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The Phenomena
Movement Quality and Movement Awareness
-
Theory Construct and Communication
within Mental Health Physiotherapy

Los Fenómenos de la Calidad del Movimiento
y Conciencia del Movimiento –
Constructo Teórico y Comunicación en Fisioterapia
en Salud Mental

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The Phenomena Movement Quality and Movement Awareness – Theory Construct and Communication within Mental Health Physiotherapy

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PhD Dissertation

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Abstract

The Phenomena Movement Quality and Movement Awareness – Theory Construct and Communication within Mental Health Physiotherapy

Background Within physiotherapy of mental health and psychiatry there is a need to clarify the phenomena of movement quality and movement awareness because of a growing interest in how to promote movement quality through movement awareness learning. The thesis is rooted in physiotherapy, and draws on inspiration from the physiotherapy approach Basic Body Awareness Therapy (BBAT), well-known for its teaching of movement quality and its specific movement pedagogy. Two basic assumptions are implemented in the thesis, a phenomenological approach to investigate lived movement experiences and a salutogenic approach to focus on assets for health.

Purpose The overall purpose of this thesis is directed towards the two phenomena of movement quality and movement awareness through studying core phenomena in the context of clinical physiotherapy, a movement vocabulary of movement quality for professional communication and, and synthesising previous research on movement quality and movement awareness, and mapping a construct of a movement awareness domain to communicate this construct within the field of mental health physiotherapy.

Material and Methods In Study I, Part 1 and Part 2, the nominal group technique (NGT) was chosen for a consensus-building process to identify core phenomena and statements describing BBAT. This was conducted in the form of a weekend-workshop, with a cohort of 21 physiotherapy experts, recruited as teachers in BBAT, from 10 European countries. The participants prioritised data through a six-step strategy. For data-analysis in Part 1, content analysis was used. In Part 2, data were calculated and organised according to the three levels 100%, 66% and 33% agreement. In Study II, a phenomenological design was chosen to identify clinical, movement-related phenomena, with a cohort of 15 national and local physiotherapy experts, recruited according to criteria from the field of neurology, primary health care and psychiatry. Data were collected through qualitative interviews. Data analysis followed recommendation from Giorgi, modified by Malterud. In Study III, a meta-synthesis of three previous qualitative publications on the phenomena of movement quality and movement awareness, was conducted to review text-material and models. Content analysis was used for data analysis. Ethical recommendations were followed.

Results In **Study I**, Part 1, a total of 138 phenomena were identified and clustered in three categories, clinical core phenomena, historical roots phenomena, and research and evaluation phenomena. The clinical core phenomena, were 106 phenomena organized into three clusters: movement quality phenomena, movement awareness practice phenomena, and movement awareness therapy and pedagogy phenomena. In Part 2, the participants reached 100% consensus on 16 of 30 statements describing BBAT. The statements represent descriptions ranked as important for communication with patients, health professionals and society. In **Study II**, a

multi-perspective movement vocabulary of 122 health characteristic terms were identified for professional communication. A movement vocabulary is considered to be valuable within mental health rehabilitation as shared vocabulary for communication. In **Study III**, a construct of a movement awareness domain for physiotherapy in mental health was identified and visualised through a small- and a large-scale map of three learning pillars. The domain provides person-centred and involving coping strategies for rehabilitation purposes in mental health physiotherapy.

Conclusion The results from the three studies are: first, clarification of the phenomena of movement quality and movement awareness, with related phenomena and statements describing BBAT; second, a multi-perspective movement vocabulary of health-terms of movement quality for professional communication; and third, a construct of a movement awareness domain in mental health physiotherapy, visualised through a small-scale and large-scale map, including three learning pillars, Movement quality components, Choice of movement components and Movement awareness strategy components. On the background of the studies, the thesis provides a framework of future vision, mission and enabling pillars of a movement awareness domain in mental health physiotherapy.

Resumen en español

Los fenómenos de la Calidad del Movimiento y Conciencia del Movimiento – Constructo Teórico y Comunicación en Fisioterapia en Salud Mental

Antecedentes Desde la fisioterapia en salud mental y la psiquiatría, existe la necesidad de aclarar el fenómeno de la calidad del movimiento y un creciente interés en promoverlo a través del aprendizaje de la conciencia del movimiento. La tesis se basa en el enfoque de fisioterapia "Basic Body Awareness Therapy" (BBAT), bien conocida por su enseñanza/aprendizaje sobre la calidad del movimiento y su pedagogía específica del movimiento. Se implementan dos supuestos básicos en la tesis, un enfoque fenomenológico para investigar las experiencias de movimientos vividos y un enfoque proveniente de la salutogenesis que se centra en los activos para la salud.

Objetivo El propósito fue estudiar los fenómenos clínicos principales y el vocabulario del movimiento, así como sintetizar investigaciones previas sobre la calidad del movimiento y la conciencia del movimiento, para construir el dominio de la conciencia del movimiento en la fisioterapia y la salud mental.

Material y métodos En el "Estudio I" se siguió la técnica de grupo nominal para el proceso de creación de consenso sobre los fenómenos y las declaraciones principales a través de un seminario, con una cohorte de 21 expertos en movimiento provenientes de 10 países europeos. Los participantes priorizaron los datos a través de una estrategia formada por seis fases. El análisis de contenido se utilizó para extraer los datos y para realizar los cálculos del nivel de acuerdo para identificar las declaraciones priorizadas por los expertos. En el "Estudio II" se eligió un diseño fenomenológico para identificar fenómenos clínicos, con una cohorte de 15 expertos en movimiento, reclutados desde la neurología, atención primaria de la salud y psiquiatría, seleccionando términos característicos de salud, a través de entrevistas individuales y cualitativas. Se usó la condensación del texto como lo describe Malterud. El "Estudio III" sigue una meta-síntesis de tres publicaciones cualitativas previas sobre los fenómenos de la calidad del movimiento y la conciencia del movimiento, para revisar el material de texto y los modelos. El análisis de contenido se utilizó para la extracción de términos.

Result En el "Estudio I, Parte 1", el resultado arrojó 138 fenómenos principales, de los cuales 106 fueron fenómenos clínicos, agrupados en tres categorías: fenómenos de calidad del movimiento, fenómenos de práctica del movimiento y terapias de concienciación del movimiento, así como fenómenos pedagógicos. En la "Parte 2", los participantes alcanzaron el 100% de consenso en 16 de las 30 declaraciones que describen BBAT. En el "Estudio II", el resultado identificó un vocabulario sobre el movimiento con múltiples perspectivas que incluye 122 términos relacionados con la salud y respecto a la calidad del movimiento. En el "Estudio III", se muestra un mapa de pequeña y gran escala como constructo del dominio de conciencia de movimiento relevante en comunicación.

