Editorial

LIFE IN A WHEELCHAIR: MOVING AGAIN "IN DANCE STEPS"

Tatiana Bolgeo[1], Annunziata Lettiero[1], Menada Gardalini[1], Roberta Di Matteo[1], Rita Lorusso[2], Antonio Maconi[1]

[1] Research Training Innovation Infrastructure, Research and Innovation Department (DAIRI) –Azienda Ospedaliero - Universitaria SS. Antonio e Biagio e Cesare Arrigo, Alessandria, Italy
[2] SC. Neurorehabilitation - Presidio Teresio Borsalino - Azienda Ospedaliero - Universitaria SS. Antonio e Biagio e Cesare Arrigo, Alessandria, Italy

Author for correspondence: Menada Gardalini mgardalini@ospedale.al.it

DOI: https://doi.org/10.65241/wh.8.2.1

For citation: Bolgeo T, Lettiero A, Gardalini M, Di Matteo R, Lorusso R, Maconi A. Life in a wheelchair: moving again" in dance steps". World of Health. 2025;2(8):6-8. DOI: https://doi.org/10.65241/wh.8.2.1

Received: 17 June 2025 | Revised: 19 June 2025 | Accepted: 27 June 2025

ABSTRACT

The experience of motor disability, especially among wheelchair users with spinal cord injuries, encourages reflection on the transformative power of expressive and movement-based practices. Among these, Dance Movement Therapy emerges as a tool capable of fostering emotional expression, body awareness, and social engagement, extending beyond traditional rehabilitative approaches. Existing literature highlights multiple benefits of Dance Movement Therapy across neurological conditions such as Parkinson's disease, multiple sclerosis, and stroke, demonstrating improvements in physical, psychological, and emotional well-being.

However, despite the growing global population of wheelchair users and the considerable impact of this condition on healthcare costs and caregiver burden, research specifically focused on individuals with spinal cord injury remains limited.

It is within this context that the project developed in a hospital in northern Italy is situated, proposing the integration of Dance Movement Therapy as social prescribing for people with disabilities following spinal cord injury. The project involves both patients and caregivers, valuing their collaborative role in the care relationship and promoting a person-centered model of support. Planned activities include professional training for healthcare providers, dedicated Dance Movement Therapy sessions, and a shared patient–caregiver pathway to enhance emotional support, active participation, and mutual well-being.

In addition to clinical and psychological outcomes, the project includes an economic evaluation to assess the long-term sustainability of the intervention and the potential savings from reduced reliance on traditional treatments and decreased caregiver burden. Overall, this initiative highlights the importance of recognizing Dance Movement Therapy as both a therapeutic and cultural practice capable of promoting inclusion, autonomy, and quality of life for individuals with motor disabilities.

Keywords: *Motor disability, spinal cord injuries, wheelchair users, dance movement therapy.*

INTRODUCTION

Dance Movement Therapy (DMT) is a universal language that communicates through body movement, conveying emotions and narratives without the use of words (1). However, challenges emerge when motor skills differ from what is commonly considered "normal." People with motor impairments are often identified as having a disability. A disability is defined as a limitation in a person's autonomy and ability to interact with the environment. This condition is often accompanied by both attitudinal and environmental barriers (2). Essentially, people with motor skill challenges find it more difficult to engage with dance as they are unable to master the technicalities in a way that allows them to participate seamlessly with their peers. The idea that people with disabilities are less capable of engaging with dance raises an important ethical issue (3). It is in this context that the importance of the relationship between disability and dance emerges, a theme that challenges prejudice and celebrates the values of inclusion through artistic expression.

In recent decades, the world of disability has undergone transformations that have generated considerable progress in terms of services, integration and tackling prejudice. This evolution has led to the social inclusion of people with disabilities, enabling them to improve a condition of life that is disadvantaged in relation to the rest of the society to which they belong. DMT is an integral part of this process of transformation, which seeks to improve the quality of life of people with disabilities, despite their diversity (4). DMT has been introduced into various fields, including neurology, as it is an engaging and enjoyable activity that stimulates the motor and attention systems (5). The literature shows that the regular practice of dance by people living with various forms of disability, such as multiple sclerosis, Parkinson's disease, stroke and other conditions that affect motor function lead to significant improvements in the psychophysical sphere, promoting a better quality of life, greater autonomy and personal well-being (6–9). Choreographed movements and sequences increase muscle strength and flexibility, improve balance and motor coordination, helping to strengthen the body and improve functional capacity (10,11). In addition, DMT brings improvements in stress levels, depressive symptoms and anxiety (12,13) by helping patients to experience greater body awareness and improve self-esteem and confidence (14). People can encourage each other on the road to recovery and acceptance by sharing their often dramatic experiences (2).

