women." *Menopause* 17 (2010): 545-551.
- Albert, Paul R. "Why Is Depression More Prevalent in Women" *JPN* 40 (2015): 219-221.
- Ai, Xianfeng, Jingjing Yang, Zhibin Lin, and Xiaohong Wan. "Mental Health and The Role of Physical Activity During the Covid-19 Pandemic." *Front Psychol* 12 (2021): 759987.
- Dieterich-Hartwell, Rebekka. "Art and Movement as Catalysts for Insight into The Human Condition of Depression." *Psychiatr Rehabil J* (2023).
- Huang, Chen-shan, Yuan-jiao Yan and Yu-ting Luo, et al. "Effects of Dance Therapy on Cognitive and Mental Health in Adults Aged 55 Years and Older with Mild Cognitive Impairment: A Systematic Review and Meta-Analysis." *BMC geriatrics* 23 (2023): 695.
- Moufang, Ji, Li Ruobing, and Xu Yizhe. "Meta-Analysis of The Effect of Different Exercise Modalities in The Prevention and Treatment of Perinatal Depression." *J Affect Disord* (2024).
- Karkou, Vicky, Supriha Aithal and Michael Richards, et al. "Dance Movement Therapy for Dementia." *CDSR* 8 (2023).
- Fu, Qiang, Rui Qiu and Lei Chen, et al. "Music Prevents Stress-Induced Depression and Anxiety-Like Behavior in Mice." *Transl Psychiatry* 13 (2023): 317.
- Tao, Dan, Roger Awan-Scully, Garrett I. Ash and Zhong Pei, et al. "The Effectiveness of Dance Movement Interventions for Older Adults with Mild Cognitive Impairment, Alzheimer's Disease, and Dementia: A Systematic Scoping Review and Meta-analysis." *ARR* (2023): 102120.
- Abu-Odah, Hammada, Mian Wang, Jing Jing Su and Gemma Collard-Stokes, et al. "Effectiveness of Dance Movement Therapy and Dance Movement Interventions on Cancer Patients' Health-Related Outcomes: A Systematic Review and Meta-Analysis." *SCC* 32 (2024): 1-23.
- Donnelly, Samantha, Kay Penny, and Mary Kynn. "The Effectiveness of Physical Activity Interventions in Improving Higher Education Students' Mental Health: A Systematic Review." *Health Promot Int* 39 (2024): daae027.
- Hokkanen, Laura, Leena Rantala and Anne M. Remes, et al. "Dance/Movement Therapeutic Methods in Management of Dementia." *JAGS* 51 (2003): 576-577.