Conclusión El resultado de los tres estudios representa los fenómenos clínicos principales, el vocabulario del movimiento a través de términos característicos de la salud para la comunicación profesional, así como el mapa a pequeña y gran escala como constructo del dominio de conciencia del movimiento mediante el aprendizaje de 1) componentes de calidad del movimiento, 2) elección de componentes del movimiento, y 3) componentes del aprendizaje de la conciencia del movimiento, junto con las tres formas de aprendizaje de la conciencia del movimiento: aprender sobre, a través y estando en movimiento.

Preface

This thesis was submitted for the degree of Philosophiae Doctor (PhD), Universidad De Murcia, Escuela Internacional de Doctorado. The thesis consists of three papers together with an overview of the field, summary of results and critical discussion and reflection.

The work was carried out at Universita of Murcia and led by Professor Antonia Gómez-Conesa. This enabled the qualitative studies on movement quality and movement awareness. The work was carried out in collaboration with Dr. Daniel Catalán-Matamoros, Faculty of Humanities, Communication and Documentation, University Carlos III of Madrid, Spain, drawing advantage on communication competence.

I had a rewarding three month stay as visiting researcher in the Physiotherapy Research Group, Department of Global Public Health and Primary Health, Faculty of Medicine, University of Bergen, Norway, led by Professor Jan Magnus Bjordal. This period improved my research skills for a movement vocabulary and theory construct within the domain of movement awareness in physiotherapy.

At Western Norway University of Applied Sciences, Bergen, Norway, I have been a member of the Rehabilitation and Health Promotion Research Group, led by Professor Eva Langeland, Faculty of Health and Social Sciences, where I was learning from the valuable expertise in salutogenesis and rehabilitation.

The thesis targets the two phenomena of movement quality and movement awareness, their interrelatedness, associated phenomena and therapeutical components and strategies. The thesis is revealing theory construct for professional communication within mental health physiotherapy, probing mechanisms involved.

The motivation to study the phenomena of movement quality and movement awareness was a clinical need to clarify, more in-depth, how the general movement quality is communicated, intended for patients suffering from long-lasting muscle-skeletal disorders and mental health problems, i.e. patients lacking contact with the body. This is essential for promoting movement quality to persons suffering from the mentioned problems, since the mental and physical health issues are on the rise within all parts of the society. Thus, such knowledge is of particular professional relevance within physiotherapy in mental health and psychiatry.

Acknowledgements

Work on this thesis was carried out during 2017-2019, organized and lead by Professor Antonia Gómez-Conesa, PT, PhD, Escuela Internacional de Doctorado, Universidad de Murcia, Spain.

I am most grateful to my two Spanish supervisors, Antonia Gómez-Conesa, Murcia University and Daniel Catalán-Matamoros, University of Carlos III Madrid, for the initiative of inviting me, for optimism, encouragement and enthusiastic support, before and during this project and the subject of the thesis. Without you, this project would not have been a reality.

I am honnored to be supervised by Professor Gunvor Gard, PT, PhD, Lund University, through 18 years of collaboration as co-author in publications on movement quality and movement awareness, revealing an in-depth interest, curiosity and willingness for refinement of and quality in the research.

A sincere thanks to Western Norway University of Applied Sciences, Faculty of Health and Social Sciences, Department of Function and Health, lead by Bjørg Hafslund, for the long-lasting support to the project of movement quality, for providing the international education of Basic Body Awareness Methodology (BBAM), 2003-2017, as arena for more than 140 physiotherapists from 20 countries and 4 continents, and their genuine interest to deepen understanding of human movement, within the specialty of mental health. To the librarian Gunhild Austrheim, at HVL, I appreciate your always readiness for diving into a new literature search, during the many years of research and for teaching the same to BBAM-students.

Special warm thanks to every single BBAM students, teacher candidates and qualified teachers from BBAM, from different corners of the world – for penetrating questions representing a diversity of your physiotherapy cultures: without you, the project would have been narrow and shallow. To Mary Anne Sundal, co-teacher at BBAM, I am grateful for your warm-hearted continuity in supporting the project and providing text-refinement.

Indeed, I thank professor Michel Probst, Leuven University, Belgium, for opening the doors for international research collaboration, for ERASMUS teacher exchange between Leuven University and HVL and for possibility to collaborate in creating the International Organisation of Physiotherapy in Mental Health (IOPTMH) together. This thesis is colored by the true interest of developing the profession of physiotherapy in mental health for the future challenge in society, internationally.

Especially thanks to The International Association of Teachers in BBAT (IATBBAT), the collaborators in BBAT for about 40 years, especially to the colleagues of Monica Mattsson, Amanda Lundvik Gyllensten, Kent Skoglund, initiated by Gertrud Roxendal, as to the Norwegian Institute of BBAT, and its living physiotherapy community, balancing clinical practice, education and research, closely supporting each other.

Specially, thanks to Ulla Britt Skatteboe, my colleague from the very start of the development of BBAT in Norway, for the powerful, joyful and theory-inspiring, yearlong fruiteful collaboration.

All rest on the very high quality in teaching and supervision by the movement educator and psychotherapists, Jacques Dropsy, Paris, France, the originator, providing inspiration in every little, single movement, teaching experience and insight into the depth of human movement – movement as much more than exercise – simple and complex at the same time.

At last, but not least, a huge thank to my husband, Rolv, for knowledge, support, inspiration, for always, believing in me and my project, for close to 40 years – together with our three children, Torkel, Kaja and Lars, with their families and all 7 grandchildren, so full of movement quality to be developed and refined and expressed during daily life. I am most grateful to be surrounded by you - receiving your joy.

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II Skjærven LH, Gard G, Gomez-Coneza A, Catalan-Matamoros D. *A Vocabulary Describing Health-terms of Movement Quality – a Phenomenological Study of Movement Communication*. Journal of Disability and Rehabilitation. Published Online 22 Apr 2019.
https://doi.org/10.1080/09638288.2019.1585970

III Skjærven LH, Catalan-Matamoros D, Sundal MA, Gomez-Coneza A, Gard G. *Mapping a Road to a Movement Awareness Domain for Mental Health Rehabilitation – A Meta-synthesis of Qualitative Studies*. Submitted.

Abbreviations

BARS-MQE	Body Awareness Rating Scale – Movement Quality and Experience
BBAM	Basic Body Awareness Methodology – the International, Academic Education in BBAT; started at Western Norway University of Applied Sciences (HVL), Bergen, Norway in 2003 and completed November 2017. Opened as Clinical Master of Physiotherapy in BBAM, at University of Almeria, Almeria, Spain, in January 2018
BBAT	Basic Body Awareness Therapy (International name of BBAT)
BK	Basal Kroppskjennskap (Norwegian name of BBAT)
HVL	Western Norway University of Applied Sciences, Bergen, Norway
IATBBAT	International Association of Teachers in Basic Body Awareness Therapy; www.iatbbat.com
ICPPMH	International Conference of Physiotherapy in Psychiatry and Mental Health; www.icppmh.org
IOPTMH	International Organization of Physical Therapy in Mental Health; www.ioptmh.org
MA	Movement Awareness
MAL	Movement Awareness Learning
MQ	Movement Quality
NIBK	Norwegian Institute of Basic Body Awareness Therapy; www.nibk.org
NGT	Nominal Group Technique
WCPT	World Confederation of Physical Therapy; www.wcpt.org
WHO	World Health Organization

Definitions

Phenomenon An object known through the senses rather than by thought or intuition; an observable fact or event of scientific interest susceptible to scientific description and explanation. Synonym: sensation [1].

