

AN ANCIENT ART FORM TO A THERAPEUTIC INTERVENTION- BELLY DANCING & WOMEN'S HEALTH

ABSTRACT

Introduction: Dance or movement therapy has been proved to have a curative power for ages. Physical fitness is controlled by a combination of the potential the person has in doing his/her own regular activity and genetically inherited capability. Belly dance is an expressionistic type of dance that initially originated in Egypt which lays emphasis on complex movements of the trunk. Belly dancing has gracefully swayed its way to mainstream cardiovascular and musculoskeletal fitness all over the world, with significant impact on women's health.

Objective: To provide concise overview of Belly dancing and its effects on women's health.

Methods: A Search of PUBMED, CINHAL, Google Scholar. database was conducted to find relevant studies in relation to Belly dancing as a therapeutic intervention in the paradigm of women's health. The studies that met with the inclusion criteria were included in this review.

Result: This review provides a crisp understanding of the impact of Belly dancing on several pathologies namely, breast cancer, urinary incontinence, fibromyalgia, malignancies and low back pain. It also discusses about the biomechanical aspects of abdomen and pelvis that are involved during belly dancing.

Conclusion: The study provides an up-to-date outline of the existing literature on Belly Dancing and women's health. It lays emphasis on the effects of belly dancing as an intervention used to enhance women's health cohesively.

KEYWORDS: Belly dance, urinary incontinence, fibromyalgia, malignancy, low back pain.

INTRODUCTION

Dance or movement therapy has been proved to have a curative power. According to the American Dance Therapy Association Dance Movement Therapy (DMT) is "the psychotherapeutic use of movement -a process which furthers the emotional, social, cognitive, and physical integration of the individual". Dance treatment is "the psychotherapeutic utilization of movement- an interaction which encourages the enthusiastic, social and intellectual, combination of a person. It is believed to have a pragmatic impact on the social, physical, or psychological well-being of people. (1)

Standard physical activity is viewed as one of the main variables for way of life, in keeping up with the wellbeing and expanding the expectancy of life. Dance is known to be an activity that incorporates organizing body developments with music treatment, similarly as mind actuation since it is persistently vital to learn and remember new movements. It requires the coordination of body improvements with cadenced upgrades, encouraging flexibility in adapting the movement. (2)

Belly dance is an expressionistic type of dance that initially originated in Egypt. It lays emphasis on complex movements of the torso. It is known by many names, like the Middle East dance, oriental dance and most traditionally- belly dance. Depending on the country and region, Belly dance has evolved to take many different forms. (3)

To date, belly dancing has gracefully swayed its way to mainstream cardiovascular and musculoskeletal fitness all over the world. This form of dance can burn as many calories as walking, running, riding a bike or any other form of physical activity. With the rapid movements and constant undulations, the body is eventually toned and leaned. It majorly uses the core muscles of the body i.e the abdomen, pelvic and back. As a form of dance, it encourages and accelerates physical rehabilitation, relaxation, body image, self- confidence, social support, and the body mind connection. It modifies the individuals physiological, motor, and existential levels when integrating music and movement together. (4)

Therefore, the aim of this study is to review the efficacy of Belly dancing as a therapeutic intervention in pathologies concerning women physically and psychology. We would be curating a literature review of the effects of Belly dancing on women with malignancies, fibromyalgia, urinary incontinence, and the psychological effects along with a discussion on the effects of belly dancing on trunk and pelvic control.

BELLY DANCING AND MALIGNANCIES

Márta Szalai et al. conducted a clinical study to determine the potency of belly dancing as a tool for rehabilitation in female patients diagnosed with malignancies. This non-randomized study was compared the various health related outcome measures in female patients subjected to a standardized medical care for malignant diseases. The patients were selected from the Outpatient

Department of the National Institute of Oncology, Budapest, Hungary from 2008–2009. This one year long belly dancing rehabilitation program was joined by 55 patients, these constituted the research group. Whereas 59 age-relevant patients volunteered themselves in the clinical assessment group or control group who received normal medical treatment. The data collected from the Research group and Control Group were evaluated using ANCOVA analysis. The conclusion was that the RG patients scored better at both the baseline and follow-up than the control group, after being subjected to the belly dancing program. Hence, they further concluded that Belly dance as a treatment method will be able to be used as a corresponding rehabilitation method alongside the standard medical care aiming to improve health related outcomes in female patients (1)