Despite scientific evidence of physical and psychological benefits of DMT in which the body becomes the protagonist once again through movement, there is still limited research into the effects of DMT on wheelchair people with spinal cord injury (4). From an ethical perspective, this group deserves more attention in terms of emotions, physiology, social identity and physical health, as disability is becoming an increasingly important component of health care expenditure and the burden of illness for both the person and the caregiver (15). In fact, it is estimated that around 75 million disabled people use a wheelchair (16), and the number is increasing due to accidents (17). This leads to an increased care burden in daily life for family members, who usually play the role of caregivers (18). More investment in research and development is therefore needed to identify new and more effective intervention strategies. In the Italian context, dance is still mainly associated with fun and entertainment rather than a form of therapeutic treatment. In the literature, research is fragmented in terms of the duration of interventions and the number of subjects involved (19, 20). This can lead to skepticism about unconventional therapeutic approaches preferring more traditional therapies, such as drug therapy or physical therapy. This perception can make it difficult to recognize DMT as a valid form of therapy, not only for its psychological benefits, but also for its positive physical and motor effects.

Wheelchair dance is an art form that offers a perspective on the experience of disability that is not yet fully understood or recognized by society as a whole, but which can be a useful therapeutic option for spinal cord injury patients as a complementary method to traditional rehabilitation (21). In our opinion, in order to fill the gaps in the use of DMT in patients with spinal cord injury, it is necessary to raise the awareness of the scientific and healthcare community about the importance of innovative and inclusive therapeutic approaches. For this reason, the Department of Integrated Activities Research and Innovation (DAIRI) of the University Hospital of Alessandria has launched a project to include the DMT as a social prescribing for people with disabilities following spinal cord injury. The project involves the patients and the caregivers in care and support process, promoting synergy between them and improving quality of life for everyone involved. The project aims to increase patient autonomy and confidence in the care process, and to reduce the physical and psychological burden on caregivers, through information sharing, emotional and practical support during DMT sessions.

In this context, the family caregiver becomes a valuable support in assisting the patient during the DMT sessions and encouraging their involvement and active participation. Sharing these experiences through movement and music creates a deeper bond in the dyad. Through this collaboration, the patients can feel supported, accepted and inspired to explore themselves and their emotions. Furthermore, DMT can also be an excellent wellness tool for caregivers, who often have to deal with high levels of stress and emotion associated with caring for their loved ones (19). Through dance therapy, both can express their emotions, relax and regain physical and mental energy. This partnership between patient and caregiver is essential to ensure an integrated and personalized approach to health and wellbeing management.

In its development, the project envisaged several phases involving both the health professional, the patient, and the dyad at the same time. Specifically, the pathways involving health professionals require psycho-education and role-playing, in order to train and raise awareness of DMT as a social prescribing in common clinical practice. Patients, together with their caregivers, attend DMT sessions in specially designed spaces under the supervision of trained DMT professionals, alongside standard rehabilitation therapies. These actions would make it possible to consider the person as a whole and to move from a "patient care" approach to "person centered care" approach (22).

In addition to the physical, emotional, and social benefits of the participants, the project intends to perform a cost-benefit economic evaluation, which can be complicated to determine, as it depends on a number of factors, including the costs of dance therapy services, the benefits to patients and the duration of positive effects. To assess the cost-effectiveness of DMT, we will consider the costs of dance therapy services in relation to the benefits obtained; for example, we will evaluate whether the costs of providing dance therapy sessions are justified by a reduction in the costs of traditional medical interventions or by an improvement in patients' quality of life. In addition, we will consider the long-term economic savings resulting from the improved health of patients participating in DMT,

such as a decrease in the number of doctor visits, hospital admissions or improved work capacity. In conclusion, DMT as a social prescribing could be a valuable approach providing persons with the knowledge, motivation, and confidence to better manage their health. Furthermore, it is significant for spinal cord injury patients as it goes beyond the prescription of traditional medical care and considers the entire context of the patient's life, including factors such as physical accessibility, community resources, social opportunities, and improved quality of life. The spokesperson for this innovative approach is the healthcare professional, who is both the link between the patient, the caregiver, and the healthcare system, and the first to identify needs.

We believe that the global healthcare community should consider DMT as a valuable intervention for individuals with disability, particularly those affected by spinal cord injury and other conditions that significantly impair motor function. There is potential for improvements not only in physical health but importantly psychological well-being. Moreover, introducing DMT as a social intervention breaks down barriers, boosts confidence and serves to address the ethical issue that exists in relation to hobbies, such as dance, largely being the domain of the abled. In this sense, DMT becomes not only a clinical resource, but also a tool for cultural transformation and societal inclusion.

