BABEŞ-BOLYAI UNIVERSITY OF CLUJ-NAPOCA FACULTY OF PHYSICAL EDUCATION AND SPORT
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The Contribution of a Self-Supervision Model in Authentic Movement and EpiMotorics to Novice Dance Movement Therapists

Long Abstract

CONDUCĂTOR DE DOCTORAT
DOCTORAL COORDINATOR
Prof. GROSU EMILIA FLORINA, PhD

PhD Student
YIFAT SHALEM-ZAFARI

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List of Published Works

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ABSTRACT

This research sought to discover how a new and original self-supervision training model (SSM), based on Authentic Movement and EpiMotorics, affects novice dance movement therapists' movement features, emotional intelligence, self-efficacy, and emotion-related physiology. Little research has focused on novice dance movement therapists' practices and how such practices, particularly self-supervision, affect them.

A mixed-methods study was employed. Participants (n=72), novice dance therapists, were divided into an experimental and a control group. Qualitative analysis of filmed movement was followed by quantitative EpiMotorics analysis. Emotional intelligence and self-efficacy were measured in close-ended questionnaires. Emotion-related physiology was measured by a quantitative Pulse Oximeter physical examination. All quantitative measurements were gathered for the control and experimental group. A qualitative open-ended questionnaire and focus group discussion were also conducted.

The SSM intervention was found to have a robust effect on ten of the twelve movement features, a moderate effect on one, and a low to non-existent effect on one. The gap between 'before' and 'after' measurements was significantly higher in favor of the experimental group, as compared to the control group. The implementation of the SSM was found to improve levels of self-efficacy beyond those of the control group. Content analysis of the open-ended questionnaire and focus group indicated that the SSM positively impacted sense of self-efficacy and emotional intelligence capabilities.

The conclusions are that the SSM appears to refine features of movement and emotions, enhancing therapists' interpersonal, intrapersonal, and professional abilities. The SSM is related to integrating cognitive and emotional expressions in both verbal and motor languages, allowing it to affect therapists' physical, motor, verbal, and cognitive abilities. On the practical level, the SSM offers a pioneering approach to training. It is interdisciplinary and thus may be taught in diverse settings, such as seminars for students of physical education with a psychological emphasis; for art therapists and other therapists who incorporate a reference to the body; and for movement teachers.

Key words: Dance Movement Therapy and Physical Activity, EpiMotorics, Authentic Movement in Supervision, Kinesthetic Ability, Original Self-Supervision Model (SSM), Movement features, Emotion-Related Physiology, Emotional Intelligence, Self-Efficacy

Glossary of Terms

AM - Authentic Movement

ANS - Autonomic Nervous System

BMP - Binary Movement Profile

BPM - Beats Per Minute

DMT - Dance Movement Therapy

DNA - Deoxyribonucleic Acid

EI - Emotional Intelligence

EQ - Emotional Quotient

EQ-i - Emotional Quotient Inventory

ERP - Emotion-Related Physiology

HRV - Heart Rate Variability

IQ - *Intelligence Quotient*

KMP - Kestenberg Movement Profile

LF - Low Frequency

LMA - Laban Movement Analysis

PPV - Positive Predictive Value

SE - Self-Efficacy

SSM – Original Self-Supervision Model

Washington, D.C. – Washington, District of Columbia

INTRODUCTION

Research Background and Rationale

The purpose of the research described in this dissertation is to evaluate the Authentic Movement and Epimotorics'–based self-supervision model (SSM) as a valid and effective practice for novice dance movement therapists. Therefore, the main objective of this research is to examine how successful the SSM is in improving novice dance movement therapists' movement, emotional intelligence, self-efficacy, and emotion-related physiology.

In dance movement therapy, the relationship between supervisor and supervisee is one that facilitates physiological, emotional, and mental growth. In sports, this relationship finds a parallel in the relationship between athlete and coach. The present study focuses on the internalization of the mentor (supervisor/coach) from which therapists gain strength and guidance.

This study focuses on supervision in the context of dance movement therapy. Dance movement therapy is the therapeutic use of movement. In dance movement therapy, the therapist observes and responds to the physical movement of the other person, in order to access deep emotional content. Treatment through dance movement therapy rests on the conviction that changes in movement patterns can result in psychological change, and that psychological change influences a person's patterns of movement and the posture of the body. As in athletic activity and training, the physical actions of the activity impact one's mental and emotional state. Conversely, a person's emotional or mental state impacts their physical expression and performance. In dance movement therapy, the body and its physical activity are the main therapeutic tools, much like words are the tools in verbal psychotherapy.

One of the essential skills of a dance movement therapist is attunement to the client's verbal and movement expressions, in order to create empathy. In dance movement therapy, empathy includes kinesthetic empathy (Kestenberg, 1975; Federman, 2011; Panhofer et al., 2011). The therapist's goal is to help the client find the words to describe their physical experience, kinesthetic experience, emotional response, or stream of thought (Panhofer et al., 2011). To achieve this, the therapist requires emotional intelligence, which

relies on nonverbal language and is one of the roots of empathy (Goleman, 2006). Dance movement therapy has deep ties to nonverbal communication (Chaiklin, 1975).

In order to document and respond to movement, many methods of observation and analysis have been developed. Methods of observing and analyzing movement have arisen in a variety of fields of study since the time of Charles Darwin (d. 1882) (Rossberg-Gempton & Poole, 1992). One approach to studying movement is the study of nonverbal behavior, focusing mainly on the movement and bodily gestures that arise within the structure of daily life and the actions involved it. Another approach to movement observation and analysis is that which is based in psychoanalytic thinking and relates to both everyday movement and to emotive movement or dance. Several of these methods are used frequently in dance movement therapy, including Laban Movement Analysis (LMA) and the Kestenberg Movement Profile (KMP) (Daly, 1988). Another such method, developed more recently over the past fifteen to twenty years, is the EpiMotorics body-movement-mind paradigm. It was created as a tool for use in dance movement therapy; it addresses the connections between observed movement qualities or movement forms, and their emotive, psychodynamic significance (Shahar-Levy, 2009). The various methods of movement observation and analysis serve as essential tools in dance movement therapy, helping practitioners understand, organize, and interpret human movement (Davis, Markus, & Walters, 2006; Goodill, 2005; Moore & Yamamoto, 2012; Panhofer, 2005; Panhofer, Payne, Meekums, & Parke, 2011a).

Each of these methods outlines a number of identifiable movement characteristics that the therapist can record while observing a client's movement. These methods provide therapists with a vocabulary for analyzing and discussing movement (Panhofer et al., 2011a). The use of this type of professional language – describing the visible movement as objectively as possible – helps the therapist avoid projecting thoughts or feelings from their own world onto the client and onto the content arising from the movement (Shahar-Levy, 2004; 2009; 2017; Shalem-Zafari & Grosu, 2016).

As in many other fields, especially therapeutic fields, supervision is an essential part of a therapist's work. Despite awareness about the significance of supervision in therapists' training and in clinical practice, there are very few studies about supervision in dance movement therapy. "Authentic Movement," an embodied approach to movement

work that is used widely in dance movement therapy and supervision, has been explored in even fewer supervision studies (Federman, 2011). EpiMotorics, the movement observation and analysis method mentioned above, has never been studied in the context of supervision, despite being taught in all dance movement therapy training programs in Israel and in several European countries. Though it has not been studied in the context of supervision, several studies have examined the use of EpiMotorics and have demonstrated its high level of sophistication and efficacy (Specktor, 2015; Skrzypek, 2017) The use of EpiMotorics in various ways and for various purposes in the therapeutic fields reflects a growing attention to the body and movement in the therapy setting. The model of self-supervision proposed in this study examines the integration of Authentic Movement and the EpiMotorics method. No research examining this particular topic was found in the literature.

The present study measures changes among novice dance movement therapists over the course of learning and implementing a self-supervision model based on the integration of Authentic Movement and EpiMotorics, using a mixed-methods approach. In particular, this study allowed the researcher to quantitatively measure how the new model affected novice dance movement therapists' movement features, emotion-related physiology, emotional intelligence, and sense of self-efficacy.

This research is significant to the process of enhancing the professional capabilities of novice dance movement therapists, in the context of supervision; this is of particular importance because therapists at this stage are involved in the intensive process of forming their professional identities. Ko (2014) emphasizes the insecurity of novice therapists and the need for guidance beyond the allotted hours of supervision. Thus this study examines, among other things, whether the self-supervision model that was developed and tested serves to enhance motor performance capabilities and increase the therapists' sense of confidence. It is an original model and has the potential to contribute new insights.

Problem Statement and Gap in Knowledge

Gap in Knowledge: The model's combination of body-movement, free-metaphoric writing, and professional terminology was designed in order to learn about verbal and nonverbal interaction while maintaining the appropriate professional stance

necessary in the supervision context. Very little research has been conducted on supervision in dance movement therapy, even less on Authentic Movement, and not at all on the use of EpiMotorics in supervision. The supervision model examined in this study is a unique model, about which there are no previous studies. It hopes to contribute to new insights, tools, and directions for further research. The model is likely to be universal, international, cross-cultural, and cross-social stratification.

Research Boundaries: The present research examined the effect of the SSM based on Authentic Movement and EpiMotorics on changes in physiological, psychological, and movement features of novice dance movement therapists. A mixed methods approach, utilizing qualitative and quantitative tools, was used: First, a qualitative video analysis was done to create quantitative measurements of movement features for all participants (n=72, 36 in the research group and 36 in the control group). Emotional intelligence and self-efficacy were measured for both groups using close-ended questionnaires. Phase 2 used an additional three measures: An open-ended questionnaire to analyze the emotional intelligence and self-efficacy of the research group (n=36), followed by a focus group qualitative analysis; the final measure addressed physiological features using a pulse oximeter to measure the heart rate and oxygen saturation of participants in both the research and control group.

CHAPTER I: THEORETICAL PERSPECTIVES

1.1 What is Dance Movement Therapy (DMT)?

Dance movement therapy is "the psychotherapeutic use of movement as a process which furthers the emotional, cognitive, social and physical integration of the individual" (ADTA, 2017). Combining aspects of body-movement expression, creativity in dance, and psychotherapeutic insights, dance movement therapy enhances the integration of an individual's physiology and psychology. (Shahar-Levy, 2009; Stanton-Jones, 1992; Weiner & Craighead, 2010). Of central importance to this process are the relationship between the therapist and client, creativity as a source of change, and the insight that mental processing of the unconscious begins with awareness of the body and its movement (Stanton-Jones, 1992; Wengrower, 2009).

Dance movement therapy is based on a multi-disciplinary knowledge of the body and of psychology, gleaning from theories and methods of individual and group psychotherapy (Weiner & Craighead, 2010); research about nonverbal communication (Davis & Skupien, 1982); body-motion development; and developmental psychology (Shahar-Levy, 2009; Kestenberg J. , 1975). Additionally, a dance movement therapist may also use systems of analyzing movement in order to gain deeper understanding of qualities of movement (Shahar-Levy, 2009; Kestenberg Amighi, Loman, Lewis, & Sossin, 1999; Laban, 1974)

In this kind of therapy, the client develops the ability to be aware of his emotional and physical experience, and of the close relationship between them. This can be done in individual or group therapy. The group setting allows for the examination and practice of interpersonal behaviors and relationships (Schmais, 1981), through movement interactions and verbal sharing, and associations or images that may arise.

Dance movement therapy is based on the principle that there is a connection between motion and emotion (Payne H. , 1992); one uses observation of movement and response to movement in order to reveal its emotional content. Thus, the abstract nature of our emotional state appears to be translated into visual forms related to the position and movements of the body. Changes in movement patterns can reveal or reflect psychological changes and psychological changes affect body/movement patterns.

1.2 Authentic Movement: Combining Jungian Theory, Dance-movement, and the Potential for Change

Authentic Movement, which has also been called "Active Imagination in Movement" and "Movement in Depth" is based on the understanding that "emotion and dance are inseparable" (Chodorow, 1997).

Chodorow believed that emotions could come forward through the process of creative movement. She also recognized that unexpressed emotions can remain trapped in the body and cause a pattern or restriction, which may even become a distortion in the body. Chodorow held that the relationship between body-psyche and emotions are the "keys" in dance movement therapy (1997), and was inspired by the theories of Carl Jung for whom the emotions were "at the foundation of the psyche" (Chodorow, 1992). Chodorow concluded, "In the depths of the unconscious, it is the emotions that mediate between the realms of body and psyche, instinct and spirit" (1992).

