

# Systematic Literature Review of the Impact of Dance/exercise Therapy on the Management of Depression

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## ABSTRACT

Dance movement therapy integrates art and science. It is an interdisciplinary discipline that marries body, movement, dance and psychology, and is a method of psychotherapy that has biological, psychological and social functions to compensate for deficits. Dance movement therapy sees a fundamental interconnection between the mind and the body and emphasises that what affects the body also affects the mind reciprocally. When mind-body integration is lacking, individuals will suffer from a variety of psychological disorders. Therefore, the core principles of dance movement therapy emphasise that holistic individual health is embodied in the integration of mind and body, that body movement is expressive and communicative, and that dance movement therapy utilises body movement as a method of assessing the individual and as a means of clinical intervention, and that the current exploration of the discipline of dance movement therapy provides a certain theoretical reference point for further in-depth exploration.

## KEYWORDS

Dance movement therapy; Depression management

## 1. INTRODUCTION

Dance movement therapy (DMT) is a branch of psychotherapy and creative arts therapy, which was defined by the American Dance Movement Therapy Association (ADTA) in 1972 as "the process of using movement for psychotherapy to promote the emotional and physical integration of the individual" (Fran J, 1988). The research on the application of dance therapy in China began in the early 1990s, for example, in 1993, a study was conducted to verify the improvement of the three major symptoms of chronic schizophrenic patients by music and dance intervention therapy (Su Lin, 1993). Since then, there have been experts and scholars through dance movement therapy for depression management and other mental disorders patients (Xiong Lihua, 2009). At the beginning of the 20th century, there appeared to be the application of dance therapy in the process of education and teaching of college students in the development of mental health research (Zhang Wen, 2007). To this day, dance movement therapy has been widely used in the rehabilitation of various mental and neurodegenerative diseases, mental health intervention or psychotherapy for special people, mental health promotion for the general population and other related fields. In recent years, people have been paying more and more attention to their physical and mental health and quality of life. Especially with the implementation of the important national strategy "Healthy China", dance therapy, as a kind of "non-medical health intervention", has received more and more attention (Gentle, 2019). Against this background, this study systematically compiled and analysed the applied research of dance therapy in China, with a view to providing a reference for subsequent research and contributing to the deepening and development of the field.

## **2. BACKGROUND OF THE STUDY**

### **2.1. Dramatic Increase in Mental Illness in the Context Of A Major New Coronavirus Health Event**

In December 2019, novel coronavirus pneumonia (coronavirus disease 2019, COVID-19, hereinafter referred to as "new coronavirus pneumonia") was first identified and reported. New coronavirus pneumonia is caused by a novel coronavirus (2019 novel coronavirus, 2019-nCoV), which can be transmitted through respiratory droplets, indirect contact, aerosols, and other modes, with an average incubation period of 5.2 days (Expert Group on Prevention and Control of New Coronavirus Pneumonia of the Chinese Society of Preventive Medicine, 2020). World Health Organization, WHO) officially declared the outbreak of neocoronavirus pneumonia as a Public Health Emergency of International Concern (PHEIC). On 11 March 2020, WHO further declared the outbreak a global pandemic. This means that the epidemic of C. neoformans poses a great threat and challenge to the global public health system. As of 24 May 2020, a cumulative total of 82,985 confirmed cases of neocoronavirus pneumonia and a cumulative total of 4,634 deaths have been reported in 31 provinces (autonomous regions and municipalities directly under the central government) and the Xinjiang Production and Construction Corps in mainland China (Guo Junlong, 2022).

In the World Mental Health Report 2022, the World Health Organisation noted that the global prevalence of anxiety and depression increased dramatically by 25% in the first year of the New Crown pandemic. Other research data suggests that by the end of 2021, the New Crown epidemic resulted in an additional 70 million depressed patients, 90 million anxious patients, and potentially several hundred million more insomniacs globally (Guo Junlong, 2022).

According to the State Council of the People's Republic of China's Emergency Regulations on Public Health Emergencies, public health emergencies refer to major infectious disease outbreaks, mass unexplained illnesses, major food and occupational poisoning, and other events that seriously affect public health that occur suddenly and cause, or are likely to cause, serious damage to the public health of the community (Luan, Fifi, & Lee, Jhunhai, 2020). For example, the SARS outbreak in China in 2003, H1N1 in 2010, Ebola virus, and the new coronavirus pneumonia outbreak in 2019 are all sudden public health events, and such negative stressors are very likely to cause people's fear and anxiety. Facing the multiple impacts of work and life as well as the stimulation of negative stressors brought about by epidemics, it is easy to trigger a series of mental health problems in people (Yang Yirou, 2023).