Concept Something conceived in the mind; a thought; an abstract or generic idea; an idea of what something is. Synonyms: abstraction, conception, cognition, [1].

Perspective A mental view or prospect; a visible scene; one giving a distinctive impression; an angle or direction in which a person looks at an object. Synonyms: viewpoint, standpoint, landscape [1].

Dimension The range over which or the degree to which something extends; an area over which activity or influence extends. Synonyms: extent; magnitude; breadth; size; width; scope; range [1].

Domain Related components or items that reflect the unified subject matter of a discipline. Synonyms: territory; sphere; discipline [1].

Element One of the factors determining the outcome of a process; one of the parts that make up a whole. Synonyms: factor; ingredient; a building block, component; a constituent [1].

Aspect The appearance of something; appearance to the eye or mind: an expression; a certain way in which something appears. Synonyms: facet; phase; plural: characteristics; qualities [1].

Attention The act or state of applying the mind to something; a condition of readiness for such attention involving especially a selective narrowing or focusing of consciousness and receptivity. Synonyms: absorption; immersion [1]. Attention can be described as a process that includes focusing on conscious awareness, thereby providing heightened sensitivity to experiences [2].

Intention A determination to act in a certain way. Synonym: intent; significance; content; drift; import [1].

[1] Merriam-Webster, 2017
[2] Siegel 2007

Concentration The act or process of concentrating; the state of being concentrated: the ability to give your thought to a single object or activity, especially directing attention to a single object. Synonyms: engrossment; enthralment [1].

Embody To make concrete and perceptible; to make it become a part of the body; to incorporate in the body. Synonyms: absorb, assimilate, integrate [1].

Presence The state of being present; the state or fact of existing, occurring, or being in the moment. Synonyms: being, appearance, a person's appearance [1]. Presence can be described as an attentive, relaxed and alert being in the here and now moment [3].

Embodied presence A closeness and familiarity between mind and body; a bodily felt sense; a form of personal knowing that evokes understanding and fosters meaning [4].

Differentiation between Presence: Being present *in*; Aware: Being aware *of*.

[3] Varela, 1993
[4] Todres, 2007

Chapter 1

Introduction

This thesis addresses physiotherapy in mental health and human movement, more specifically, the two phenomena, movement quality and movement awareness, how the two relate to each other and how to promote movement quality through movement awareness, a movement vocabulary and a construct of a movement awareness domain, studied in the context of clinical physiotherapy. The aim is to justify and provide clarification on the terminology and construct of movement quality and movement awareness, revealed through qualitative research, addressing intervention, rehabilitation, preventive health care and health promotion in mental health physiotherapy.

The thesis focuses on a dynamic, lived and experienced dimension of human movement, as basic assumption in the thesis. The overarching perspective is a phenomenological approach chosen to investigate lived experiences to come in contact with as many features and characteristics of the phenomena as possible (van Manen, 1997). The incorporated focus and arena for the study is the everyday world in which physiotherapists lives with the phenomena, with movement quality and movement awareness.

The thesis is inspired by multiple arenas within physiotherapy, in general as well as in physiotherapy in mental health, in particular. However, the physiotherapy approach Basic Body Awareness Therapy (BBAT), has a strong impact, drawing also on the teaching experiences from the international academic study programme of Basic Body Awareness Methodology (BBAM) and its international, multi-cultural influences.

1.1 Background

The phenomenon of movement quality focuses on how, or the way in which human beings move, or more precisely, how general movements are performed and experienced. By general movements are here meant the whole moving person, more than separate parts of the body. Focusing the whole moving person provide an opportunity to relate to how the dynamic interplay between the balance-line, breathing and and mental awareness influence human movements, as in the general movements of laying, sitting, standing and walking, all movements, present in daily life. Based on years of my own clinical practice, working at psychiatric institutions providing physiotherapy in mental health, observing, describing, evaluating, treating patients,

suffering from mental health disorders and long-lasting musculoskeletal problems, the thesis starts by providing an extract from my clinical experiences, presented as background to the subject:

> *Observing human movement, as a physiotherapist, of people walking in the street, one is struck by the variety of ways of moving – a span between light, rhythmical, unified elegance and a "lack of movement quality", expressed in various ways: some using far too much energy, others far too little energy. The movements are stiff, almost mechanical and "lifeless", with varying degrees of flow, un-rhythmical, as if devoid of life. In some persons it is as if different regions of the body are split from each other. The movements give the observer the impression of being accidentally impulsive, as if the movements are not attuned with each other. Most striking is the expression of a person not being present, either in the eyes or in the movements. Some report pain, others describe they can hardly feel the moving body at all. Many say they do not notice rhythm and the use of energy, most having difficulties in finding words to describe how this is experienced, but expressing a lack of well-being and health. Some describes being devoid of themselves and with a sense of being split.*

The phenomenon of movement quality and how to promote it through movement awareness, within the profession of physiotherapy, is focused on in the thesis, addressing human movement, and not physical exercise, the term most often used in physiotherapy. Approaching the phenomenon of movement quality and how to promote through movement awareness refers to the general movement coordinations in human beings, which are well-known in daily life.

Health promotion is included as a basic assumption in the thesis (Antonovsky, 1987). The WHO promotes strategies enabling people to improve their own health (WHO, 2013). Salutogenesis focuses attention on health and assets for health, describing pathways to successful coping strategies and better health (Langeland et al., 2016; Mittelmark et al., 2017). The consequence for the physiotherapist is not only handling what is dysfunctional and unhealthy, but attuning to an attitude of recognising signs of health and supporting this through the patients' movement.

A term like "description of experiences" is another basic assumption in the thesis, rooted in seeing and accepting the human being (Rogers, 1961, 1980). Accordingly, the thesis focuses on movement experiences. John Dewey, the American philosopher, psychologist, and educational reformer was the first to develop a theory on experiences (Dewey, 1934a,b). He underlines a differentiation between a general experience and a particular experience, when the experience develop into a fulfilment of learning (Dewey, 1934b). In this setting, movement experiences are related to the particular movement experiences that can arise in a physiotherapeutic setting, when guiding movement quality through movement awareness learning.