Wyman-McGinty (1998) proposed that the goal of Authentic Movement is "to contain" and to unite the tension of creativity with images and emotions. Authentic Movement encourages the use of the body to allow access to the unconscious. It utilizes knowledge that is concealed in the body (Young, 2012).

Created from the explorations of those who were first captivated by movement as a form of therapy (Lowell, 2002; Adler, 2002; Stromsted, 2009; Taylor, 2007; Hendricks, 2010), the Authentic Movement practice begins with the mover closing her eyes and waiting, while being observed by an observer/witness. The mover waits to move in response to an emotion, impulse, or sensation.

The basis for the Authentic Movement discipline is the relationship between the mover's self and the witness's self (Adler, 1996). As the mover waits and moves, she develops her own inner witness, who observes the inner activity, watching for the impulse, image, sensation, or emotions that arise. Thus, the internal relationship of the mover to herself is a central part of the practice (Stromsted, 2009; Taylor, 2007). The witness also strengthens her inner observer, watching both the mover and her own internal activity, such as emotions, sensations, or images that arise while also observing the mover. After the movement portion is over, the mover and witness do a verbal sharing of their own experiences.

Authentic Movement invites one to enter the inner world of the psyche by moving naturally. This technique can be practiced in a group or one-on-one. The practice of this movement format seeks the sensation of self beyond the ego and intensifies kinesthetic awareness (Lowell, 2002).

1.3 Introduction to Emotional Intelligence and Self-Efficacy

Modern psychology has engaged in research on emotional intelligence for over two decades. The basic definition of emotional intelligence is the ability to understand and communicate feelings, understand one's own and others' emotions, and regulate emotions efficiently. This involves emotional awareness, including the ability to identify emotions, harness emotions and apply them to tasks like thinking and problem-solving, and manage one's emotions and help cheer up or soothe others (Goleman, 1998; Zeidner, Matthews, & Roberts, 2012). Emotional intelligence has entered into a wide variety of areas, inspiring varied definitions (Zeidner, Matthews, & Roberts, 2012; Tortora, 2016).

In this study, the proposed SSM corresponds with this definition of emotional intelligence. It integrates emotional movement observation, structured using the Authentic Movement model, which invites an emotional focus and uses metaphors and images as a way of opening the emotional space to words. The EpiMotorics tool allows one to understand emotional information emerging through movement by analyzing it. The present research also proposes a new way of measuring emotional intelligence, through body-movement features, which are related to the nonverbal aspects of emotional intelligence (Shalem-Zafari & Grosu, 2017a; 2017b)

1.3.1 Emotional intelligence – Nonverbal communication and dance movement therapy

One of the main components of emotional intelligence identified by those doing research in this area is the ability to recognize emotions through nonverbal signs and communication. For humans, there has apparently always been a relationship between outer expression and emotions. Darwin's book, *The Expression of Emotions in Man and Animals* (Darwin, 1872) was the first book that explored facial and bodily expressions in

connection with emotions, and also their relationship to biological versus cultural influence (DePaulo & Friedman, 1998).

1.3.2 The relationship between emotional intelligence, self-efficacy, and dance movement therapy

Dance movement therapy is based on the recently-developed approach to dance as a multisensory experience that engages one's body-movement, emotional, cognitive, and cultural abilities (Shalem-Zafari & Grosu, 2017a). Dance fosters a connection with the bodily self to support one's handling of everyday problems. People's bodily postures and the way they move determine how they take in and respond to the world, and how they experience in it. The connections between emotions and understanding, or the knowledge base of emotional intelligence, continues to be studied and explored in the growing field of embodiment (Fuchs & Koch, 2014; Koch S. C., 2011; 2013; 2014; Koch, et al., 2016).

Elfenbein et al. (2006) discuss the ability to identify, be aware of, and use emotions wisely, for one's own sake and for the sake of others and the environment. In claiming this, she joins Tadmor et al. (2016) and many others whose view the ability to manage emotions as an important component of emotional intelligence. Through this ability, the possibilities for choice, response, and action are broadened, allowing for enhanced functioning (Schwartz, Nissim, & Zohar, 2015). Improving one's functioning directly improves self-efficacy, and higher self-efficacy improves performance ability and emotional intelligence (Mikolajczak & Luminet, 2008). Better emotional intelligence enhances the ability to identify and use emotions. Hence a cycle is created that nurtures both self-efficacy and emotional intelligence.

This researcher's perspective is that addressing emotions requires that one consider the various ways in which emotion is reflected – in the physical/body/movement expressions as well as in words and cognition. This is so that one may gather all of the information stored in these expressions. Each researcher relates to these various pieces of information, but it can leave our understanding of the emotions incomplete. It is desirable and even necessary for these pieces of information to be integrated in order to obtain the fullest possible understanding.

1. 4 Physiological Parameters Associated With Emotional States

When communicating, humans grasp and express emotional information through many channels, including facial expressions, body-movement and posture, and prosody (rhythm and intonation of language). Although the body has historically been considered a vehicle for performing actions, it is now understood that the body is also an important medium for expressing emotion. Indeed, the study of emotional body language is quickly becoming a new field of study in cognitive neuroscience and neuropsychology (De Gelder, De Borst, & Watson, 2015).

One of the first topics explored in the fields of philosophy and psychology has been the connection between the body and soul. How can people's thoughts and state of mind affect the makeup and cells of the body? This question is even explored in the Bible. King Solomon says, "The spirit of a man will sustain him in sickness, but who can bear a broken spirit?" (Proverbs 18:14, New King James Version). That is to say, a man whose spirit is sickly and broken will experience bodily ailments, and vice versa. With the understanding that the body and the psyche are deeply connected, it also becomes clear that one can learn about one from the other: "Every voice had its distinctive repertoire of expressive forms, and so, too, did every heart… [the heart's beating] betrayed much about body and soul and altered with time or according to the situation" (Sendker, 2002).

Much research has been done on the physiological changes associated with emotions. Affective states such as depression, anxiety, and chronic anger have been shown to impede the functioning of the immune system and are associated with various maladies (Picard, 1997). Physiological parameters associated with emotional states include blood pressure and pulse rate and regularity (Lewis & Haviland-Jones, 2000).

1.4.1 Pulse and oxygen saturation: Key concepts

Pulse: This is the term for the contraction and expansion of the arteries in response to the heart's activity. Measuring a person's pulse involves touching an area of the body where the arteries are close to the skin and ascertaining the number of beats per minute (BPM). Since the pulse rate corresponds with the heart rate, measuring a person's pulse

makes it easy to measure a person's heart rate. The average pulse of an adult at rest is 60-80 BPM. Children, babies, and pregnant women have higher pulses of 80-120 BPM. Athletes who train regularly and develop the heart muscle have a decreased resting heart rate of around 40-60 BPM. During physical exertion, excitement, illness, or injury, the pulse increases. The maximum pulse that one can reach through exertion depends on one's age and is 220 BPM minus the person's age (Fang, Hu, Wei, Shao, & Luo, 2014). During strenuous physical activity, much oxygen is required, and so the heart must work more quickly (though increasing the pulse) and more strongly (through increasing the contraction and compression of the heart) (Tusman, Bohm, & Suarez-Sipmann, 2017).

Oxygen Saturation: Oxygen saturation is the fraction of oxygen-saturated hemoglobin in the blood out of all the hemoglobin, both saturated and unsaturated. Hemoglobin is a protein in the red blood cells. It becomes oxygenated in the lungs, where there is a high concentration of oxygen. The oxygenated hemoglobin is carried along in the bloodstream to other parts of the body, where the concentration is lower. The oxygen is released, allowing the organs and the organism to perform their functions. Availability of oxygen is a crucial element for a living human body. The hemoglobin collects carbon dioxide and brings it back to the respiratory organs to release it from the organism. In arterial blood, which is blood that has been freshly oxygenated by the lungs and is ready to bring oxygen to the body's peripheral organs, optimal levels of oxygen saturation are an SPO_2 (estimated amount of oxygen in the blood) of 95%-100% (Brand, Brand, & Jay, 2002). Mild hypoxemia (hypoxemia is an oxygen deficiency in arterial blood), involves SPO_2 values of 88%-88%, intermediate hypoxemia has values of 83%-88%, and severe hypoxemia involves levels lower than 83%. If a patient's SPO_2 falls under 93%, he must be monitored closely. Insufficient oxygen has been shown to have very negative effects among adults as well as fetuses (Tusman, Bohm, & Suarez-Sipmann, 2017).

1.5 Supervision

The therapy professions consider supervision to be a central facet of learning to be an effective therapist. In supervision, therapists both receive professional training and undergo the process of building a professional therapeutic identity (Watkins, 1997). Supervision has been shown to enhance therapists' professional skills (Panhofer, 2008).

The central goal in the supervision process is to help a therapist build the skills he or she needs in order to provide clients with beneficial therapy. In this way, the relationship of supervisor and supervisee serves to support the relationship of the therapist and her client(s) (Brown, Meyerowitk Katz, & Ryde, 2007). Supervision is a space for contemplation, reflection, and insight, wherein the supervisor and supervisee work together to understand the client and the client-therapist relationship (Case, 2007).

Supervision may occur in a one-on-one setting between a supervisee and supervisor, or can be done in a group setting, with a number of supervisees and a supervisor. The supervision process includes consultation, advice, and learning, which are offered according to the supervisee's needs (Barnett, Erickson Cornish, Goodyear, & Lichtenberg, 2007). However, beyond the cognitive contemplation of a clinical case, supervision must be a safe space for the therapist to explore feelings arising in their work, such as confusion, anxiety, or uncertainty (Payne, 2008). Mollon (1989) has supported the need for emotional safety in supervision, adding that supervision should involve the expression of feeling, and mirroring of those feelings by the supervisor. Supervision is a setting where both logic and emotion are welcome and exist simultaneously, so that the supervisee can work on clinical material in an authentic and conscious manner.

1.5.1 Self-Supervision

While the importance of supervision for therapist-development is widely agreed upon, there are circumstances in which supervision is unavailable (Dennin & Ellis, 2003). For example, novice therapists feel the need to advise with their supervisor more often than the supervisor is available (Yager, 1987).

A self-supervision model can certainly not replace classic supervision (group, pair, or private). Rather, it can serve as a complementary, enriching model, that provides an answer in those moments in which the therapist feels the needs for guidance and his supervisor is unavailable. Only three writers were found who addressed self-supervision in the creative arts therapies (Ko, 2014; Payne, 2001; Yager, 1987).

In 1985, Casement coined the term "the internal supervisor" (1985). Whitehouse (2000), Chodorow (1992), and Payne (2008) used this term relating to one aspect of the witness role in Authentic Movement. The internal supervisor is able to observe and absorb

information and reflect upon it with a degree of distance or separation. A self-supervision model is meant to help therapists identify and change undesired patterns of response and improve their therapeutic skills (Barnett, Erickson Cornish, Goodyear, & Lichtenberg, 2007) Studies have shown that self-supervision models can be important in controlling sexual attraction to clients (Martin, Godfrey, Meekums, & Madill, 2011).

1.6 EpiMotorics Method of Movement Analysis

'Emotions play out in the theater of the body.' (Damasio, 2003, p. 28)

EpiMotorics is a method of movement assessment and therapy, developed by Yona Shahar-Levy. She is among the top dance movement therapists in Israel and her method has been used in Europe, as well. EpiMotorics has a universal system of guidelines with which to enter data about the therapy client. Analyzing the data collected through observation allows one to outline a picture of the bodily-emotional world of the person who is moving, and to use the information for therapeutic and supervision intervention.

1.6.1 Why choose EpiMotorics?

As discussed above, EpiMotorics builds upon the knowledge and tools developed by its predecessors in the area of movement analysis, Kestenberg and Laban. Beyond this, there are two central reasons why EpiMotorics was chosen as the methodology used both as part of the self-supervision model (SSM) itself, as well as in the process of gathering and analyzing the data of the participants' movement. Firstly, the EpiMotorics paradigm and methodology incorporates the language of the body/movement and that of verbal/cognitive language. The integration of cognition and emotion is a cornerstone of emotional intelligence and allows dance movement therapists to move between these two modes with confidence. The second reason that EpiMotorics is used is its ability to be serve as a phenomenological, objective tool. This both serves the therapists, as they attempt to understand the content of their work from an objective perspective, and makes the tool appropriate and effective as the framework for gathering and analyzing movement data.