14. Filar-Mierzwa, Katarzyna, Małgorzata Długosz and Anna Marchewka, et al. "The Effect of Dance Therapy on The Balance of Women Over 60 Years of Age: The Influence of Dance Therapy for The Elderly." *JWAGE5* 29 (2017): 348-355.
15. Sun, Z., H. Chen, M. R. Berger and L. Zhang, et al. "Effects of Tai Chi Exercise on Bone Health in Perimenopausal and Postmenopausal Women: A Systematic Review and Meta-Analysis." *Osteoporos Int* 27 (2016): 2901-2911.
16. Viana, Ricardo Borges, Claudia Lima Alves, Carlos Alexandre Vieira and Rodrigo Luiz Vancini, et al. "Anxiolytic Effects of a Single Session of The Exergame Zumba® Fitness on Healthy Young Women." *Games health j* 6 (2017): 365-370.
17. Dong, Yangjian, Xinxin Zhang and Rongting Zhao, et al. "The Effects of Mind-Body Exercise on Anxiety and Depression in Older Adults: A Systematic Review and Network Meta-Analysis." *Front psychiatry* 15 (2024): 1305295.
18. Cheng, Wei-Hsin, Yixue Quan, and William Forde Thompson. "The Effect of Dance on Mental Health and Quality of Life of People with Parkinson's Disease: A Systematic Review and Three-level Meta-Analysis." *Arch Gerontol Geriatr* (2024): 105326.
19. Moufang, Ji, Li Ruobing, and Xu Yizhe. "Meta-Analysis of The Effect of Different Exercise Modalities in The Prevention and Treatment of Perinatal Depression." *J Affect Disord* (2024).
20. Wass, Sam, Emily Greenwood, Giovanni Esposito and Emily Phillips, et al. "Annual Research Review: 'There, The Dance Is—At the Still Point of The Turning World'—Dynamic Systems Perspectives on Coregulation and Dysregulation During Early Development." *J Child Psychol Psychiatry* (2024).
21. Fong Yan, Alycia, Leslie L. Nicholson and Clifton Chan, et al. "The Effectiveness of Dance Interventions on Psychological and Cognitive Health Outcomes Compared with Other Forms of Physical Activity: A Systematic Review with Meta-analysis." *Sports Med* (2024): 1-27.
22. Yadav, Vikas, Akanksha Jain and Sunil Nandeshwar, et al. "A Meta-Analysis on The Prevalence of Depression in Perimenopausal and Postmenopausal Women in India." *AJP* 57 (2021): 102581.
23. McCrary, J. Matt, Emma Redding, and Eckart Altenmüller. "Performing Arts as a Health Resource an Umbrella Review of the Health Impacts of Music and Dance Participation." *PLoS one* 16 (2021): e0252956.
24. ADMT, UK. "What Is Dance Movement Therapy." (2003).
25. Ljubojevic, Adriana, Vladimir Jakovljevic and Dan lulian Alexe, et al. "The Effects of Zumba Fitness® on Respiratory Function and Body Composition Parameters: An Eight-Week Intervention in Healthy Inactive Women." *Int J Environ Res Public Health* 20 (2022): 314.
26. Bryl, Karolina, Cecilia Fontanesi, and Chevon Stewart. "Abstracts from the 2021 Research and Thesis Poster Session of the 56th Annual American Dance Therapy Association Conference, Dance/Movement Therapy: Ancient Healing, Modern Practice, Virtual Conference, October 14–17 2021." *AJDT* 44 (2022): 85-92.
27. Bryl, Karolina, Cecilia Fontanesi, and Chevon Stewart. "Abstracts from the 2022 Research and Thesis Poster Session of the 57th Annual American Dance Therapy Association Conference, Renewed Connections: Dance/Movement Therapy Fostering Community Healing, October 27–30 2022." *AJDT* 45 (2023): 109-121.
28. Rodrigues-Krause, Josianne, Juliano Boufleur Farinha, Mauricio Krause, and Álvaro Reischak-Oliveira. "Effects of Dance Interventions on Cardiovascular Risk with Ageing: Systematic Review and Meta-Analysis." *Complement Ther Med* 29 (2016): 16-28.
29. Lahiani, Mariam, Fatma Ben Waer, Fatma Chaari, Haithem Rebai, and Sonia Sahli. "Effect Of 12-Week-Zumba Training on Postural Balance, Lower Limb Strength, Mood and Quality of Life in Postmenopausal Women." *Exp Aging Res* 50 (2024): 171-189.

30. Schoenfeld, Timothy J., and Chance Swanson. "A Runner's High for New Neurons Potential Role for Endorphins in Exercise Effects on Adult Neurogenesis." *Biomol* 11 (2021): 1077.
31. Pahlavani, Hamed Alizadeh. "Possible Role of Exercise Therapy on Depression: Effector Neurotransmitters as Key Players." *Behav Brain Res* (2023): 114791.
32. Kohut, Marian L., J. Mark Davis, D. A. Jackson and L. H. Colbert, et al. "The Role of Stress Hormones in Exercise-Induced Suppression of Alveolar Macrophage Antiviral Function." *J Neuroimmunol* 81 (1998): 193-200.
33. Ben Waer, Fatma, Fatma Chaari, Thouraya Fendri and Rabeb Laatar, et al. "The Relationship Between Postural Control and Cognitive Functioning Following Zumba Dancing in Middle-Aged Women: A Randomized Clinical Trial." *JWAGE5* (2024): 1-13.
34. Ben Waer, Fatma, Rabeb Laatar, Ghada Jouira and Mariam Lahiani, et al. "Effects Of 12 Weeks of Caffeine Supplementation and Zumba Training on Postural Balance and Cognitive Performances in Middle-Aged Women." *HCWIDQ* 44 (2023): 1601-1621.
35. Waer, Fatma Ben, Dan Iulian Alexe, Mariam Lahiani and Rubén Sanchez-Gomez, et al. "Pilates Versus Zumba Training Effects on Postural Control Under Conflicting Sensory Conditions in Postmenopausal Women." *Exp Gerontol* 188 (2024): 112383.
36. Ben Waer, Fatma, Fatma Chaari and Thouraya Fendri, et al. "The Relationship Between Postural Control and Cognitive Functioning Following Zumba Dancing in Middle-Aged Women: A Randomized Clinical Trial." *JWAGE5* (2024): 1-13.

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