REFERENCES:

1. Goodill SW. An Introduction to Medical Dance/Movement Therapy: Health Care in Motion. 1st ed. Jessica Kingsley Publishers, London and Philadelphia; 2005.
2. Mont D, Madans J, Weeks JD, Ullmann H. Harmonizing Disability Data To Improve Disability Research And Policy. Health Aff (Millwood). 2022;41(10):1442–8.
3. Harmon SHE. The Invisibility of Disability: Using Dance to Shake from Bioethics the Idea of 'Broken Bodies'. Bioethics. 2015;29(7):488–98.
4. Bhattarai JJ, Bentley J, Morean W, Wegener ST, Pollack Porter KM. Promoting equity at the population level: Putting the foundational principles into practice through disability advocacy. Rehabil Psychol. 2020;65(2):87–100.
5. Shanahan J, Morris ME, Bhriain ON, Volpe D, Richardson M, Clifford AM. Is Irish set dancing feasible for people with Parkinson's disease in Ireland? Complementary Therapies in Clinical Practice. 2015;21(1):47–51.
6. Aleksander-Szymanowicz P, Filar-Mierzwa K, Skiba A. Effect of dance movement therapy on balance in adults with Down Syndrome. A pilot study. J Intellect Disabil. 2023;17446295231220429.
7. Davis E, Webster A, Whiteside B, Paul L. Dance for Multiple Sclerosis: A Systematic Review. Int J MS Care. 2023;25(4):176–85.
8. Lihala S, Mitra S, Neogy S, Datta N, Choudhury S, Chatterjee K, et al. Dance movement therapy in rehabilitation of Parkinson's disease – A feasibility study. Journal of Bodywork and Movement Therapies. 2021; 26:12–7.
9. Rocha PA, Slade SC, McClelland J, Morris ME. Dance is more than therapy: Qualitative analysis on therapeutic dancing classes for Parkinson's. Complement Ther Med. 2017; 34:1–9.
10. Aldana-Benítez D, Caicedo-Pareja MJ, Sánchez DP, Ordoñez-Mora LT. Dance as a neurorehabilitation strategy: A systematic review. Journal of Bodywork and Movement Therapies. 2023; 35:348–63.
11. Ares-Benitez I, Billot M, Rigoard P, Cano-Bravo F, David R, Luque-Moreno C. Feasibility, acceptability and effects of dance therapy in stroke patients: A systematic review. Complement Ther Clin Pract. 2022; 49:101662.
12. Cox L, Youmans-Jones J. Dance Is a Healing Art. Curr Treat Options Allergy. 2023;10:1–12.
13. Salihu D, Kwan RYC, Wong EML. The effect of dancing interventions on depression symptoms, anxiety, and stress in adults without musculoskeletal disorders: An integrative review and meta-analysis. Complement Ther Clin Pract. 2021;45:101467.
14. Sivertseva SA, Anfilofeva KS, Zotova AV, Sherman MA, Guseva ME, Boyko AN. [Dance therapy in the rehabilitation of neurological diseases]. Zh Nevrol Psikhiatr Im S S Korsakova. 2022;122(7. Vyp. 2):31–5.
15. Mao Y, Wen Y, Liu B, Sun F, Zhu Y, Wang J, et al. Flexible wearable intelligent sensing system for wheelchair sports monitoring. iScience. 2023;26(11):108126.
16. Fung K, Miller T, Rushton PW, Goldberg M, Toro ML, Seymour N, et al. Integration of wheelchair service provision education: current situation, facilitators and barriers for academic rehabilitation programs worldwide. Disability and Rehabilitation: Assistive Technology. 2020;15(5):553–62.
17. Vos T, Lim SS, Abbafati C, Abbas KM, Abbasi M, Abbasifard M, et al. Global burden of 369 diseases and injuries in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019. The Lancet.2020;396(0258):1204–22.
18. Kuzu D, Perrin PB, Pugh Jr. M. Spinal Cord Injury/Disorder Function, Affiliate Stigma, and Caregiver Burden in Turkey. PM&R. 2021;13(12):1376–84.
19. Champagne ER. Caregiver Resilience and Dance/Movement Therapy: A Theoretical Review and Conceptual Model. J Appl Gerontol. 2024;43(3):319–27.
20. Swaine B, Poncet F, Lachance B, Proulx-Goulet C, Bergeron V, Brousse É, et al. The Effectiveness of Dance Therapy as an Adjunct to Rehabilitation of Adults With a Physical Disability. Front Psychol. 2020; 11:1963.
21. Agaronnik N. Musical Chairs: Using Wheelchair Ballroom Dance in Disability Education. JAMA. 2018;320(1):14–5.
22. Jonas WB, Rosenbaum E. The Case for Whole-Person Integrative Care. Medicina (Kaunas). 2021;57(7):677.