The thesis draws on inspirations from physiotherapy in general, from the tradition of mental health physiotherapy and in particular Basic Body Awareness Therapy (BBAT). When introduced to BBAT in the early 1980s, it was easy to identify within the field. However, concepts, phenomena, terminology, words, guidance, and the way of organising the training and therapy were slightly different from traditional physiotherapy. Psychological components found to be important were acceptance, trust and freedom endowed in the atmosphere of movement awareness learning. Most importantly: all was about human movement, being exposed to a simple

complexity of being in the element of moving as a whole human being, and the learning process. This became important to study as physiotherapist, as educator in physiotherapy in mental health and psychiatry, and later as researcher.

The intention of the thesis is to study the phenomena of movement quality and movement awareness, a potential vocabulary of movement quality and to draft a tentative movement awareness domain through mapping a road for such a practice, and a content for future implementation in mental health physiotherapy. The thesis starts by presenting a background for the thesis and basic assumptions, identification and descriptions of the phenomena of movement quality, progressing to present an extract of influencing movement awareness traditions.

1.2 Long-lasting Musculoskeletal Disorders and Mental Health

Long-lasting musculoskeletal disorders and mental health problems are leading causes of disability (Hagberg et al., 2012; Higgs et al., 2004; WHO, 2013). These conditions affect people from childhood to old age and the prevalence and impact are predicted to rise as the global population ages, and the prevalence of risk factors for non-communicable diseases increases, particularly in low- and middle-income settings (WHO, 2013). Long-lasting musculoskeletal disorders rob millions of individuals of their mobility, function, and a pain-free existence. Disorders and conditions leading to pain and suffering incur huge costs in handling procedures and interventions, demanded by an overburdened health system. Long-lasting musculoskeletal problems are often presented together with mental health problems (WHO, 2013).

1.2.1 Mental Health

The burden of mental disorders is growing with significant impacts on health and major social and economic consequences in all countries of the world. Mental disorders are generally characterised by a combination of abnormal thoughts, perceptions, emotions, and behaviour, affecting relationships with others. Mental disorders include depression, bipolar affective disorder, schizophrenia and other psychoses, dementia, intellectual disabilities and developmental disorders (Tasman et al., 2015). Effective strategies exist for prevention, treatments and ways to alleviate the suffering caused by mental disorders. Access to health care and social services capable of providing treatment and social support is key. Physiotherapists represent one of several health professionals who provide a specialty in the field of mental health rehabilitation (Probst and Skjaerven, 2018).

Determinants of mental health and mental disorders include not only individual attributes such as the ability to manage ones thoughts, emotions, behaviours and interactions with others, but also social and cultural ones. Mental health is described as a sense of wellbeing, implying a capacity to live in a resourceful and meaningful manner, and having the ability to deal with challenges and obstacles in life. Government departments work worldwide to create the conditions for promoting good mental health. Accordingly, people of all ages, backgrounds and social groups ought to receive support to attain a better mental health (WHO, 2013).

1.2.2 WHO's Action Plan

The health condition of the world population is challenged when it comes to mental health and its physical consequences (WHO, 2013). Epidemiological studies of people suffering from multifactorial problems describe tendencies of increasing mental illness. The WHO points to an urgent need to scale up resources and care for mental health within countries. Depression is documented as the most common mental disorder, affecting about 121 million people worldwide. In 2000, the WHO ranked depression as the fourth largest health-problem in the world.

The WHO's Mental Health Action Plan 2013-2020 (WHO, 2013) recognizes the essential role of mental health in achieving health for all people. The plan includes four major objectives: 1) more effective leadership and governance for mental health, 2) the provision of comprehensive, integrated mental health and social care services in community-based settings, 3) the implementation of strategies for promotion and prevention, and 4) strengthened information systems, evidence and research. Long-lasting musculoskeletal disorders and mental health problems matters because they may effect the person throughout their life.

1.2.3 Mental Processes and Dissociations

Dissociation is a mental process where a person disconnects from his/her own thoughts, feelings, memories or sense of identity. Dissociative disorders include dissociative amnesia, dissociative fugue, depersonalisation disorder and dissociative identity disorder (Tasman et al., 2015). Depersonalisation is described as a feeling of being disconnected from your own body, as a derealisation or a feeling of being disconnected from the world, with identity confusion and little sense of who you are, as well as loss of feelings, of control, and of your own body movements. A person might have such symptoms for as long as the event that triggered them, lasting for shorter or longer episodes or even permanently.

People suffering from mental health problems often have body-oriented symptoms like muscle tension, pain and difficulty with movement coordination, breathing and concentration (Mattsson et al., 1995, 1998; Gyllensten, 2001). A lack of contact with the body and a disturbed body image frequently appears together with such symptoms. These disorders often develop to become chronic with negative consequences for the ability to work and quality of life (Malmgren-Olsson and Armelius, 2003).

1.3 Physiotherapy in Mental Health and Psychiatry

Psychiatric and psychosomatic physiotherapy is an umbrella term commonly used within the specialty of physiotherapy in mental health. The term "psychosomatic" originated within medicine and has acquired a strong influence on the European health system (Mattsson and Mattsson, 2002). It led to the establishment of psychosomatic medicine (Alexander, 1950).

1.3.1 Mental Health Physiotherapy in Scandinavia

Historically, in Norway, the development of psychiatric and psychosomatic physiotherapy originated in the early 1950s with the physiotherapist Aadel Bülow-Hansen, who worked within field

of neurological and orthopedic physiotherapy. She searched for tools to reach the patients, more in-depth. Aadel Bülow-Hansen became the originator of the Norwegian Psychomotor Physiotherapy (NPMP), as it came to unfold in the early years of 1950s in the close collaboration with the psychiatrist Trygve Braatøy, (Bunkan et al., 1982; Thornquist and Bunkan, 1995). This was a time with major development in the field of neurology, psychiatry and psychology, nationally as internationally. The hypothesis of the Austrian psychoanalyst Wilhelm Reich on how psychological states are expressed in the body, in terms of respiratory- and muscular-patterns, pointed to a close interrelation between emotions, breathing and muscle-tension (Reich, 1990). His ideas left strong influences in Norwegian medicine as well as in the Norwegian Psychomotor Physiotherapy.

In Sweden another development emerged from the physiotherapist Gertrud Roxendal, PT, PhD (Roxendal, 1985, 1987), a pioneer within psychiatric and psychosomatic physiotherapy and one of the first researchers in the field. Working within orthopedics and psychiatry, also she was in need of tools working within the mental health and psychiatry. In the mid 1970s she met the French movement educator and psychotherapist Jacques Dropsy in Sweden (Dropsy, 1973, 1984, 1998b,a). He was teaching a body and movement awareness approach in Sweden.