EpiMotorics is an approach that invites connection between verbal and nonverbal/movement language. Shahar-Levy (2017) has noted the use of metaphor and imagery to bring up unconscious content, similar to Jung's approach (upon which

Authentic Movement is based), which is then expressed and organized with cognitive tools. This fosters an attuned approach to emotive movement. Memories hidden within motor codes, which are therefore not always accessible in verbal recall, arise spontaneously through the use of movement, and can then be verbalized or acknowledged. Thus it allows one to gain information from the language of the body and incorporate it into cognitive processing.

CHAPTER II: VALIDATION OF THE PILOT RESEARCH

Before conducting the broader research on the effects of the self-supervision model (SSM), a pilot study was conducted in order to refine the research tools and gain insight relevant for the broader study. The pilot study was based on a workshop given at the Seventh Annual Expressive Arts Therapies Summit that took place in New York City in 2016.

2.1 Research Paradigm and Approach

2.1.1 Theoretical Background: The SSM as an intervention program

Dance movement therapists continually seek out keys in bodily postures and motor movement in order to better understand the psychological state of the mover. The new self-supervision model offers a powerful tool for therapists to understand their clients' emotional state. Once learned, each participant can make use of this self-supervision model going forward.

The model is based on Authentic Movement and on the writings and teachings of Yona Shahar-Levy (2004; 2017), combining body/movement, free-metaphoric writing, and professional vocabulary. The purpose of the model is to provide a tool for therapists to guide themselves through self-supervision that will improve their abilities, as well as their sense of capability, and that will take advantage of the information available in the body as well as cognitive information.

The model arose from a need perceived during the researcher's extensive work teaching and working in the fields of psychotherapy and psychiatry. The need that was identified was that of finding the bridges between the world of movement and the world of words. It appeared that the combination of using a movement analysis method together with Authentic Movement provides these *bridges* on a bodily level. The therapist uses words as movement and movement as words (Hendricks, 2010). The model integrates the bodily instincts in its motor expressions with words and consciousness, allowing for analysis and verbal discussion. Over the years, the researcher's fieldwork has allowed for the development (improvement, clarification, and simplification) of the SSM. Below is an outline of the SSM.

Table 1: The Self-Supervision Model (original contribution)

Phase	**Time frame**	**Instrument**	**Procedures**
Identifying the subject matter	As required by supervisee	Pen and paper	The supervisee writes down the event (subject matter or presenting problem) he would like to examine and the moment it presented itself. He may write it in whatever style he chooses, with the writing not exceeding one page.
Physical movement warm-up	As required by supervisee	Movement equipment /music if desired	Allowing the attention to travel to the body, the supervisee becomes acquainted with the space and surroundings in order to feel safe. He connects with his physical self and state. If needed, he may change his state according to the event/ subject matter at hand
Allowing the moment to *move you*	7 minutes	Filmed with a video recording device, if desired	The mover taps into the somatic and kinesthetic mode. He is invited to allow physical activity to arise, based on the text written in the first stage. The mover closes his eyes, and imagines, in detail, the situation he has brought to the supervision. He awaits the urge to move, and creates a free association in movement.
Self-Witnessing	No time-limit	Pen and paper	Stage one: Supervisee describes the physical activity using the vocabulary of EpiMotorics observation and analysis (For those who are not dance movement therapists, other movement language can be used, e.g. from sports, yoga, dance, etc.) Stage two: Free-writing. Formulate a single sentence in the first-person.
Observation and Evaluation	No time-limit	Pen and paper	The evaluation process serves to reflect on the created product, and any insights emerging from this. in order to assess its utility and application (Ko, 2014) Supervisee reads the first text, *Identifying the presenting problem*, and the *Self-witnessing* text. He writes down thoughts about the patient, about himself, and about the relationship between himself and the patient. He formulates a single sentence in the plural first-person. Supervisee considers the two sentences – the first-person singular and the first-person plural - and ties them in to whatever information can be understood from the EpiMotorics analysis.

2.1.2 Research design

The pilot study used qualitative methods of research in order to examine the effects of the unique training model (SSM) on the movement features. The pilot research design was conducted in a single stage. Video recordings of movements were numerally coded, before and after the implementation of the SSM.

2.2 Research Design and Methodology

2.2.1 Preview

The pilot study involved using a short-term intervention in order to examine the effects of the SSM based on Authentic Movement and EpiMotorics. Although the small sample size and limited nature of a short-term intervention have clear limitations, the research literature from the field of dance movement therapy includes precedents for utilizing one-time interventions (Koch et al., 2016; Koch, Morlinghaus, & Fuchs, 2007) and a small number of participants; Wiedenhofer, Hofinger, Wagner, and Koch (2016) conducted a study with six participants on the health effects of non-goal-oriented movement. The topic of using a small sample size has been written about by Wiedenhofer and Koch (2017), who posit that when an occurrence of specific effects is demonstrated in a small sample size, one can often assume that these effects will also be found in larger sample sizes.

2.2.2 Research goals, questions and hypotheses

Research goals

The pilot study's objective was to provide preliminary findings about the SSM based on Authentic Movement and EpiMotorics. It specifically addresses the SSM's ability to cause changes in movement features, and aimed to refine the tool of movement features for use in the broader study. The features might predict a relationship between movement patterns and the psychological factors of emotional intelligence and self-efficacy.

Research questions

Which movement features are affected by the use of the SSM? and how are they affected?

Research hypothesis

The hypothesis of the pilot study was that the movement features would change significantly following the implementation of the SSM based on Authentic Movement and EpiMotorics.

2.3 Research Population and Sample

2.3.1 Sampling methods

Each participant was personally invited by the researcher, who invited them to participate in the pilot study for the experimental self-supervision training. Six individuals gave their consent to participate in the pilot study. These six participants formed the pilot group.

2.3.2 Participants' characteristics

All six participants in this pilot study shared the following characteristics:
All were dance movement therapists or therapists who relate to the body and movement in therapy.

A. All six participants previously interacted with the researcher, i.e. the workshop facilitator, and one another in a short meeting prior to the workshop. The choice to do so was in order to reduce tensions natural to the first stages of forming a group; such tension can be expressed in increased emotionality, shyness, and reduced confidence, all things that impact one's movement (Ko, 2014). Familiarity with others in the groups helps shorten the process of getting comfortable and can thus control for some of those variables, which allows for a more accurate examination of the workshop's impact on participants (Panhofer, 2005).

B. The participants had similar background knowledge in the two approaches, Authentic Movement and EpiMotorics. This helped control for differences in knowledge or a lack of previous familiarity with the approaches. None of the participants were previously acquainted with the SSM.

C. All six participants were acquainted with the idea that dance can give rise to previously unidentified information, energy, and emotion (Leseho & Maxwell, 2010).

The research group consisted of six participants, all women, aged 30 to 50 years old. All participants were middle-class post-graduates.

2.3.3 Ethical issues

Several ethical principles guided the research and facilitated the establishment and maintenance of appropriate standards: First, the researcher remained vigilant to the ultimate goal of the research, namely, to empower the participants. Alongside this goal, the privacy of the participants and protection of their rights and well-being were crucial.

Furthermore, the pilot study's participants were fully informed with regards to the study's goals and design. Before the workshop, the researcher held a meeting with all of the participants in order to discuss the purpose of the study, the time frame, and to answer questions. Participants were informed during the meeting that the data and findings would be handled discreetly, maintaining their anonymity in any publication.

2.4 Research Instruments

The core instrument in the pilot study, and in the present study more broadly, is the original SSM, based on the Authentic Movement and EpiMotorics approaches. The pilot study utilized quantitative instruments. Before and after the training in the SSM, video recordings were made of the workshop participants while in movement. The video recordings were later analyzed, using the EpiMotorics movement analysis as the instrument for analysis. Epimotorics scale used for analyzing the movement in the recordings is described later in this chapter.

Video recordings

During the workshop, two cameras were set up in fixed areas in the workshop room in order to film participants' movement. The camera position did not change during the course of the workshop. Although the entire workshop was filmed, for the purposes of the pilot study, the researcher used only filmed sections that documented the beginning of the training and the end of the training,

Video analysis

For the movement analysis, video segments were chosen for each participant wherein most of the participant's body is visible, to afford the best view for observing the subject's movement repertoire. The two investigators independently reviewed the videos in order to identify segments in the data that were related to the research focus. The selected segments were compared in order to identify commonalities and differences; they were then combined into various categories, according to which the data was coded. Following this, the two investigators refined and named the categories. The data segments were then re-examined and reassigned to the various categories.

EpiMotorics Scale for Examination of Movement features

Because of the complex nature of human movement, a sophisticated analysis tool was required in order to analyze the participants' movement in this study. The EpiMotorics method was chosen for this purpose. It is a psychomotor model for the observation, analysis, and interpretation of emotive motor behavior. It is a conceptual model that interweaves body-movement-mind and is based on a developmental, psychoanalytic approach to human emotive behavior. As such, it is used for movement analysis, psychophysical assessment, and dance movement therapy. It can be used for diagnostic purposes by applying a binary categorization of human psychophysical potentials. These are represented in the Matrix of Binary Core-Potentials (see Fig. 1 in Chapter I) (Shahar-Levy, 2017). Table 3 is a summary of the movement features. Table 4 provides the name of each movement feature along with a description, and an illustrative photo for each of the movement features examined in the pilot study.

2.5 Pilot Study Findings

44 movement features were examined in the pilot study. The findings demonstrate that some movement features were affected more than others. Of the 44 movement features, 14 were shown to have statistically significant differences after the SSM implementation. Two were lower after the SSM implementation and the rest were higher. Of the movement

features that were higher after the SSM implementation, eight were significantly higher and four were marginally significantly higher. One of the movement features, Vibration wavy movement, was found to be challenging to identify through video observation. Another two features, Rotation and Trunk activation, showed no change before and after the SSM implementation.

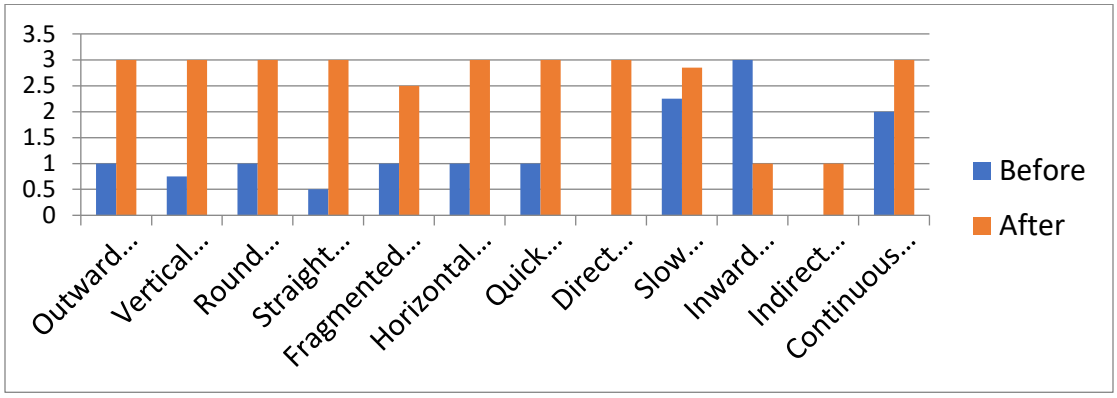

Figure 1: Median Differences in Movement features before and after implementation of SSM in Pilot Study

2.6 Conclusion of Pilot Study

The pilot study aimed to provide preliminary findings about the effects of the SSM based on Authentic Movement and EpiMotorics. The study's findings indicate a clear impact of the short-term intervention on the participants' movement features. It served to provide information about refining the research tools for use in the broader study, indicating which movement features responded to the SSM. The broader research study aims to examine the effects of the SSM on movement features, emotional intelligence, self-efficacy, and emotion-related physiology, In the context of that research, there is a further examination of the relationship between movement features and psychological parameters; such an examination can help establish the relationship between movement and psychological elements. Because the SSM hopes to give novice therapists' tools that serve them in their work, the pilot study was encouraging in that the movement features most affected were those related to attachment and connection – two areas that are crucial for developing therapists.