Previous studies of Severe Acute Respiratory Syndrome (SARS) 07-19, Middle East Respiratory Syndrome (MERS), and Ebola Virus Disease (EVD) during the epidemic have shown that the mental health of people with severe acute respiratory syndrome (SARS) 07-19, Middle East Respiratory Syndrome (MERS), and Ebola Virus Disease (EVD) is a major cause of mental health problems. Studies during epidemics have shown that outbreaks and pandemics can be very psychologically taxing on the general public and can cause a variety of mental health problems including depression, anxiety, stress, and insomnia. As a new round of major public health events, the new Crown pneumonia epidemic is bound to be a huge stressor and cause mental or psychological problems (Guo, J. L., 2022).

Depression is an unhealthy psychological state that manifests itself in a sustained period of diminished volitional activity, low mood, slowed reaction time, attention deficits, and significant weight loss accompanied by suicidal thoughts. According to the World Health Organisation, depression currently affects 322 million people worldwide, or 4.4% of the global population. Depression has many detrimental effects on people's lives, leading to a higher risk of cardiovascular disease, disability, reduced quality of life and increased mortality. However, in clinical practice, doctors focus more on the physical illness and less on the patient's mental health and how it contributes to physical health and illness. Depressed patients are often ashamed to seek medical

attention for their illness and refuse to do so by deliberately concealing their condition, which can make the diagnosis of depression more difficult (Zheng, Yue, 2023).

## **2.2. The Unique Effectiveness of Dance Movement Therapy**

Multiple national and international studies in the field of mental health have confirmed the effectiveness of therapeutic intervention practices in art, dance, music, theatre and poetry. However, much of the literature has tended to focus on a single art form and on the specific diagnosis of illness in effectiveness studies. To date, there has been little research into the commonalities and differences between different forms of art therapy practice, which has somewhat limited the understanding of the common elements of art therapy and the important principles of practice applied in therapeutic work. Against this background, recent years have seen a proliferation of studies of art therapists collaborating and establishing cross-modal shared practice, focusing on multimodal combinations of art therapies and their application to various patient populations, such as depression and dementia. Some art therapy professional organisations have also developed relevant clinical guidelines through consensus-based approaches, developing nominal groups or other models and guidelines that span multiple art therapies such as dance therapy and music therapy (Mao Q., 2021).

Dance Movement Therapy (DMT) is a branch of psychotherapy and creative art therapy, and the applied research of DMT in China began in the early 1990s, until now, DMT has been widely used in the rehabilitation of various psychiatric and neurodegenerative disorders, mental health interventions or psychotherapy for special people, and the mass population's mental health promotion and other related fields. (Wen Zhang, 2007)

In recent years, dance movement therapy has been shown to significantly improve depression management in patients with depression management (KARKOU V, 2019), and dance movement-based interventions (YAN FENG, 2021) have also appeared more frequently in Chinese depression prevention and treatment. The psychotherapeutic effects of dance movement therapy, dance interventions are not inferior to other modalities (KOCH S C, 2019), and have more specific advantages over talk-based therapies due to their emphasis on non-verbal communication and body-oriented nature. Patients who received both dance movement therapy and conventional medication improved their depression management faster than those who received only conventional medication (KARKOU V, 2019). However, whereas the effect of dance movement therapy on mental health improvement is more stable, the results of studies related to dance interventions are more heterogeneous (KOCH S C, 2019), which may be due to the fact that dance movement therapy, in contrast to dance-type interventions, also possesses these key elements of healing: firstly, the use of mirroring methods to establish an embodied therapeutic relationship; secondly, the use of symbolic and metaphorical processes represented by real movements to uncover and processing subconscious content; and third, achieving mind-body integration through creative movement narratives and reflection (KARKOU V, 2019).

Dance movement therapy is not simply a form of body therapy and bodywork, but a psychotherapy based on body movement. As a psychotherapeutic approach, the main differences between dance movement therapy and other body-oriented therapies are, first, the use of the Laban/Bartenieff Movement System (LBMS) and other movement analyses as a diagnostic tool, and, second, the development of therapeutic techniques by means of an active creative process. Dance movement therapy is not the creation of a dance work, its creative process has a healing function; thirdly, dance movement therapy works not only on the physical level, but also on the emotional and psychological level (Magurandam, 2020).