Jacques Dropsy (1938-2018) was born and lived in Paris, in the middle of a rich cultural melting pot of the time in philosophy, psychology, dance, theatre, fine art and music. Educated at the Sorbonne in economy and chemistry, he was dedicated to human movement, to movement quality and the process of becoming aware and expressing one-self, gaining insight and new movement habits. In his youth he travelled to different continents, studying a broad variety of movement awareness approaches and cultures. For more than 40 years he taught lay people, medical doctors, psychiatrist, psychologists, teachers, musicians, dancers, actors and artists in France and Switzerland, as in Scandinavia.

In particular, many physiotherapists became attracted to Dropsys' movement awareness approach, his in-depth knowledge and understanding of human movement, and the particular strategy of transferring knowledge and skills to learners. From mid 1970s till 2000, many physiotherapists followed his courses, in Sweden, Norway, Denmark, Finland and Iceland. In the early 1980s, Roxendal established a group of interested physiotherapists, creating the Swedish-Norwegian teacher group (Skatteboe, 1990; Mattsson, 1998; Skjærven, 1999; Gyllensten, 2001). From 1987 till 2000, Dropsy taught and supervised the group of teachers in BBAT. In physiotherapy, this approach was first named Body Awareness Therapy (BAT) (Roxendal, 1985), later it was named Basic Body Awareness Therapy (BBAT) (Gyllensten, 2001).

1.3.2 The Specialty of Physiotherapy in Mental Health and Psychiatry

Patients suffering from long-lasting musculoskeletal disorders and mental health problems, stress-related conditions, fatigue syndrome, post traumatic stress syndrome (PTSD), eating disorders, life style problems, depression and anxiety, breathing and concentration problems, represent a major group of patients seeking help from physiotherapists all over the globe. Also group of patients referred to physiotherapy are patients with severe psychiatric problems, like schizophrenia.

The specialty of physiotherapy in mental health and psychiatry emerged during the last 60 years in the Nordic countries, as also in Belgium, the Netherlands, and the UK, drawing on

a variety of influences, implementing elements and aspects into physiotherapy. Accordingly, physiotherapists are working within the psychiatric ward, community health care and preventive health care, providing evaluation tools, structured approaches, through individual and group physiotherapy. Physiotherapy in mental health provides a broad variety of approaches, such as relaxation techniques, Jacobsen progressive relaxation technique, biofeedback, European psychomotor physiotherapy, Norwegian Psychomotor Physiotherapy, Basic Body Awareness Therapy, different kinds of movement groups, and adapted physical activity, approaches with different cultural origins (Probst and Skjaerven, 2018).

Physiotherapy in mental health and psychiatry has a long tradition of developing education, within Bachelor programme and post-graduate courses, later, also at the academic level, through Master of Science and PhD programmes, in Belgium, the Netherlands, Sweden and Norway. One is the international post-graduate study program of Basic Body Awareness Methodology, BBAM, developed at Western Norway University of Applied Sciences, Norway in 2003; from 2018 this is a clinical master of 60 ECTS at the University of Almeria, Spain. This arena is developed for the many international physiotherapists from all continents, showing an increasing interest in the mental health physiotherapy.

The specialty includes about 40 years of research, and the research groups at Leuven University, Belgium, led by Professor Michel Probst and of Lund University, Sweden, led by Professor Gunvor Gard and Dr. Amanada Lundvik-Gyllensten, have contributed strongly. Research has been accomplished through differentiated research design and methods for example studies on patients suffering from eating disorders and distorted body image (Probst et al., 2013, 2008a,b), schizophrenia (Vancampfort et al., 2012a,b, 2013, 2018; Nyboe and Videbech, 2010; Hedlund and Gyllensten, 2010, 2013), depression and severe mental illness (Nyboe Jacobsen et al., 2006; Nyboe and Lund, 2013; Nyboe et al., 2016, 2017), to mention a few.

In the middle of the 2000s steps were taken by Professor Michel Probst, for establishing a first international conference for physiotherapists with interest in psychiatric and psychosomatic physiotherapy: the International Conference for Physiotherapy and Psychiatry in Mental Health (www.icppmh.org). The first conference in 2006 at Leuven University, was followed by a conference at Western Norway University of Applied Sciences, Bergen, Norway (2008). This developed into continued conferences, at Lund University, Sweden (2010), Edinburgh, UK (2012), at Utrecht, The Netherlands (2014), in Madrid, Spain (2016) and Reykjarvik, Iceland (2018) as for Helsinki, Finland (2020). The growing interest has made the conferences to be a specific arena for physiotherapists to present and exchange research, educational and organisational matters within the field, creating a professional togetherness, across the continents.

At the World Conference of Physical Therapy, WCPT 2011, an important step in the professionalization and globalisation of the specialty of physiotherapy in mental health was taken. The idea of becoming a subgroup in WCPT was born at the conference in Bergen in 2008, and steps were taken to develop a constitution for IOPTMH, as of applying for WCPT subgroup-membership, a work of two years, supported by the Norwegian subsection of psychiatric and psychosomatic physiotherapy. The new subgroup of the WCPT, the International Organisation of Physical Therapy in Mental Health (IOPTMH), was accepted at the WCPT‘s International Conference in Amsterdam 2011, and became a milestone, originating from the year-long tradition of psychiatric and psychosomatic physiotherapy.

The IOPTMH aims to foster global cooperation among physiotherapists practicing in mental health, promoting improved standards and clinical consistency in mental health care and advanced practice, education and research by communicating and exchanging information (IOPTMH Constitution, 2012). Accordingly, a definition is provided (Probst et al., 2016):

- Physiotherapy in mental health is a specialty within physiotherapy. It is implemented in different health and mental health settings, psychiatry and psycho-somatic medicine.

- Physiotherapy in mental health is person-centred and provided for children, adolescents, adults and elderly with (mild, moderate) severe, acute and chronic mental health problems, in primary and community care, inpatients and outpatients. Physiotherapists in mental health provide health promotion, preventive health care, treatment and rehabilitation for individuals and groups. Physiotherapists in mental health create a therapeutic relationship to provide assessment and services specifically related to the complexity of mental health within a supportive environment applying a bio-psycho-social model.

- The core of physiotherapy in mental health is to optimise wellbeing and empowering the individual by promoting functional movement, movement awareness, physical activity and exercise, bringing together physical and mental aspects.

- Physiotherapists in mental health play a key role in the multidisciplinary team and interprofessional care. Physiotherapy in MH is based on the available scientific and best clinical evidence.

As seen above, the phenomenon of movement awareness is, one of several terms, used in the field of mental health physiotherapy. The phenomenon is considered important in order to optimise wellbeing and empowering the individual. Knowledge and professional handling of physical, mental and relational problems, needs to clarify clinical core phenomena as well as therapeutic components for use within mental health physiotherapy. This is important to elevate the professional quality in treatment and the communication of it.