CHAPTER III: METHODOLOGY OF THE RESEARCH ENTITLED: THE CONTRIBUTION OF A SELF-SUPERVISION MODEL IN AUTHENTIC MOVEMENT AND EPIMOTORICS TO NOVICE MOVEMENT THERAPISTS

3.1 Research Paradigm and Approach: Mixed-Methods Research

The mixed method approach is rooted in the two classical research paradigms, quantitative and qualitative, which were derived from different philosophical principles and conceptions of reality. The quantitative paradigm is positivistic and based on the perception of an absolute reality, which is constant and non-evolving, and which can be evaluated by statistical methods. The qualitative paradigm, on the other hand, takes a naturalistic approach to reality as an internal, individually-constructed reality that is shaped by the cultural and personal experiences of the research participants. Proponents of this approach believe that in order to be understood, phenomena and processes must be studied in the dynamic and evolving social and historical context in which they occur (Shkedi, 2011).

Naturalistic researchers strive for an understanding and presentation of reality in a way that both heightens the researcher's own awareness and that of the participants. In contrast, positivistic research aims at hard data and an understanding of the connections between variables (Shkedi, 2011). In keeping with these differences, the two approaches differ regarding data analysis and interpretation as well.

Qualitative-constructivist researchers attempt to understand the phenomena being studied as it was perceived by research subjects. They prefer staying as close as possible to the unique view of the world among those participating in the processes under investigation (Maykut, Maykut, & Morehouse, 1994). Subjectivity, according to this approach, is crucial to understanding (Dwyer & Buckle, 2009). The positivistic approach to research, on the other hand, is based on a clear differentiation between the objective and

the subjective worlds; the use of unique sets of tools for data collection helps maintain unbiased objectivity (Maykut, Maykut, & Morehouse, 1994).

It is common for researchers to compare qualitative and quantitative methods in terms of the advantages and disadvantages of each (Fetters, Curry, & Creswell, 2013). In terms of reasoning, quantitative research uses deduction, objectivity, and causation; the main advantage of this method is the highly economical way of collecting large amounts of data using closed research instruments and tools for analysis that are pre-specified and outcome-oriented and that can cope with volumes of information in short periods of time (Tashakkori & Teddlie, 2010). In this research, changes were examined in 12 movement features, in addition to physiological parameters such as pulse and oxygen saturation, measured by a Pulse Oximeter. Moreover, the quantitative analysis included measures of emotional intelligence and self-efficacy from close-ended questionnaires.

3.1.1 Theoretical Background

As described at length in the Introduction and Chapter I, this research is based on knowledge and research from the fields of dance movement therapy, particularly the Authentic Movement and EpiMotorics approaches, and concepts from the field of psychology including Jungian psychotherapy, emotional intelligence and self-efficacy. In addition, it draws on research connecting physiological parameters with emotional states.

3.1.2 Research design

Table 2, below, outlines the research design, incorporating mixed methods embedded in an experimental model.

Table 2: Research design according to the mixed method embedded experimental model – variables, stages, instruments, and participants

	Variables				
	Movement Features	*Emotional Intelligence and Self-Efficacy*			*Emotion-Related Physiology*
Instruments	Video analysis (Qualitative) followed by EpiMotorics analysis (Quantitative)	Close-ended questionnaires (Quantitative)	Open-ended questionnaire (Qualitative)	Focus Group (Qualitative)	Pulse Oximeter Physical Examination (Quantitative)
Phase 1	Research group (n=36) Control group (n=36)	Research group (n=36) Control group (n=36)			Research group (n=36) Control group (n=36)
Intervention: Applying the SSM to the research groups					
Phase 2	Research group (n=36) Control group (n=36)	Research group (n=36) Control group (n=36)	Research group (n=36)	Research group (n=36)	Research group (n=36) Control group (n=36)

3.2 Research Design and Methodology

3.2.1 Research goals, questions and hypotheses

Research goals

1. To measure the effectiveness of the Authentic Movement and the EpiMotorics–based self-supervision model in improving novice dance movement therapists' movement, emotional intelligence, self-efficacy, and emotion-related physiology.
2. To examine how novice dance movement therapists experience the self-supervision model integrating Authentic Movement and EpiMotorics and to explore its' influence on their perceptions of themselves as professionals.
3. To explore the relationship between movement features, emotional intelligence, self-efficacy, and emotion-related physiology.

Research Questions

The main question that drives the current research is:

Does the self-supervision model affect physiological and movement features, emotional intelligence, self-efficacy, and emotion-related physiology of novice dance movement therapists? If so, in which ways?

Research Hypotheses

The current research examined three hypotheses:

1) The new self-supervision model will change the movement features of novice dance movement therapists:

(a) Practicing the Authentic Movement and EpiMotorics–based self-supervision model will lead to more confident, assured, and self-aware movement (e.g. to less inward, quick, fragmented, and indirect movements)

(b) Practicing the Authentic Movement and EpiMotorics–based self-supervision model will lead to more emotional and interaction-oriented movement (e.g. to more outward, round (curved) shaped, linear (straight) shaped, horizontal (alignment) shaped, vertical (alignment) shaped, continuous, slow, and direct movements).

2) Practicing the Authentic Movement and EpiMotorics–based self-supervision model will improve novice dance movement therapists' emotional intelligence and self-efficacy.

3) Practicing the Authentic Movement and EpiMotorics–based self-supervision model will improve emotion-related physiology of novice dance movement therapists:

(a) Practicing the new self-supervision model will decrease participants' heart rate.

(b) Practicing the new self-supervision model will increase participants' oxygen saturation.

3.3 Research Population and Sample

3.3.1 Sampling methods

The researcher addressed all participants in a personal letter, asking if they would be interested in participating in the experimental self-supervision training. Thirty-six gave their consent to participate. These 36 participants formed the research group.

As participants from the control group had to be supervised by someone other than the researcher to avoid a conflict of interests and minimize research bias. The researcher approached the 36 individuals, randomly selected by the researcher' colleague, and asked for their consent to participate in the study.

3.3.2 Participants' characteristics

All 72 participants in this study shared the following characteristics:

A. 'Novice' therapists, defined as those who have been practicing for no more than five years in a full-time job and who have not yet reached the professional level where they can serve as supervisors to other therapists. The five-year cutoff is based on the definition by the expressive arts' association in Israel (Yahat, 2017). The choice to use novice therapists in this study is because these therapists are at a stage that allows one to see significant change.
B. All participants had a previous relationship with the workshop facilitator and with each other. This choice was made in order to reduce the tensions inherent in the first stages of forming a group, which can express themselves in unstable emotionality, shyness, and lack of confidence. These all directly impact one's movement (Ko, 2014). Thus, the familiarity with one another can shorten the process of becoming comfortable; it can control for some of those variables, in order to more accurately study the impact of the workshop material on participants (Panhofer, 2005).
C. All participants had identical (previous) training in the two approaches incorporated into the self-supervision model (Authentic Movement and EpiMotorics) in order to control for differences in and/or lack of previous familiarity with the techniques.

However, all participants were unacquainted with the self-supervision model (taught only in the research groups workshops).

D. All participants had previous knowledge in movement and were familiar with the understanding that dance can give rise to information, energy, and emotion that was previously hidden (Leseho & Maxwell, 2010).

E. All participants were required to agree not to participate in any group dance therapy during the experiment period, to prevent outside influences from impacting their movement features, emotional intelligence, self-efficacy, or their emotion-related physiology.

F. The research group consisted of 36 participants (4 men and 32 women), aged 29 to 45 years old. All participants were middle-class post-graduates living in Jerusalem and the surrounding area.

G. The control group consisted of 36 participants, all women, ages 29 to 45 years old. All 36 participants were middle-class post-graduates living in Jerusalem and the surrounding area. Since all participants in this study were novice dance movement therapists, the research sample is defined as a convenience and purposive sample (Shkedi, 2011).

3.4 Research Instruments

At the core of the present research stands a new self-supervision model (SSM) based on Authentic Movement and EpiMotorics methodology. These instruments include a structured closed-ended questionnaire, an open-ended questionnaire, a focus group protocol, EpiMotorics movement analysis and a physical examination using a Pulse Oximeter.

The EpiMotorics analysis was designed to use and be refined during the preliminary phase of research (pilot study), and was used during Phase 1 and Phase 2 (see Table 2) to determine the feasibility of the study and to evaluate the participants' movement features.

The structured close-ended questionnaires were used during Phase 1 and Phase 2 to evaluate participants' emotional intelligence and self-efficacy. A qualitative analysis of an open-ended questionnaire and a focus-group qualitative analysis were then used during Phase 2, to provide additional information about participants' emotional intelligence and

self-efficacy evolution and about other emotional influences of the new self-supervision model.

The Pulse Oximeter physical examination was designed to examine participants' heart rate and oxygen saturation, in order to detect changes in their emotion-related physiology during Phase 1 and Phase 2.

3.4.1 EpiMotorics scale: Examination of movement features

The EpiMotorics method is a statistically validated tool for movement analysis developed by Shahar-Levy (2004). This method consists of qualitative analysis followed by a quantitative coding of one's filmed movements. The quantitative measures can be used to statistically detect changes in that person's movement characteristics, i.e. movement features. The EpiMotorics scale was validated by Skrzypek (2017) at the Augsburg University, Germany (See Appendix A) and was translated from Hebrew to English by Shahar-Levy (2009) who also helped to adapt it to suit the purposes of the present study.

The collected data (by two "judges") was examined for inter-rater consistency, following Koo and Li (2016). ICC indicator values exceeding 0.75 indicate a high degree of inter-rater consistency and indicate **high reliability** of the coded scales. Only two measurements had ICC of less than 0.75 (outward Movement rated after the intervention, with ICC=.62, and continuous movement rated after the intervention, with ICC=.62). However, these measures are acceptable as indicating inter-rater consistency and high reliability of the coded scales (Koo & Li, 2016).

CHAPTER IV: RESEARCH FINDINGS

Chapter four presents the findings that emerged from the various research tools that were used to gather data to achieve the research objectives. The findings are presented according to the order of the research questions, and hypotheses that relate to them. Thus, **t**he current chapter will present the research findings as follows: First, the empirical subchapter will be presented, addressing the hypothesized changes in movement features, emotional intelligence, and self-efficacy, and the physiological changes resulting from the experimental phases. As mentioned before, the movement features, emotional intelligence, self-efficacy, and physiological parameters were compared across two groups (research/control). Following this section, a qualitative subchapter will be presented, addressing the participants' experiences and the reoccurring themes that arose from an open-ended questionnaire analysis and a focus group content analysis. At the end of the chapter, a summary of the integrative research findings will be presented.

4.1 Empirical Findings

This subchapter will present findings emerging from Research Question 1: Does the self-supervision model affect physiological and movement features, emotional intelligence, and self-efficacy of novice dance movement therapists? If so, in what ways?

4.1.1 Movement features

The first research hypothesis was that the new SSM would change the movement features of novice dance movement therapists. It is hypothesized that there will be a decrease in inward, quick, fragmented, and indirect movements, and an increase in outward, round (curved) shaped, linear (straight) shaped, horizontal (alignment) shaped, vertical (alignment) shaped, continuous, slow movement, and direct movements.

The following strategy will be adopted to examine the first hypothesis: a between-groups comparison of baseline scores; a between-group comparison of scores post-implementation of SSM; separate within-group comparisons of before and after the implementation of the SSM for both the study group and the control group; and, lastly, a between-groups comparison of the changes from the 'before' and 'after' scores.

Examination of baseline descriptive statistics and group differences

In order to view baseline descriptive statistics and mean differences between the research groups, an independent-samples t-test analysis has been performed. Results are presented in the table below.