### 3. LITERATURE REVIEW

#### 3.1. Current Status of Dance Movement Therapy Research in the West

Dance movement therapy has been practiced and researched in the West for sixty years, and its scope of application is very wide. Firstly, dance movement therapy can promote the sub-healthy psychological development of the general population, especially in today's high pressure and fast-paced life state, dance movement therapy can regulate the balance of body and mind, reshape the body image, build up self-confidence, expand inclusiveness and increase social adaptability, which can effectively slow down the pressure and release the self. In addition, dance movement therapy can also be beneficial to other special populations of patients. In the early days, dance movement therapy in the West was located in the mental health field, focusing on mental illnesses, functional deficits and behavioural disorders. Since the 1980s, dance movement therapy in the West has begun to extend its research reach into the medical field, applying it to clinical medical research and achieving many successes at the same time (Magurandam, 2020).

Dance-movement therapy began with a clinical case study, 'Dance Psychotherapy: The Power of Movement', a video produced by Noms Brock, Christopher Reeves and published by the American Dance and Movement Therapeutic Association (ADTA), which shows the work of five different therapists with different patients (Noms Brock, Christopher Reeves, 2020). Joan L. Naess Lewin published "Notes on Dance Movement Therapy", which vividly reproduces her developmental approach and describes her clinical practice as an experienced dance movement therapist in long-term relationship therapy (Joan L. Naess Lewin, 1998). Naess Lewin, 1998). Hand, Judith L. explores the rhythms of the mind and body and their relationship to therapy and analyses what these reveal about dance movement therapy. Dance movement therapy is an opportunity for the "doctor" or "artist" within each person to heal physical or emotional wounds (Hand, Judith L., 1996). Following the *Essence of Kiss*, Claire Schmais discusses in detail the basic concepts in the teaching of dance psychotherapy from the perspective of a dance therapy teacher (Claire Schmais, 2004).

One of the most widely used issues that dance therapy has been used to treat in recent years is anxiety symptoms. Although quantitative research into its effectiveness is scarce, it has been shown to be well effective. Mohacsy argues that sometimes words are not enough and that physical forms of communication are necessary, especially when trying to release feelings of anxiety. He believes that dance therapy provides this form of communication through imagined self-expressive movement and conveying feelings.

An investigation was conducted to examine the effectiveness of dance movement therapy and relaxation therapy on anxiety problems in college students. The subjects were a group of 24 psychology undergraduates from Catholic Liberal Arts College, ranging in age from 18 to 21, with an average age of 19, and coming from upper-middle class New England. They were divided into two treatment groups. Students in the dance movement therapy group followed an instructor and were guided by a dance videotape to eliminate their anxiety by doing self-selected movements for free expression and release of emotions. The other group received relaxation therapy, in which the students listened to an audio cassette tape that consisted of tensioning and relaxing muscle groups, accompanied by deep breathing. Anxiety levels were recorded for all subjects before and after the session. And physiological measures of anxiety were obtained by instrumenting the subjects' skin conductance levels during the course. The expectation of the investigators was that the dance movement therapy sessions could reduce anxiety levels to a great extent through the process of self-expression and non-verbal communication. Instead, the results showed that both treatment sessions significantly reduced anxiety levels, with the dance movement therapy dropping slightly more than the relaxation therapy. Therefore, they recommended that both methods be extended to other populations to benefit from dance therapy and relaxation therapy (Catholic Liberal Arts, 2006).

Controlled studies have shown that dance movement therapy helps to improve symptoms and social rehabilitation functioning in chronic schizophrenia (SuL, Fan Quyu, 1999). The combination of these two therapies has also been found to have a positive effect on the psychological adjustment of mastectomy patients. The two therapies have also been used with patients with skull injuries, and it was found that dance, relaxation, and the combination of the two increased morale and facilitated recovery (Dooley, 2002).

## **4. THEORIES**

### **4.1. Adlerian Theory**

Adlerian psychokinetic application in dance movement therapy is mainly embodied in four aspects: firstly, she believes that the aggressive drive is like the instinct of primitive organisms, which is the manifestation of life, and possessing abundant vitality is a kind of aggressive drive, and dealing with repressed emotions by the power of the body is a development process in which the body and the mind are united, and the aggressive drive is the manifestation of health and natural drive, which is the power of change and growth. Secondly, dance movement therapy builds social-emotionality in group dance. People inevitably live in and come into contact with social groups from infancy, and the appeal of group dance is that when people dance together, the group reduces the individual's feelings of loneliness and uneasiness, and instead increases a sense of security, support and acceptance. In addition to the various opportunities for interaction in the group, the group also breaks down age boundaries, and this relationship between the individual and the group is called "socio-emotional". Thirdly, psychokinetic dance movement therapy uses physical dance to allow patients to express their emotions, to overcome low self-esteem through physical movement, and to gradually accept themselves and discover their self-expressive qualities through dance. Psychokinetic dance movement therapy uses dance/movement to establish a connection with patients, which has an important impact on overcoming patients' low self-esteem. Fourthly, Adler's psychokinetic view is that the individual's life form can be found in the individual's body, one is that movement and the posture and gesture of movement can express emotions; the other is that the individual's use of space represents his or her life form. Individual psychology's view of body attitudes suggests that body movements are not only postures as seen by the eye, but also include the trajectory of the individual's past, present and future transformations.