1.3.3 Physiotherapists' Unique Focus on Human Movement

Physiotherapists in mental health need to have in-depth knowledge about how life experiences are expressed in the moving human being and how movement coordinations can be observed, described, analysed and structured by the physiotherapist as well as also how such aspects are experienced, described and handled by the patients. It is a well-known fact that diseases and worries manifest themself and are expressed into the movement of daily life functioning. Thus, physiotherapy in mental health aims to incorporate components from physical, psychological, social and existential perspectives, stretching towards incorporating such aspects into treatment (Gard and Skjaerven, 2018; Skjærven and Gard, 2018).

The core competency of the profession of physiotherapy is to maximise people's movement potential, thereby promoting health and well-being (WCPT, 2017). Physiotherapists competence

in movement analysis of the general movements is based on the disciplines of anatomy, physiology, bio-mechanics, philosophy, psychology, sociology, anthropology and pedagogy, representing a broad field influences in physiotherapy. In order to promote more functional outcome, competence and reflection on clinical strategies from a multi-perspectives view is needed.

Physiotherapists have a central role in the treatment of long-lasting musculoskeletal disorders and mental health problems (WCPT, 2017). To obtain a positive treatment outcome, it is important for physiotherapists to understand how life experiences and/or diseases can create a lack of contact with the body and one-self, how this is expressed in human movement and functioning and how it can be experienced by the patient (Laisnè et al., 2011; Skjaerven et al., 2015). The therapy, accordingly, aims towards re-establishing contact, making such a contact with the body and the movements. Refining habitual, functional movement, may lead to enhancing personal insight and coping strategies for daily life, which is of vital importance for the patient.

Physiotherapists have used the phenomenon of movement quality, but most often with little description and terminology, using a vocabulary rooted in anatomy, biomechanics and physiology, related to physical components as muscles and joints (Higgs et al., 2004). A profession with human movement and function as its core phenomenon can intend to stretch to be more explicit in the communication of movement, while also aiming towards an increased movement identity.

Bodily experiences create an understanding and orientation about ourselves and contributes to an improved self-awareness (Thörnborg and Mattsson, 2009). Physical, physiological, psychological, social, cultural and existential aspects act as sensory experiences and are fundamental for human perception, as the person act and relate in the world. From a physical perspective, it is shown that the networks for body image and postural control partly run together with the network for pain, motivation and affect (Brodal, 2016). This is closely linked to motor control and an awareness of how to move and act in life (Shumway-Cook and Wollacott, 2017). A learning form that is supporting and making it easier for patients to experience the body how the movements are done, can be a help to gain positive experiences from more functional ways of moving (Skjærven et al., 2010). New research is underpinning the evidence for using simple movements and adequate energy as an approach to achieving more functional movement quality and experience of better health (Hedlund and Gyllensten, 2010).

1.4 Basic Body Awareness Therapy (BBAT)

1.4.1 What is Basic Body Awareness Therapy (BBAT)?

Basic Body Awareness Therapy (BBAT) originates from Dropsy (Dropsy, 1973, 1984, 1998b), was brought into physiotherapy by Roxendal, PhD (Roxendal, 1985, 1987; Roxendal and Nordwall, 1997) and has, since the mid 1980s, been further developed by the International Association of Teachers (IATBBAT) in BBAT (Skatteboe, 1990; Mattsson et al., 1998; Skjærven, 1999; Gyllensten, 2001).

BBAT was accepted in the Norwegian and Swedish Association of Physiotherapy in the late 1980s and has since then provided clinical practice, education and research in the field.

Development of the methodology, and securing its the quality, with regard to clinical practice and teaching, is taking place in the International Association of Teachers in BBAT, IATBBAT. BBAT is well-known for its focus on movement quality and how to promote it through movement awareness, it is person-centred, process-oriented and health-directed, providing concrete coping strategies for everyday use. The principles can be implemented in clinical practice, rehabilitation, health promotion and preventive health care, in individual or group therapeutic settings.

BBAT is based on the clinical hypothesis, described as the identification of a three fold contact problem: a persons' lack of contact with the physical body, with the internal psychological life and with the environment and relationships with other persons. Consequently, BBAT therapeutically embraces such a multi-perspective approach based on recognizing that patients suffering from musculoskeletal problems are lacking sensory-motor awareness, described as a contact problem, affecting physical, mental, relational and existential aspects of the human being. This is reflected in the patient's dysfunctional movement coordinations, coping strategies and habits in daily life (Dropsy, 1973, 1984).

BBAT can be applied to patients suffering from dysfunctional movements habits, long-lasting musculoskeletal pain, problems in physiological functions like breathing, response to their own feelings, experiences, thoughts, energy, and relationships with other persons, decreased self-understanding and insight, coping strategies and daily life functioning.

1.4.2 Daily Movements and Basic Coordinations

BBAT is composed of general movement coordinations, lying, sitting, standing, walking, and thus, a broad scope of daily movements, focusing on the whole human being (Dropsy, 1984) (see Figure 1.1). Referring to the whole human being means here to incorporate a view that embraces feet to head, back and front, left and right side, upper and lower body. Furthermore, it means to incorporate a biomechanical, physiological, psycho-socio-cultural and existential perspective into the approach.

Below are presented three basic coordinations (Piret and Bezier, 1971; Dropsy, 1984), also described as archetypal or organic movements, which are universal for human beings. By archetypal is meant original, ordinary, a kind of prototype, quintessential (Merriam-Webster, 2017). The term organic refers to fundamental laws of anatomy, physiology, neurology etc. The

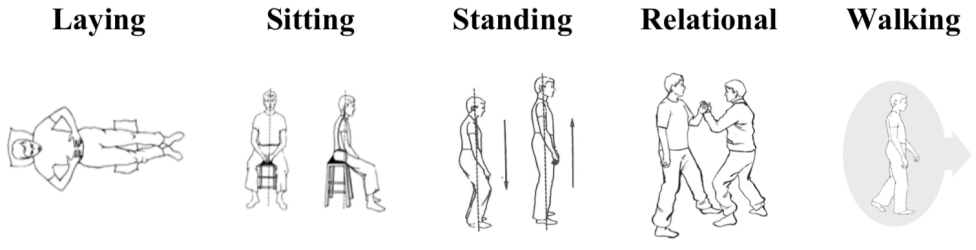

Figure 1.1: Overview of daily movements in BBAT, laying, sitting, standing, relational movements and walking (Dropsy, 1984; Skjaerven et al., 2015).