Table 3: Means and standard deviations for baseline movement features, scores by group (N=72)

	Control(n=36)		Study(n=36)		$t_{(70)}$	*P*
	M	*SD*	*M*	*SD*		
Inward Movement	2.86	0.49	3.14	0.49	-2.42	.02
Outward Movement	1.39	0.87	1.25	0.69	0.75	.46
Round Curved Shapes	1.66	0.84	1.47	0.81	0.95	.35
Straight Linear Shapes	1.69	0.86	1.47	0.74	1.18	.24
Horizontal Alignment Shapes	1.86	0.93	1.61	0.93	1.14	.26
Vertical Alignment Shapes	1.64	1.02	1.44	1.08	0.79	.44
Quick Movement	1.53	1.06	1.86	1.10	-1.31	.19
Slow Movement	2.50	0.81	2.25	1.05	1.13	.26
Fragmentary Movement	2.14	0.96	2.47	1.00	-1.44	.15
Continuous Movement	1.75	1.08	1.56	0.97	0.80	.42
Indirect Movement	2.83	0.56	3.03	0.51	-1.54	.13
Direct Movement	1.22	0.87	0.72	0.91	2.38	.02

Table 3 shows that significant baseline differences were found for inward movement and direct movement, which means that the research group participants were significantly higher on inward movement and significantly lower on direct movement, in comparison to the control group. No baseline mean differences were found for the rest of the movement features.

Group differences in movement features after the implementation of the self-supervision model

In order to compare the effect of the self-supervision model on the movement features between the research groups, an independent-samples t-test has been performed for the 'after' measurement alone. Results are presented in the table below.

Table 4: Means and standard deviation for movement features scores by group, after the implementation of the self-supervision model (N=72)

	Control (n=36)		Study (n=36)		*t*	*p*
	M	*SD*	*M*	*SD*		
Inward Movement	2.19	0.95	1.50	0.88	3.22	.002
Outward Movement	1.78	0.87	2.83	0.74	-5.57	< .001
Round Curved Shapes	2.33	0.59	2.83	0.67	-3.42	.001
Straight Linear Shapes	2.03	0.85	2.52	0.56	-2.96	.004
Horizontal Alignment Shapes	1.97	0.77	2.72	0.66	-4.43	< .001
Vertical Alignment Shapes	2.42	0.69	2.92	0.37	-3.83	< .001
Quick Movement	1.50	1.00	1.36	0.90	0.62	.54
Slow Movement	2.58	0.73	2.86	0.54	-1.83	.07
Fragmentary Movement	2.00	0.93	1.17	0.61	4.51	< .001
Continuous Movement	2.00	0.93	1.58	1.03	1.81	.08
Indirect Movement	2.42	0.81	1.61	0.69	4.56	< .001
Direct Movement	1.28	0.85	2.81	0.71	-8.28	< .001

Table 4 and Figure 2 show that besides 'quick movement,' significant and marginal significant differences were found for all other movement features. As seen in Figure 2, the research group were significantly higher on outward movement, round curved shapes, straight linear shapes, horizontal alignment shapes, vertical alignment shapes, slow movement (marginally significant), and direct movement, in comparison to the control group. In contrast, the control group were significantly higher on inward movement, fragmentary movement, continuous movement (marginally significant), and indirect movement.

Within-group differences in movement features scores (before and after the implementation of the self-supervision model)

In order to examine whether the self-supervision model had initiated changes in the movement features, a 'before-after' comparison was performed for each group separately via a series of paired-samples t-tests.

Changes within the control group in movement features scores: The first series of paired-samples t-tests was performed within the control group. Results are presented in the table below.

Table 5: Means and standard deviation for movement features by time, for the control group (N=36)

	Before		After		$t_{(35)}$	p
	M	*SD*	*M*	*SD*		
Inward Movement	2.86	0.49	2.19	0.95	4.06	< .001
Outward Movement	1.39	0.87	1.78	0.87	-2.79	.009
Round Curved Shapes	1.66	0.84	2.34	0.59	-6.43	< .001
Straight Linear Shapes	1.69	0.86	2.03	0.85	-2.09	.05
Horizontal Alignment Shapes	1.86	0.93	1.97	0.77	-1.44	.16
Vertical Alignment Shapes	1.64	1.02	2.42	0.69	-5.02	< .001
Quick Movement	1.53	1.06	1.50	1.00	0.27	.79
Slow Movement	2.50	0.81	2.58	0.73	-0.68	.50
Fragmentary Movement	2.14	0.96	2.00	0.93	1.71	.10
Continuous Movement	1.75	1.08	2.00	0.93	-1.67	.11
Indirect Movement	2.83	0.56	2.42	0.81	3.85	< .001
Direct Movement	1.22	0.87	1.28	0.85	-0.37	.71

Table 5 shows that significant and marginally significant differences were found for inward movement, outward movement, round curved shapes, straight linear shapes, vertical alignment shapes, and indirect movement. The baseline measurement was found to be higher than the 'after' measurement for inward movement and indirect movement; outward movement, round curved shapes, straight linear shapes, and vertical alignment shapes were found to be higher 'after' the implementation. Besides that, no significant differences were found between other movement features within the control group.

Changes within the study group in movement features scores: The second series of paired-samples t-tests was performed within the study group. Results are presented in the table below.

Table 6: Means and standard deviation for movement features by time, for the study group (N=36)

	Before		After		$t_{(35)}$	p
	M	*SD*	*M*	*SD*		
Inward Movement	3.14	0.49	1.50	0.88	14.41	< .001
Outward Movement	1.25	0.69	2.83	0.74	-10.14	< .001
Round Curved Shapes	1.47	0.81	2.83	0.66	-11.29	< .001
Straight Linear Shapes	1.47	0.74	2.53	0.56	-9.40	< .001
Horizontal Alignment Shapes	1.61	0.93	2.72	0.66	-5.98	< .001
Vertical Alignment Shapes	1.44	1.08	2.92	0.37	-8.16	< .001
Quick Movement	1.86	1.10	1.36	0.90	4.07	< .001
Slow Movement	2.25	1.05	2.86	0.54	-3.80	.001
Fragmentary Movement	2.47	1.00	1.17	0.61	9.15	< .001
Continuous Movement	1.56	0.97	1.58	1.03	-0.16	.87
Indirect Movement	3.03	0.51	1.61	0.69	10.54	< .001
Direct Movement	0.72	0.91	2.81	0.71	-12.55	< .001

Table 6 and Figure 3 show that besides 'continuous movement,' significant mean differences were found for all other movement features. For outward movement, round curved shapes, straight linear lines, horizontal alignment shapes, vertical alignment shapes, slow movement, and direct movement – the scores increased after the implementation of the self-supervision model. In addition, after the implementation of the self-supervision model, the scores decreased for inward movement, quick movement, fragmentary movement, and indirect movement.

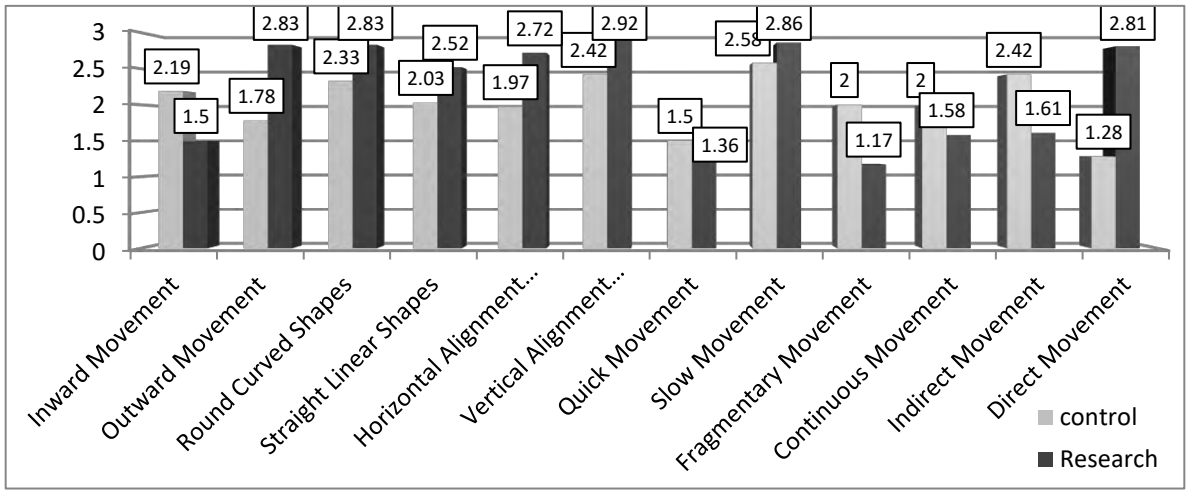

Figure 2: Mean differences in movement features, after the implementation of the self-supervision model.

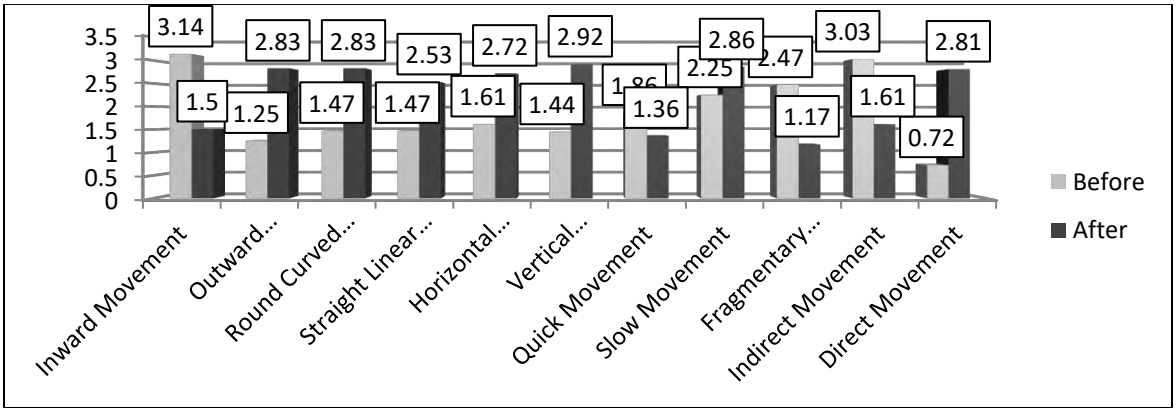

Figure 3: Mean differences in movement features, before and after the implementation of the self-supervision model, within the study group.

Between-group differences in changes of movement features

In order to examine whether the SSM had initiated changes in the movement features for the research groups beyond those of the control group, a 'gap' variable was calculated ('after' minus 'before'). Results are presented in the table below.

Table 7: Means and standard deviations for the gap between the 'before' and 'after' measurements, by groups (N=72)

	Control (n=36)		Study (n=36)		*t*	*p*
	M	*SD*	*M*	*SD*		
Inward Movement gap	-0.67	0.99	-1.64	0.68	4.87	< .001
Outward Movement gap	0.39	0.84	1.58	0.94	-5.70	< .001
Round Curved Shapes gap	0.69	0.63	1.36	0.72	-4.42	< .001
Straight Linear Shapes gap	0.33	0.96	1.06	0.67	-3.71	< .001
Horizontal Alignment Shapes gap	0.11	0.46	1.11	1.12	-4.97	< .001
Vertical Alignment Shapes gap	0.78	0.93	1.47	1.08	-2.92	.005
Quick Movement gap	-0.03	0.61	-0.50	0.74	2.96	.004
Slow Movement gap	0.08	0.73	0.61	0.96	-2.62	.01
Fragmentary Movement gap	-0.14	0.49	-1.31	0.86	7.11	< .001
Continuous Movement gap	0.25	0.91	0.03	1.03	0.97	.33
Indirect Movement gap	-0.42	0.65	-1.42	0.81	5.80	< .001
Direct Movement gap	0.06	0.89	2.08	1.00	-9.10	< .001

Table 7 shows that besides for continuous movement, significant differences were found for all other comparisons. In relation to the abovementioned findings, the gap between the 'before' and 'after' measurements was significantly higher in favor of the study group, as compared to the control group.

Summary of findings about the movement features in relation to the research hypotheses:

In summary: After comparing all of the abovementioned results, there are three main findings:

1. The self-supervision model intervention was found to have a robust effect on the following movement features: inward movement, outward movement, round curved shapes, straight linear shapes, horizontal alignment shapes, vertical alignment shapes, quick movement, fragmentary movement, indirect movement, and direct movement.