The pilot concentrate via Carminatti et al. (2019) pointed towards exploring the effect of a belly dance program on the self-perception and confidence of ladies going through breast cancer therapy. It studied 19 women who had either completed or were still undergoing treatment. Breast cancer can have multiple repercussions in women's quality of lives and physical activity. Nineteen women were part of this study, were split into a control group of 8 women and a study group of 11 women. Questionnaires used for data collection were demographic and related to the self-image of the females. The target group were subjected to a 60-minute dance session conducted twice per week for 12 weeks. Whereas women in the control group were asked to maintain their day-to-day activities. It was concluded that the differences observed in the improvement of body image were significant in the belly dance study group in the pre- and post-intervention periods. It was reasoned that the distinctions seen in the improvement of self-perception were huge in the belly dance group in both the pre-and post-intercession periods. (2)

BELLY DANCING AND FIBROMYALGIA

A randomized, control study was conducted by Baptista AS, et al. to verify the effectiveness of dance therapy in patients diagnosed with fibromyalgia. Random allocation of eighty female patients aged 18-65 years, diagnosed with fibromyalgia was done to both, a dance group, and a control group. Patients of the dance group practiced belly dance twice a week for 16 weeks, while the patients belonging to the control group were asked to carry out normal tasks. The patients were assessed based on their pain, functional, emotional, and mental health status along with the other indices. The dance group had achieved significant improvements in their perception of pain, as well

as an increased emotional and mental health status. Hence, they concluded that these health parameters can be hugely impacted with belly dance as a conclusive treatment for fibromyalgia (5)

BELLY DANCING AND LOW BACK PAIN

As examinations of belly dance mechanics show comparative inclusion of the muscles that are incorporated in persistent **Low Back Pain (LBP)** Castrillon et al. involved themselves in investigating the effects of a standardized belly dance program on the apparent health status of women diagnosed with chronic low back pain. Outcome measures to evaluate the differences in pain, avoidance of fear and disability were used. It was concluded with the findings that a belly dancing program may impact positively the pain status and function in women diagnosed with chronic LBP (6)

BELLY DANCING AND URINARY INCONTINENCE

A SY, Kim SS et al. carried out a review to analyze the impact of belly dancing on muscles related to urinary incontinence in women belonging to the moderate age category. This review aimed at assessing the impact dancing specifically belly dancing on the muscles identified with incontinent bladder in women to provide as a basis in setting up a powerful program focused in relieving urinary incontinence. This research included 24 moderately aged ladies, diagnosed to have incontinence. The research group went through a belly dancing program zeroing in pelvic movements. This group were found to showcase escalated strength in their muscle while the other group demonstrated no critical changes. Subsequently, proposing that this program concentrating on pelvic muscles will be able to stall and free patients from urinary incontinence as a non-invasive rehabilitation method (7)

IMPACT OF BELLY DANCING ON ABDOMEN AND PELVIS

In a review exploring on how hip twirl specialists play out the "hip shimmy", The hip shimmy is a complex cadenced development comprising of intentional pelvic motions generally in the front facing plane, with negligible or no development of the trunk. The points of this review were twofold: 1) to survey whether under postural and recurrence conditions, can the amplitude and steadiness of the pelvic movements be maximized, and 2) examine in a whether it is truly conceivable to sway the pelvis in the front facing plane just at 1 to 3 Hz range. Nineteen belly

dancing specialists participated. The outcomes showed that a low stance upgrades sufficient execution and that the amplitude of pelvic oscillation diminished at a frequency of 3 Hz.

DISCUSSION

The motive of this study is to evaluate the usefulness of Belly Dance as a therapeutic intervention for different health conditions seen commonly in women's population. Belly dancing can be a chosen form of rehabilitation with women having low self-confidence and self-esteem, for post-surgery breast cancer women, women experiencing urinary incontinence and women with low back pain and fibromyalgia.(6,11,12) As a type of dance, belly dance seems to lend itself to providing itself as an efficient tool in rehabilitating female patients with malignancies showing significant enhancement in the body image of female patients during and after treatment for breast cancer. It can even be used in reducing pain, improving functional capacity, perception of self-image, quality of life in patients with fibromyalgia (5) Belly dancing even uses the lumbar and abdominal muscles as a conventional spinal adjustment exercise and, thusly, might be a viable choice in affecting the prognosis in chronic LBP. A customary pelvic exercise program like Belly Dancing could be effectively applied as a powerful unintrusive treatment for urinary incontinence (7,9) Belly dance likewise gives an imaginative way to deal with human control and coordination to give knowledge into complex control mechanisms of pelvic movement. Further data collection scrutinizing belly dancing as a rehabilitation program for people with malignancies, fibromyalgia, chronic LBP, urinary incontinence, and pelvic motions involving a larger sample.