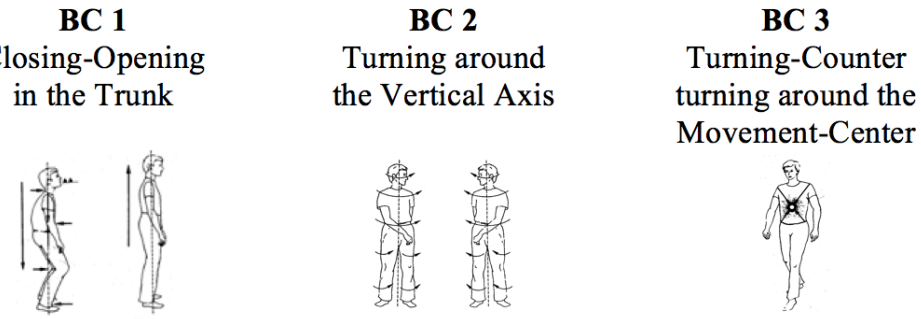

Figure 1.2: Three Basic Coordinations (Dropsy, 1984; Skjaerven et al., 2015).

coordinations are described to involve the whole person, anatomical and biomechanical, from a spherical perspective (Piret and Bezier, 1971; Dropsy, 1984) (see Figure 1.2).

The movements provided in BBAT are stabilising, freeing and safe, representing coordinations reflecting how the human being uses their body during the day. The principle of progress in therapy refers to the psychomotor development of the child (Flavel and Piaget, 1963). These everyday movements are incorporated into situations and actions designed to personally involve the patient during the period of treatment, promoting new movement habits and insight (Skjærven, 2013).

The therapy situations do not require equipment other than a floor, a mat and a chair and the physiotherapist acts as a guide, bridging the therapy situation with the everyday life and needs. A treatment contract is developed in dialogue with the patient, focusing on how the movement principles can be adjusted and practised at home, at work etc. Use of a diary is a concrete and helpful tool to strengthen the learning process and for influencing coping strategies as the therapeutic outcome.

The movement pedagogy is rooted in the physiotherapist's acquired know-how in the movements. Embodying movement elements and aspects, becoming aware of movement potentials, provides the physiotherapist with insight as the basis for treating others and as the basis for strengthened self-identity (Gyllensten et al., 2010). When movement principles in BBAT are implemented, presence in and awareness of movement, are at the core of the therapy. To enhance the contact with "the self", the physiotherapist arranges for situations that focus on basic movement principles.

1.4.3 Movement Quality

BBAT is well known for its focus on movement quality, how the movements are performed and experienced in relation to space, time and energy. This generated research on the phenomenon of movement quality (Skjærven et al., 2003, 2004; Skjaerven et al., 2008) (see Appendix A). Accordingly, a first draft of perspectives, elements and aspects in the phenomenon were identified, providing four perspectives acting as a framework for the structure of clinical practice. Postural stability, free breathing and mental awareness are key elements, when integrated into

movements, promoting more functional movement quality, well-being and health.

1.4.4 Therapeutic Components

There has been a request for identifying therapeutic components for implementation in the process of change in movement quality (Skjærven et al., 2010). Studying the phenomenon of movement quality propelled a first study on how to promote movement quality through movement awareness, resulting in the Therapeutic Component Model (see Appendix B). It is important to provide the patient with opportunities to experience learning situations that give rise to trust and acceptance. This has the potential to establish a good relationship and simultaneously strengthen curiosity, initiative and motivation, all important components for good interaction between patient and therapist (Gyllensten et al., 2000).

1.4.5 Movement Awareness Learning Cycle

The Movement Awareness Learning Cycle emerged within the study of identifying therapeutic components and is related to the Therapeutic Component Model. This movement awareness learning cycle constitutes the core of the movement pedagogy, learning being in the movement, when practicing movement awareness. It includes seven learning steps: to make contact with, explore, experience, integrate, create meaning, master and conceptualise/reflect on the movement experience, aimed at promoting coping strategies (see Appendix C). Inviting the patient to be in a state of exploration is different from using external correction, focusing on right or wrong (Horosko, 1991).

With this cycle as a therapeutic tool, the therapist invites the patient to be involved in the learning situation, through internal and external feedback (Larsson and Gard, 2006). The therapists invites the patient to learn through repeating the movement, being in movement together with the patient when guiding, acting as a role model, as being a mirror for the patient. This provides the patient with an internal image of the movement quality, which otherwise can be difficult for the patient to find (Dropsy, 1987). Through movement, the therapist functions as a tacit, non-verbal movement communicator, but also provide verbal guidance (Polanyi, 1983). The physiotherapist creates situations for the patient to repeatedly explore and experience the movement, which is followed by a reflection and conceptualisation, to integrate learning. Such a process is also known as experiential learning (Kolb, 1984).

1.4.6 Body Awareness Rating Scale – Movement Quality and Experience

The evaluation tool, Body Awareness Rating Scale (BARS) rooted in BBAT, was developed in the early 1980s, and consisted originally of six subscales (Friis et al., 1989; Skatteboe, 1990; Skatteboe et al., 1989). A factor analysis was conducted, demonstrating a decrease of subscales in the initial scale, into two main dimensions: a movement dimension and an awareness dimension (Skatteboe, 1990, 2005). Based on this factor analysis, and on the research on movement quality (Skjærven, 2015; Skjaerven et al., 2008; Skjærven et al., 2010), the evaluation tool is now named BARS-Movement Quality and Experience (BARS-MQE) and incorporate two parts: (i) the therapist observation and evaluation of the patient's movement quality in 12 movements

followed by (ii) interview of the patient about his/her description of the immediately movement experience after each movements. The variables for the movement quality observation have been operationalised, including elements and aspects identified in the movement quality model (Skjaerven et al., 2008), making it possible to score observed movement quality on a 1-7 scale. The interview of the patient's description of the immediate movement experience is handled as a direct quote, as phenomenological material, written down, but not scored.

The 12 movements included in the BARS-MQE, are presented in Figure 1.3. The organisation and therapeutic guidance and evaluation are described in the BARS-MQE manual (Skjærven, 2015).

BARS-MQE as an evaluation tool, is useful before, during and after treatment, indicating a strategy for clinical decision-making and how to proceed in the movement awareness learning, when promoting movement quality (Skjaerven et al., 2015; Strand et al., 2016). Development of the BARS-MQE has made it possible to quantify general movement coordinations, and thus