2 The self-supervision model had a moderate effect on slow movement.

3. The self-supervision model had a low to non-existent effect on continuous movement.

Therefore, the first section of the first hypothesis was fully affirmed; practicing the Authentic Movement and EpiMotorics–based self-supervision model led to more confident,

assured, and aware movement, and to less inward, quick, fragmented, and indirect movements. The second section of the first hypothesis was partially affirmed; practicing the Authentic Movement and EpiMotorics–based self-supervision model led to more emotional and interaction-oriented movement – to more outward, round (curved) shaped, linear (straight) shaped, horizontal (alignment) shaped, vertical (alignment) shaped, slow movement, and direct movements. The continuous movement in the research group did not change more than in the control group.

4.1.2 Emotional intelligence and self-efficacy

Examination of baseline descriptive statistics and group differences

In order to view baseline descriptive statistics and mean differences between the groups in terms of emotional intelligence and self-efficacy, a series of independent-samples t-test was performed. Table 8 shows that no baseline mean difference was found between the groups in either emotional intelligence ($t_{(70)} = 0.05$, $p = .96$) or self-efficacy ($t_{(70)} = 0.97$, $p = .33$).

Group differences in emotional intelligence and self-efficacy after the implementation of the self-supervision model

In order to compare the effect of the self-supervision model on the emotional intelligence and self-efficacy between the research and the control group, a series of independent-samples t-tests was performed for the 'after' measurement alone. Table 8 and Figure 5 show that significant differences were found for self-efficacy, after the implementation of the self-supervision model ($t_{(50.57)} = -3.77$, $p < .001$); the research group was found to be higher than the control group. Table 8 and Figure 4 show that no significant differences were found for emotional intelligence after the implementation of the self-supervision model.

Table 8: Means and standard deviations for emotional intelligence and self-efficacy scores by group (N=72)

	Control (*n*=36)		Study (*n*=36)		*T*	*P*
	M	*SD*	*M*	*SD*		
Emotional intelligence						
Baseline	3.86	0.35	3.85	0.34	0.05	.96
After the implementation of the self-supervision model	3.90	0.34	3.99	0.39	-1.13	.26
Self-efficacy						
Baseline	20.58	2.42	20.03	2.42	0.97	.33
After the implementation of the self-supervision model	20.53	2.25	22.17	1.32	-3.77	< .001

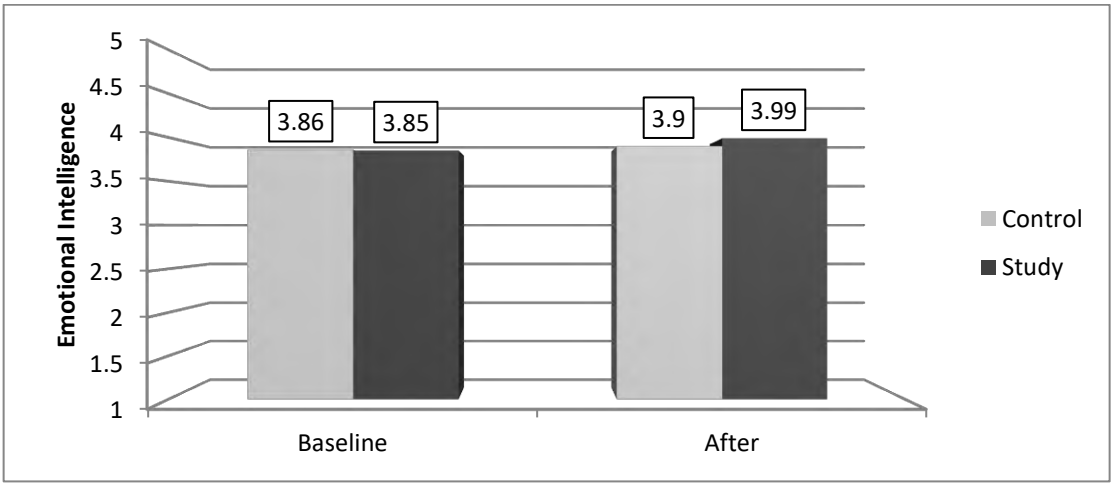

Figure 4: Mean differences in emotional intelligence between the research and the control group.

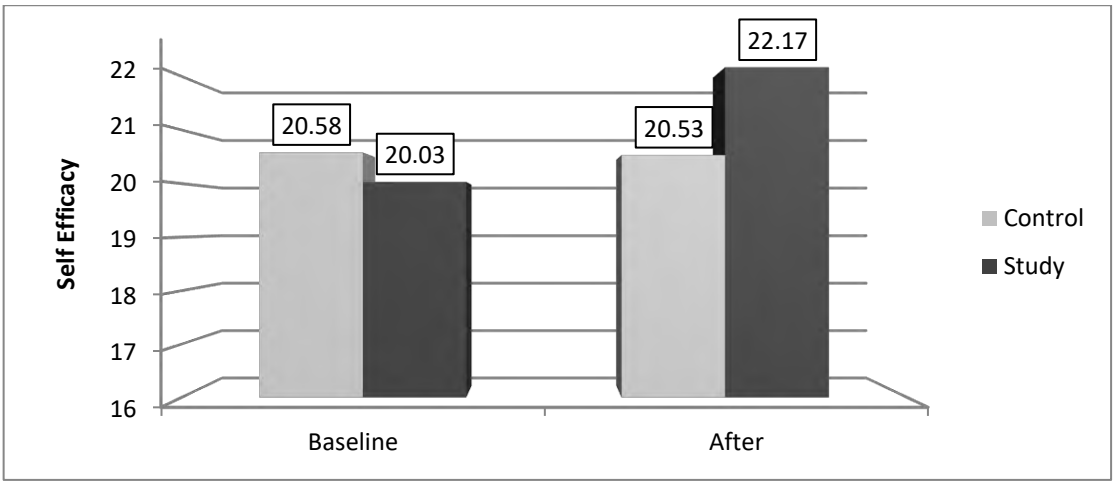

Figure 5: Mean differences in self-efficacy between the research and the control group.

Within-group differences in emotional intelligence and self-efficacy scores (before and after the implementation of the self-supervision model)

In order to examine whether the self-supervision model had initiated changes in emotional intelligence and self-efficacy within each group, a 'before-after' comparison was performed for each group separately via a series of paired-samples t-tests. Means and standard deviations are presented in Table 8.

Regarding emotional intelligence, Figure 6 shows that significant differences were found for the study group ($t_{(35)} = -2.93$, $p = .006$); after the implementation of the self-supervision model, scores were higher compared to the baseline measurement. No significant differences were found for the control group ($t_{(35)} = -0.96$, $p = .35$). Regarding self-efficacy, Figure 7 shows that significant differences were found for the study group ($t_{(35)} = -5.36$, $p < .001$); after the implementation of the self-supervision model, scores were higher compared to the baseline measurement. No significant differences were found for the control group ($t_{(35)} = 0.29$, $p = .77$).

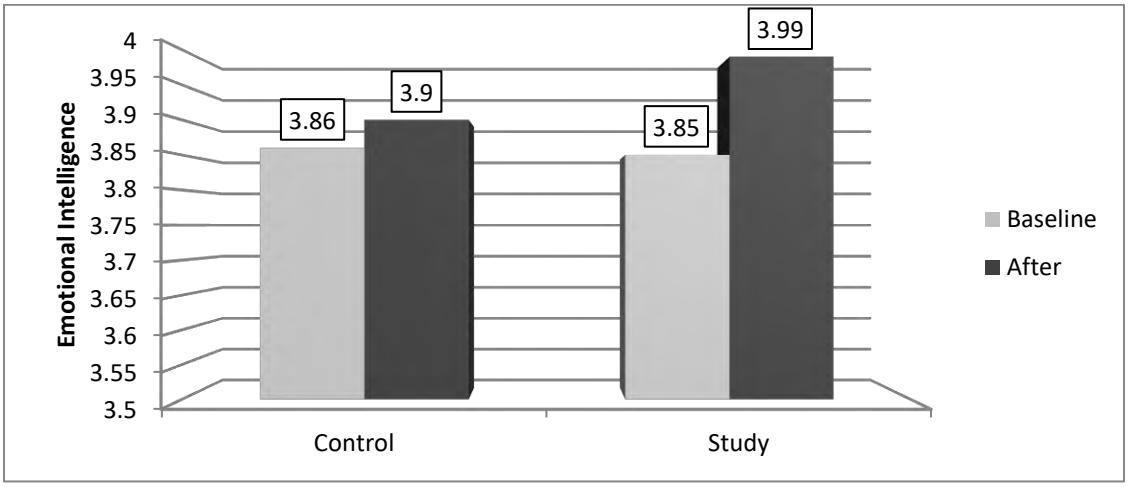

Figure 6: Mean differences in emotional intelligence, before and after the implementation of the self-supervision model, by group.

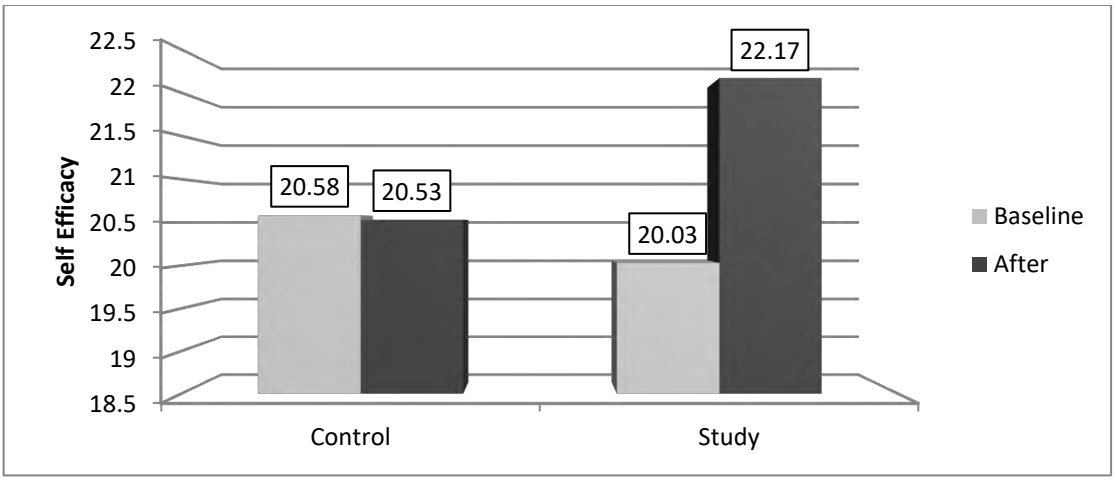

Figure 7: Mean differences in self-efficacy, before and after the implementation of the self-supervision model, by group.

Between-group differences in the effect of the self-supervision model on emotional intelligence and self-efficacy

In order to examine whether the self-supervision model had initiated changes in emotional intelligence and self-efficacy for the research group beyond those of the control group, 'gap' variables were calculated ('after' minus 'before'). A series of independent-samples t-tests were performed to examine the mean differences between the gaps. Table 9 and Figure 8 show that no significant differences were found for emotional intelligence ($t_{(70)}$ = -1.57, p = .12). In contrast, Table 9 shows that significant differences were found for self-efficacy ($t_{(50.24)}$ = -4.96, p < .001) – in which the study group showed a robust change due to the implementation of the self-supervision model.