Dance movement therapist Espenak was influenced by Adler, Reich and Lowen. She greatly admired some of Adler's ideas, and in addition, in 1950 Espenak was introduced to the theories of the psychoanalyst Reich and studied theories of psychopathology, as well as a variety of techniques related to the body and group dynamics training. Espenak developed "psychokinetic therapy" from creative dance, in which emotional sensations are used to activate bodily expression, and Espenak believed that bodily traits and characteristics are often important processes in the development of personality. The school of psychokinetic dance movement therapy represented by Espenak believes that the dynamics of the body, the mind, and the heart are the overall expression of a person's personality. The structure of the body and each part of the body represents different meanings and emotions. The structure of the body is divided into the upper and lower body, with the upper body being the human part, which represents thinking, self-control, intelligence and wisdom. The lower part of the body is the animal part of the body, which includes vitality, exploration and so on. If some parts of the body are slow to move, it may be due to a hidden quality of the body that is not functioning properly. Therefore, the structure of the body and the parts of the body are like a chart of the mind, which is of great significance (Lee, 2004).

## 4.2. Laban's Movement Analysis

At the beginning of the twentieth century, the main contribution of Laban, the father of modern dance theory in Germany, was to put forward the theory of human kinesiology, which has great contribution to dance psychotherapy. He believed that "movement itself is a language, movement is one's response to one's inner world, and the inner world is expressed through doing, acting, and dancing. Every movement has its own qualities, and these qualities are inseparable from the basic elements, and these elements of space, time, power, flow, and relationship are the elements that we are going to explore". It is through these elements that the body allows us to connect with ourselves and others. As early as the first half of the twentieth century, Laban made the call that "modern labour habits often cause damage to the mind, and if a remedy is not found, the whole culture of mankind must suffer." He advocated the artful creation of rhythmic, fluid work procedures in all areas of work, so as to avoid the fatigue of excessive tension and the laziness of excessive relaxation. Laban stood on the height of social and cultural history, and gave modern dance more social responsibilities: physical and mental health, education, and social transformation. (Qiu Hua, 2001)

Human kinesiology divides human movements into functional and expressive movements. Expressive movements have no obvious purpose for external things and mainly originate from inner impulses. Human movement not only has an external spatial form, but also has its internal meaning. The core of the theory of human kinesiology is to transform human beings through the relationship between body and mind shown by movements, and then transform human society. Laban believed that the whole world was full of contradictions, and if they could be harmonised properly, it would mean the progress of society. And dancers are trained in strength and effectiveness to ease and harmonise psychological and physiological contradictory conflicts, thus making dance training important for the development of the personality. "When people realise that it is possible to open their minds through the movements of their bodies, it opens up the possibility of using dance therapy." International academics have compared Laban's human kinesiology to Einstein's theory of relativity, arguing that Einstein revealed the mystery of cosmic movement, while Laban revealed the mystery of human movement. (Walter Sorrell, 1996).

There are many other studies related to this. For example, from 1940 to the 1970s, Laban's student Burtneff worked on the relationship between movement and mental health, developing "Burtneff's Basic Analysis of Movement", which emphasised the role of movement in stimulating and unifying people's feelings and bodies, and from 1950 to the 1970s, Thuud studied how body imagery and movement affect bodily sensations and attitudes, and Biviste studied how movement influences bodily sensations and attitudes. From the 1950s to the 1970s, Thunders studied how body imagery and movement affect bodily sensations, Bivest studied movement structure and social methods, and Zwilling analysed body movement in the therapeutic process.