CONCLUSION

This review has assembled proof on the impacts of belly dancing on different pathologies that affect women. Belly dancing can be a chosen form of rehabilitation with women to improve the vast array of pathologies focusing on the different zones of symptoms providing a chance for improvement. In conclusion as a type of dance, belly dance seems to lend itself to providing itself as an efficient tool in rehabilitating female patients.

Ethical Approval:

As per international standard or university standard ethical approval has been collected and preserved by the authors.

COMPETING INTERESTS DISCLAIMER:

Authors have declared that no competing interests exist. The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

REFERENCES:

1. Szalai M, Lévy B, Szirmai A, Papp I, Prémusz V, Bódis J. A clinical study to assess the efficacy of belly dancing as a tool for rehabilitation in female patients with malignancies. *Eur J Oncol Nurs*. 2015;19(1):60–5.
2. Carminatti M, Boing L, Leite B, Sperandio FF, Korpalski T, Fretta T de B, et al. Effects of belly dancing on body image and self-esteem in women with breast cancer – pilot study. *Rev Bras Med do Esporte*. 2019;25(6):464–8.
3. Bonnie Paul. PHYSICAL AND PSYCHOLOGICAL EFFECTS OF BELLY DANCING: A MULTIPLE CASE STUDY. 2005;(September).
4. Szalai M, Szirmai A, Füge K, Makai A, Erdélyi G, Prémusz V, et al. Special aspects of social support: Qualitative analysis of oncologic rehabilitation through a belly dancing peer support group. *Eur J Cancer Care (Engl)*. 2017;26(6):1–14.
5. A.S. B, A.L. V, A. J, J. N. Effectiveness of dance in patients with fibromyalgia: a randomized, single-blind, controlled study. *Clin Exp Rheumatol [Internet]*. 2012;30(6 Suppl 74):18–23. Available from: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=emed11&NEWS=N&AN=23020850>
6. Castrillon T, Hanney WJ, Rothschild CE, Kolber MJ, Liu X, Masaracchio M. The effects of a standardized belly dance program on perceived pain, disability, and function in women with chronic low back pain. *J Back Musculoskelet Rehabil*. 2017;30(3):477–96.
7. An SY, Kim SS, Han G. Effect of belly dancing on urinary incontinence-related muscles and vaginal pressure in middle-aged women. *J Phys Ther Sci*. 2017;29(3):384–6.

8. Moreside JM, Vera-Garcia FJ, McGill SM, Carminatti M, Boing L, Leite B, et al. Effect of belly dancing on urinary incontinence-related muscles and vaginal pressure in middle-aged women. *J Phys Ther Sci* [Internet]. 2017;29(3):384–6. Available from: <https://doi.org/10.1016/j.humov.2021.102791>
9. Tournillon A, Siegler IA. Voluntary control of pelvic frontal rotations in belly dance experts. *Hum Mov Sci* [Internet]. 2021;77(July 2019):102791. Available from: <https://doi.org/10.1016/j.humov.2021.102791>
10. Nugent MM, Milner TE. Segmental specificity in belly dance mimics primal trunk locomotor patterns. *J Neurophysiol*. 2017;117(3):1100–11.
11. Boing L, Baptista F, Pereira GS, Sperandio FF, Moratelli J, Cardoso AA, et al. Benefits of belly dance on quality of life, fatigue, and depressive symptoms in women with breast cancer – A pilot study of a non-randomised clinical trial. *J Bodyw Mov Ther* [Internet]. 2018;22(2):460–6. Available from: <https://doi.org/10.1016/j.jbmt.2017.10.003>
12. Boing L, Do Bem Fretta T, De Carvalho Souza Vieira M, Pereira GS, Moratelli J, Sperandio FF, et al. Pilates and dance to patients with breast cancer undergoing treatment: Study protocol for a randomized clinical trial - MoveMama study. *Trials*. 2020;21(1):1–17.