Table 9: Means and standard deviations for the gap between the 'before' and 'after' measurements, by group (N=72)

	Control (n = 36)		Research (n = 36)		t	p
	M	*SD*	*M*	*SD*		
Emotional intelligence (gap)	0.04	0.25	0.14	0.29	-1.57[a]	.12
Self-efficacy (gap)	-0.06	1.15	2.14	2.39	-4.96[b]	< .001

[a] *df = 70,* [b] *df = 50.24*

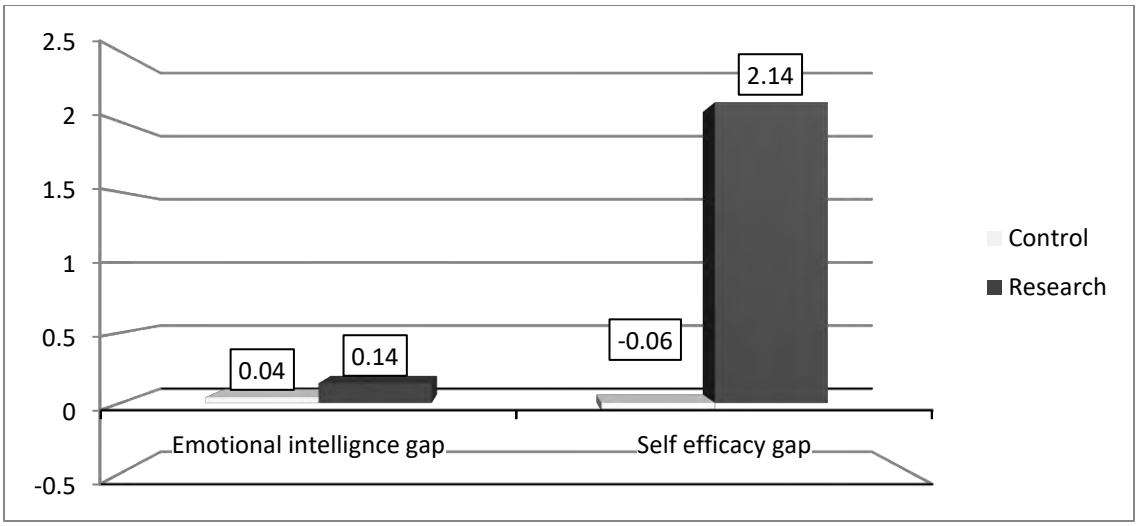

Figure 8: Emotional intelligence and self-efficacy: Gap between the 'before' and 'after' for control and research groups

Summary of findings about emotional intelligence and self-efficacy in relation to the research hypotheses

The second research hypothesis was that practicing the Authentic Movement and EpiMotorics–based self-supervision model would improve novice dance movement therapists' emotional intelligence and self-efficacy.

In summary, no significant effect was found for the self-supervision model intervention in terms of emotional intelligence, when comparing the study group to the control group. In contrast, the implementation of the self-supervision model was found to improve levels of self-efficacy beyond those of the control group. Thus, the second hypothesis was partially affirmed.

4.1.3 Physiological changes due to the implementation of the self-supervision model

The third research hypothesis claimed that, compared to the control group, after the self-supervision model implementation, the pulse parameter of the participants in the research group would decrease and their blood saturation would increase.

Examination of baseline descriptive statistics and group differences

Table 10 presents the baseline descriptive statistics for pulse and saturation variables. The table shows that all of the variables were located around the standardized norms, suggesting a moderate number of total pulse events, pulse time in events, average pulse rate,

average low pulse rate, and moderate saturation – for both groups. A series of independent-samples t-tests revealed significant differences between the groups in pulse total events ($t_{(70)}$ = -2.64, p = .01); the control group had a lower number of events compared to the study group. No significant differences were found for the rest of the variables.

Table 10: Means, standard deviation, and range for baseline physiological parameters (N=72)

	Control (n = 36)				Study (n = 36)			
	M	SD	Min	Max	M	SD	Min	Max
Pulse								
Total events	3.00	1.93	0.00	7.00	4.94	3.99	0.00	17.00
Time in event (minute)	1.36	1.04	0.00	4.00	3.35	6.33	0.00	39.00
Average rate	76.54	12.18	46.00	106.00	77.90	9.26	51.00	93.00
Low rate	67.86	12.26	42.00	101.00	67.25	9.16	43.00	88.00
Saturation								
Basal SpO2%	97.20	1.77	90.00	99.00	97.44	1.62	91.00	99.00

Group differences in pulse and saturation after the implementation of the self-supervision model

In order to compare the effect of the self-supervision model on the physiological parameters between the research groups, a series of independent-samples t-test was performed for the 'after' measurement alone. Table 11 shows that marginally significant differences were found for pulse time in event. After the implementation of the self-supervision model, the study group still had higher scores than the control group. No significant differences were found between the groups for the rest of the physiological parameters.

Table 11: Means, standard deviation, and range for physiological parameters after the implementation of the self-supervision model (N=72)

	Control (n = 36)		Study (n = 36)		t	P
	M	SD	M	SD		
Pulse						
Total events	3.28	1.89	4.19	3.11	-1.51	.14
Time in event (minutes)	1.48	0.75	2.14	1.83	-2.00	.05
Average rate	78.34	17.86	74.67	8.84	1.10	.27
Low rate	67.69	12.35	65.22	7.31	1.03	.31
Saturation						
Basal SpO2%	97.06	1.35	97.58	1.23	-1.70	.09

Within-group differences in physiological parameters (before and after the implementation of the self-supervision model)

In order to examine whether the self-supervision model had initiated changes in the physiological parameters within each group, a 'before-after' comparison was performed for each group separately via a series of paired-samples t-tests.

Means and standard deviations are presented in Tables 10 and 11. Regarding the control group, no significant differences were found ($p \geq .55$). In contrast, the research group showed significant differences in average pulse rate ($t_{(35)} = 5.28$, $p < .001$); after the implementation of the self-supervision model ($M = 74.67$, $SD = 8.84$), the average pulse rate had decreased compared to the baseline level ($M = 77.9$, $SD = 9.26$). No significant differences were found for the rest of the variables.

Between-group differences in the effect of the self-supervision model on physiological parameters

In order to examine whether the self-supervision model had initiated changes in physiological parameters for the research group beyond the control group, 'gap' variables were calculated ('after' minus 'before'). A series of independent-samples t-tests were performed to examine the mean differences between the gaps. Table 12 and Figure 9 show that significant differences were found for average pulse rate. The means show that the

study group had decreased their average pulse rate significantly, beyond the control group. No significant differences were found for the rest of the variables.

Table 12: Means and standard deviations for the gap between the 'before' and 'after' measurements, by group (N=72)

	Control (n=36)		Study (n=36)		$t_{(70)}$	p
	M	SD	M	SD		
Pulse						
Total events+	0.28	2.08	-0.75	3.13	1.64	.11
Time in event (minutes) +	0.13	1.24	-1.21	6.72	1.17	.25
Average rate+	1.80	11.46	-3.23	3.67	2.51	.01
Low pulse rate+	-0.17	8.02	-2.03	6.73	1.07	.29
Saturation						
Basal SpO2%+	-0.14	1.80	0.14	1.55	-0.72	.48
+gap variable						

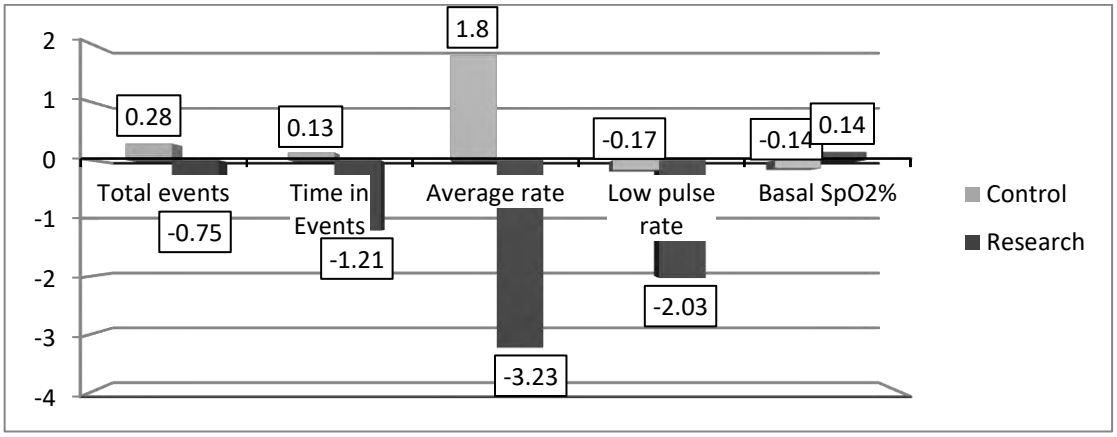

Figure 9: Mean differences in physiological parameters between measurements (before-after), by group.

Summary of findings about physiological parameters in relation to the research hypotheses

The third research hypothesis claimed that practicing the Authentic Movement and EpiMotorics–based self-supervision model would improve emotional-related physiological parameters of novice dance movement therapists.

Overall, a significant decrease was found in average pulse rate for the study group, beyond the effect that was found for the control group. No significant effect was found for

blood saturation levels after implementation of the self-supervision model. Therefore, the third hypothesis was partially affirmed.

4.2 Qualitative Findings

4.2.1 Qualitative findings emerging from the open-ended questionnaire

Table 13: Themes and sub-categories derived from the open-ended questionnaire

The training as improving participants' emotional intelligence			The training as improving participants' self-efficacy		
Appraisal and expression of emotion	Regulation of emotion	Utilization of emotion	Related to body and movement	Related to physiological parameters	Related to language

4.2.2 Qualitative findings emerging from the focus group discussion

Table 14: Participant perceptions about the impact of the self-supervision model: Themes that emerged through content analysis of the focus groups

Participants in the focus groups perceived that the SSM had an impact on:					
1) Improving emotional-intelligence-based therapeutic capabilities	**2) Self-efficacy-based development**			**3) Improving practical therapy skills**	
Emotional abilities	Professional identity	Professional development	Personal growth	Functioning capabilities	Cognitive abilities
*Improves emotional regulation *Improves differentiation between therapist and client *Allows therapist to be more available to the other *Develops listening abilities *Enhances empathy *Strengthens sense of responsibility and commitment *Fosters independence *Provides a source of support – a sense that "I am not alone"	Strengthens professional identity	Develops self-esteem Develops self-confidence Improves belief in oneself	Enhances self-recognition Enhances social recognition	Creates a setting for work Enhances focus and sense of order	Provides clarity about the content Reveals information Helps solve dilemmas Provides answers regarding what should be focused on

CHAPTER V: CONCLUSIONS AND RECOMMENDATIONS

5.1 Conceptual Conclusions – Rethinking Dance Movement Therapy: A New Construct for Understanding Inner Self-Supervision

The research findings allow for the emergence of an evidence-based framework for understanding movement therapy. Figure 10 illustrates the new construct.