## 4.3. Dance Psychology Theory

According to the theory of mind-body relationship of dance, the body is the "material" and "carrier" of dance, which carries the form and connotation of dance and presents them through the material of the body. Therefore, the correct perception of the body determines the concept of dance and affects the effect of dance teaching, training, performance and other activities. This shows the importance of the concept of body and mind for dance, which makes it necessary for us to further examine the relationship between the body and dance. From the perspective of dance ontology, Lv Yisheng points out the "ontology" of the body as a carrier and its relationship between body and mind. According to him, "the essential difference between the art of dance and other art carriers lies in the fact that its ultimate work is not a physical object outside the body, but the dancer's own human body. The bodies of the dance performers are the ultimate carriers of the dance work, and as such they are directly concerned with the realisation of the dance ontology". The relationship between body and mind as well as their movement performance is the connotation of dance ontology, which is the core content

of dance ontology and even dance art as a whole. The relationship between body and mind is the common research object of dance ontology, dance psychology and choreography. It can be seen that experts in the field of dance have long stood at the height of philosophy and aesthetics, explored the carrier of dance - the body, as well as the relationship between body and mind in dance, and emphasised the "sensual" and "ontological" characteristics of the body as the carrier of dance and the integration of body and mind. It emphasises the "sensual" and "ontological" characteristics of the body as a vehicle for dance, as well as the integration of mind and body. This point not only echoes the main direction of the relationship between body and mind in the current Western philosophical thought, but also embodies the concept of body and mind in Chinese philosophy, which provides theoretical support for the application of body and mind in dance. Meanwhile, in terms of practice, the founder of modern dance, Isadora. Duncan, the founder of modern dance, has the same idea of dance art as Nietzsche's philosophy of the body, which is based on "the monism of body and mind". Nietzsche regarded the creativity of the body as the core, valued one's own genuine, irrational intuitive feelings, emphasised human instincts and potentials, affirmed the equal status of the body and consciousness, and affirmed the original naturalness and dynamism of the human body. Influenced by Nietzsche and other European philosophers, Duncan's dance philosophy also emphasises the "monism of body and mind", and her deviation from traditional classical dance and breakthroughs in conventional dance techniques have led to her much talked about achievements in the field of modern dance art. This idea of being grounded in the spiritual realm and seeking equality and liberation of body and mind has influenced the philosophical concept of modern dance, resulting in a dance philosophy that respects the body and values its natural expression of emotion. One of the main aims of dance psychotherapy is to achieve a balanced unity of mind-body behaviour. The development of these related fields of research has further advanced the theory and practice of dance movement psychotherapy (Fuxi Yulan, 2002).

Dance movement and emotion theory, in dance psychology, love collectively referred to as feelings, it refers to the human needs to meet or not the attitude produced by the experience, the broader sense of emotion is emotion, the narrower sense of emotion refers exclusively to the middle level of emotion and sentiment of that emotion. According to the level of human needs: physiological needs, psychological needs and spiritual needs of the three levels, can be divided into emotion, emotion and sentiment three levels. Emotions common to humans and animals, and human physiological needs, emotions with situational, transient, so-called scene; emotions unique to mankind, emotion refers to the relationship between man and man, and human psychological activities are closely related to the emotions have stability, persistence and other characteristics; gymnastics is one of the highest level of human emotions, and human spiritual life is closely related to the gymnastics have stability, persistence, profoundness and Transcendence and other characteristics.

Dance movement and personality theory, all movements are reflective, the most essential nature of dance actually comes from human kinaesthesia, which is made up of muscle shuttles in the muscles, tendon shuttles in the tendons, and joint vesicles in the joints. Dance movement is perceived by the human body through the kinesthetic sense, so it is said that dance is a visual, auditory and kinesthetic art. The source of experience is from the movement of the body, through the link with the body, to obtain physical sensations, through the physical sensations, and ultimately expand to the inner heart of each person for the most essential sense of self, through the body muscles and nerves associated with the movement of the brain and cerebellum of each person and the body organically together, not only involves the essence of human movement, reflecting the inner inner dynamics, as well as the individual in the socially generated patterns of association.

Dance movement empathy theory, through empathy to establish movement relationship, using movement, non-verbal way, through observing the movement perception of their own body muscles, to understand the movement expression of the members, to establish movement empathy / kinesthetic empathy, through their own body movement, voice to perceive, express, feedback the emotional

expression of the members, through their own power of observation and dance ability, to match with the members' different emotions.

## 5. CONCLUSION

This paper provides an overview of the study, presents the background of dance movement therapy and the current development of dance movement therapy outside China. On this basis, it introduces the significance of Chinese dance movement therapy, the purpose of the study, the difficulties of the study, and combs through the scope of the study of Chinese dance movement therapy, as well as the relevant theoretical concepts. Finally, by sorting out the organisational structure of the paper, it is made clear how this paper systematically sorts out and analyses the applied research on Chinese dance movement therapy, and ultimately contributes to the deepening and development of research in this field.

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