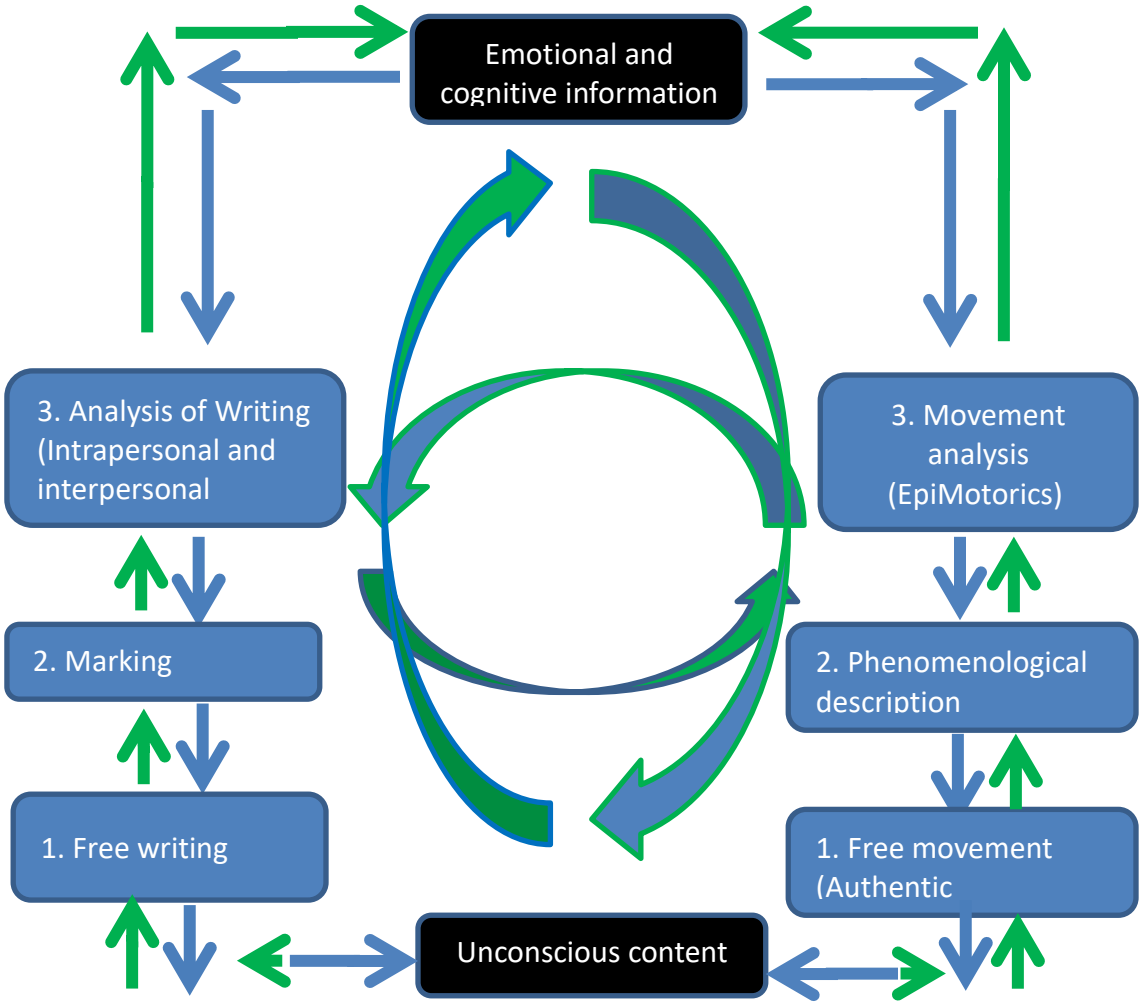

Figure 10: A New Construct for Understanding Inner Self-Supervision

This graphic illustration of the new structure for understanding dance movement therapy shows the interplay between knowledge that arises from use of verbal language and from the language of movement. The right side of the illustration shows the process of elevating hidden and unconscious elements to the level of cognitive and emotional information, which are revealed through reference to movement. In stage one, free motion based on Authentic Movement is used to elevate content from the unconscious. In stage two, a descriptive language of movement is applied to the event, so that in stage three it is possible to perform an analysis of motion using EpiMotorics. This analysis collects and integrates emotional and cognitive information, which is then crystalized into valuable insights. As this bottom-up process continues it has a simultaneous top-down influence, such that knowledge affects the style of movement and unconscious content. Thus, there is a circular influence, as represented by the arrows of the horizontal circle.

The verbal aspect of the event is also shown. In this process, free writing in stage one elevates content from the unconscious. Stage two consolidates the text by means of indicating the most meaningful content elements. In stage three, it is possible to perform a content analysis relating to intrapersonal processes through text written in the first-person singular (I) and interpersonal processes through text written in the first-person plural (we). Processes of the language of movement are indicated on the right side of the illustration and verbal language processes on the left side, such that there is a circular effect from top-to-bottom and from bottom-to-top. This circle of impacts is represented around the vertical axis.

The framework presented in this model indicates the continuous transitions between unconscious content, content made visible through the body and its movements, and written language (metaphoric or description of movement). This allows for access to emotional information and development of cognitive understandings. Both effects are circular and mutually impact each other. For example, movement is influenced by the emotional state and at the same time it affects the emotional state. Unconscious content affects the way movement is performed (reactions and behaviors in different situations) while conscious attention to the forms of movement, whether through motion or through writing, can affect the quality of movement.

The model is integrative and interdisciplinary, touching upon multiple areas of knowledge, including physical education, psychology, and art. The model is modular in that individuals can shape movement in their own way and according to their needs. They have the freedom to emphasize use of verbal language or physical movement in order to integrate cognitive understandings with emotional movement. In this way, the model is holistic, involving the whole person. It integrates emotional, cognitive, creative, physical, motor, and verbal aspects. Additionally, the model is internationally applicable, because the center of the model is the person conducting self-instruction, using movement characterizing the individual, and the individual's native language.

5.2 Practical Implications and Recommendations

The conclusions of this study point to the need to advance conscious changes in the use of information embedded in physical, physiological, motor, and verbal expression, and to integrate these various types of knowledge into emotional experiences and cognitive understandings. The first stage for implementing the model should be introducing it into curricula for dance movement therapists. By including it in training programs for students of dance movement therapy, the SSM can be acquired as an element that assists therapists' professional development throughout their career. To achieve this goal, it is essential to provide tools enabling use of verbal language and the language of movement, facilitating processes that integrate knowledge acquired through both. EpiMotorics enables precise analysis of emotional movement and facilitates connections with psychological theories that advance cognitive understandings of movement. Thus, a special program of study of self-instruction in movement should be designed to train new instructors in this field.

It is therefore important to train the team of instructors of training programs for dance movement therapy so that, in the future, they can utilize this model in advanced training programs. It is similarly important to initiate SSM training programs among veteran therapists, so they too can access their internal guides and learn this new approach to instruction, which will develop their potential, and improve and refine their therapeutic capabilities.

The proposed model is interdisciplinary. It is therefore possible to teach it in diverse settings, such as seminars for people studying physical education with an emphasis on its psychological aspects, and for art therapists and other therapists who incorporate a reference to the body (for example, somatic phenomena), as well as for movement teachers.

In addition to serving as a basis for instruction, the model can also serve as a basis for therapeutic work that includes a connection to internal strengths and abilities (the "internal guide") that enable processes of change related to movement and emotions. Certain aspects of the proposed model can serve as a basis for work on self-efficacy as an internal motivator in various areas of physical and emotional training and practice.

5.3 Contributions to Knowledge

5.3.1 Contribution to theoretical knowledge

The objective of the present study was to examine the effect of the SSM on dance movement therapists. It focuses on the gap between unconscious and conscious knowledge and the integration of knowledge from various languages including verbal, nonverbal, and movement modes of expression, along with theoretical perspectives. The findings of this study enable the advancement of a new, evidence-based model founded on results from the field.

Development of this model addresses a gap in knowledge in the field of dance movement therapy in general and in the field of instruction in particular. It contributes to theoretical knowledge pertaining to therapy, psychology, the dynamics of language, the Authentic Movement approach (Chodorow, 1991), EpiMotorics (Shahar-Levy, 2017) and the interplay between intelligence and emotions (Salovey & Mayer, 1990). The model allows for a change in the understanding of how dance movement therapists are trained in Israel and around the world. This original and innovative model is the first to combine Authentic Movement with EpiMotorics. In addition, since the model is interdisciplinary, it broadens knowledge in the fields of psychology, physical education, and art therapy.

This study's contribution to theoretical knowledge stems from the fact that it is the first to examine a self-training program based on the combination of free movement and analysis of movement. It examines the program's impacts on dance movement therapists

in relation to twelve movement capabilities, psychological parameters, and physiological measures that reflect emotional states.

Previously, dance movement therapists have been guided by models that relate to either verbal aspects or movement aspects. In contrast, this innovative program integrates components of verbal language and the language of movement. This leads to improvement in the therapeutic capabilities of program participants, including the physical, verbal, emotional, and cognitive.

This study shows the beneficial impact of an innovative model of self-instruction (SSM) on dance movement therapists, in terms of parameters of movement, emotional intelligence, self-efficacy, and emotional-physiological measures. It provides a response to the lack of training models and paucity of existing studies in the field of training in dance movement therapy. The SSM expands upon the concept of the internal guide introduced in studies of Authentic Movement.

The SSM combines Authentic Movement and the analytic style of EpiMotorics. In the field of research on training, there are a limited number of studies on the Authentic Movement method. Since EpiMotorics does not offer a training model, there are no studies in this field pertaining to EpiMotorics. The current study sheds light on how each of these approaches can contribute to training in movement therapy, as well as the beneficial contribution of the combination of the two approaches to the field of training in dance movement therapy.

The study also contributes to theoretical knowledge of dance movement therapy. It advances understanding of the connections between features of movement and psychology. It also shows connections between the core of movement with visible and hidden, unconscious elements.

The study is based on the ongoing dialogue between language and movement, an inseparable part of dance movement therapy and its supervision in the field. The research methods used reflect this dialogue by using a tool that integrates movement with verbal and nonverbal language: namely, Authentic Movement. This approach, on which the SSM is based, opens the door to a kinesthetic state. A kinesthetic experience allows a person to focus on internal bodily events. This experience, sometimes referred to as the “internal guide” has not been sufficiently researched (Federman, 2011; Ko, 2014). The proposed

model supports kinesthetic experiences and brings about a verbal-cognitive state by using writing and analysis based on Authentic Movement. This enables reorganization of thoughts and expression of suppressed difficulties (Ko, 2014; Panhofer, 2011). Following the Authentic Movement approach, the system of EpiMotorics is used to identify and analyze factors arising in the practice of movement by integrating nonverbal knowledge with the verbal-cognitive realm. This combination fills a gap between therapy and instruction in dance movement therapy. While previously there has been integration of knowledge gained from verbal language and that gained from the language of movement in dance movement therapy, this integration has been lacking in the training process for dance movement therapists.

Authentic Movement has not been previously integrated with the professional, phenomenological vocabulary of EpiMotorics; the use of this vocabulary helps therapists avoid interpreting statements of their clients and allows for a more objective stance (Davis, Markus, & Walters, 2006; Moore & Yamamoto, 2012; North, 1990; Payne H. , 1992; 2017). The model's integration of physical movement with free metaphorical writing and the professional vocabulary was designed to explore the interaction between the verbal and nonverbal.

This study contributes to theoretical knowledge in the fields of emotional intelligence and self-efficacy. In specific, it concludes that there are connections between changes in movement, physiological parameters, emotional intelligence, and self-efficacy in relation to interpersonal and intrapersonal processes. This conclusion may be helpful in training and instruction in physical education. Moreover, this conclusion can serve people who work in educational and therapeutic professions.

5.3.2 Contributions to practical knowledge

On the practical level, the model developed in this study could change existing policies for professional development frameworks in the field of dance movement therapy training for both students and professionals, expanding the frameworks and allocating resources to expand existing curricula.

The new construct emerging from the results of this study can contribute to practical knowledge by providing guidance to organizations such as the Council for Higher

Education, the Israeli Association for Creative Arts Therapies (YAHAT), and training programs for therapists. This model allows therapists to connect with their internal guide and improve their capabilities. Using this tool also contributes to therapists once their training has ended, in their professional work.

Thus, one contribution to practical knowledge is the construction of a unique training model for therapists that is adapted to their needs, encourages trust in their professional competence, improves motor and physiological parameters, and develops emotional-intelligence-based on principles of therapeutic work. This model can be applied in individual as well as group training and achieve the same goals. The model can lead to change in the approaches towards dance movement therapy and instruction, as well as in other areas that integrate bodily movement with psychological aspects, such as therapeutic sports or psychological aspects of athletic performance. In this way, it can affect training and instruction programs in other physical activities.

The three aspects of the model: movement, writing, and analysis, are carried out independently and can be undertaken in any language. Thus, this is a universal, multicultural, and cross-social stratification model and its use transcends borders.

5.4 Innovations in the Research and Originality

The proposed self-supervision model, based on combining bodily/movement information with verbal information, is an innovation that addresses these connections in a way that has not yet been done in the area of movement supervision.

The researcher has created an innovative model for self-supervision, which has not been previously studied. Prior to the current study, no model of self-instruction was found that enables maximal adaptation of the therapist within a flexible routine. Further, no previous model promoted elevation of unconscious contents through movement and processing of these contents from the physiological, through the emotional, until it becomes possible to reach cognitive understandings formulated in words.

5.5 Follow-up Studies

In future studies, it would be interesting to differentiate between emotional intelligence and self-efficacy, creating secondary categories and correlating them with the movement indices. In this way, the examined correlation could lead to a breakthrough whereby movement measures reveal information about emotional intelligence and self-efficacy, and vice versa. Questionnaires on emotional intelligence and self-efficacy could provide information about individuals' movement.

This is a pioneering clinical trial, the first of its kind. The preliminary results of this study will need to be further examined among a larger sample taking into consideration a larger number of movement features.

In light of the new framework developed through this study, which took a holistic approach by integrating the language of movement and verbal language, it is apparent that it would be meaningful to examine the impact of the new model not only among dance movement therapists, but among therapists at large, thus yielding unified insights.

Following the universality of this unique model, it would be enlightening to examine its impact worldwide. For example, a postdoctoral study conducted in Romania could examine the influence of the model on therapists in Romania.

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