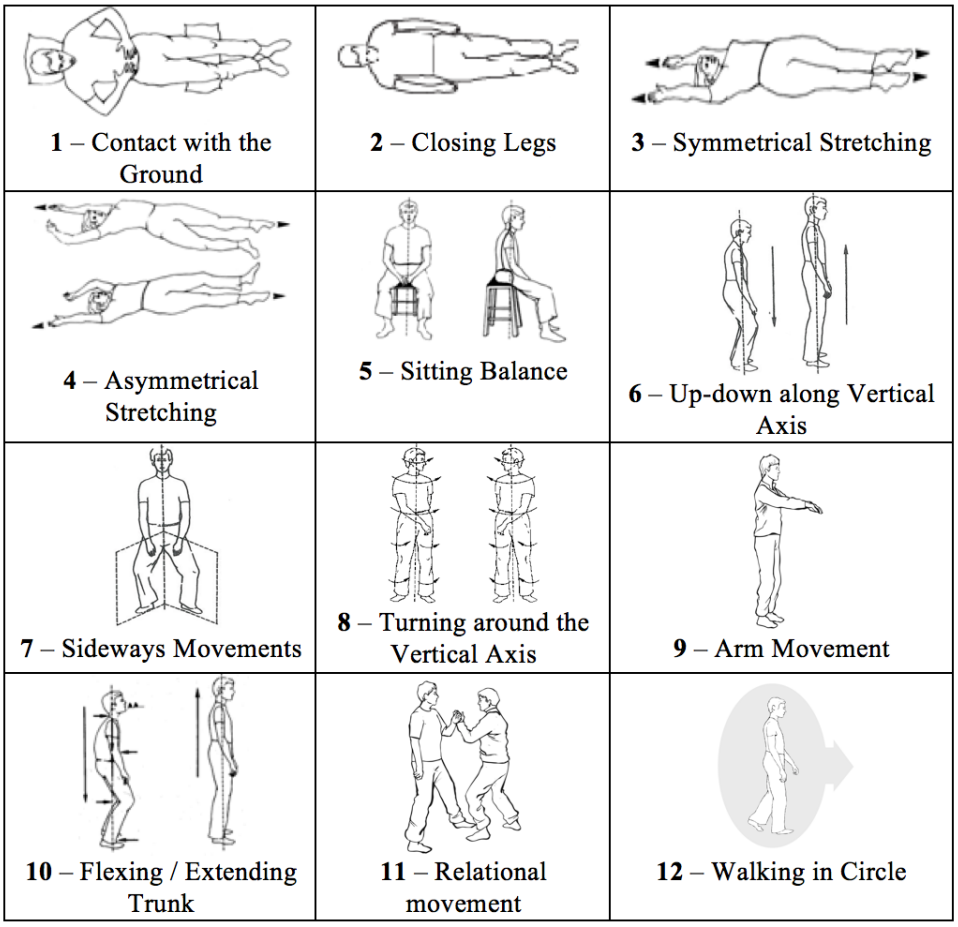

Figure 1.3: Movements in Body Awareness Rating Scale – Movement Quality and Experience (BARS-MQE), No 1-8, 10 and 12: (Dropsy, 1984). No 9 and 11: (Skjærven, 2013).

make it possible to study outcome of such training and the learning from it.

1.4.7 Who can Benefit from Basic Body Awareness Therapy?

In 1985, Roxendal, PT, PhD, presented the development of the Body Awareness Scale and the use of BAT in the field of psychiatry, studying a group of young male patients diagnosed with schizophrenia (Roxendal, 1985). Since then, multiple quantitative and qualitative studies of BBAT have been undertaken over a period of 30 years: Two randomised controlled studies on the effect of BBAT for patients with psychiatric disorders and one pilot study on patients with eating disorders (Gyllensten et al., 2003, 2009; Catalan-Matamoros et al., 2011), one study on long-term effect of physiotherapeutic treatment in outpatient psychiatric care (Mattsson et al., 1995), one study of violinists suffering from musculoskeletal problems (Fjellman-Wiklund et al., 2004) and two of patients with irritable bowel syndrome (Eriksson et al., 2002, 2007). Furthermore, a comparative outcome study (Malmgren-Olsson et al., 2009), a cross-sectional study rating body awareness in people with eating disorders (Thörnborg and Mattsson, 2009), applied research in a primary care setting (Steihaug et al., 2001), an effect study in a group context for patients with personality disorder (Friis et al., 1989; Leirvåg et al., 2010; Skatteboe et al., 1989), a study of sexually abused women (Mattsson et al., 1997, 1998), a study reviewing BBAT for patients with fibromyalgia (Gard, 2005), qualitative study revealing experiences in patients with schizophrenia (Hedlund and Gyllensten, 2010), identifying factors important for the relationship between patient and therapist (Gyllensten et al., 1999, 2000, 2004, 2010), focus group interviews on patients' experience with BBBAT in psychiatric health care (Johnsen and Råheim, 2010), study of young adults with autism (Bertilsson et al., 2018) and BBAT for patients with post-traumatic stress disorders (Blaauwendraat et al., 2017), to mention some.

1.4.8 BBAT – Anchored in Physiotherapy

Basic Body Awareness Therapy (BBAT) is well anchored in physiotherapy and the professional disciplines of anatomy, bio-mechanics, physiology, neurology, movement science, psychology and pedagogy and recognised movement elements and aspects (Bernstein, 1967; Brodal, 2016; Carr and Shepard, 1987; Larsson and Gard, 2006; Shumway-Cook and Wollacott, 2017). Even if BBAT is well anchored in these core disciplines, views on human movement, perspectives, phenomena, the movement vocabulary, movement pedagogy and therapeutic components brought professional challenges in the meeting with BBAT in the 1980s.

This has triggered and shown the way of this research. Below follows a description of movement quality and influencing traditions of movement awareness – representing a limited extract of a rich tradition.

1.5 Movement Quality – as Phenomenon

This chapter starts by highlighting the relationship between abstract definition and understanding of phenomena, before proceeding to lexical definitions of quality, qualities and descriptions

of movement quality. The chapter includes references revealing the onset of the study of the phenomenon of movement quality within a context of movement awareness.

1.5.1 Literature Search

A first literature search was done in the period of 1995-1998, based on the available data of the time, using Medline and Cinahl. The following keywords were used: quality, qualities, movement quality, quality of movement and quality in movement. This was followed by a second, revised literature search in 2007, in preparation for two publications (Skjaerven et al., 2008; Skjærven et al., 2010). Together these literature searches provided entrance to a richness of publications and literature within the field. The presentation below includes finding from the two periods found to provide an overview of the period and thus, a base for understanding the phenomenon.

1.5.2 Definition versus Understanding

A definition of a phenomenon like movement quality demonstrates a need for differentiation between an abstract concept and a phenomenon derived from lived experience (Redfern, 1965). When description originates from lived experience it enlarges a theoretical definition (Best, 1974). Lived, practical experience promotes meaning to abstract concepts and virtually transforms theoretical knowledge into living and meaningful understanding (Arnold, 1973, 1979). Also, there can exist many definitions of the same phenomenon: for example, a phenomenon can be defined in relation to the perspective and vocabulary used in a specific context. When searching to describe the phenomenon of movement quality it is necessary to differentiate between abstract, theoretical concepts and phenomena related to experiences (Redfern, 1965). Thus, a phenomenon such as movement quality allows its peculiarities to be described, providing knowledge, experience, understanding and meaning (Renshaw, 1975; Stelter, 1996).

1.5.3 Differentiation between Quality and Qualities

Quality can be described as all properties or a summing up of individual characteristics, being "a general term", including a whole (Webster, 1986), for example "The Greek sculptures are full of quality". However, quality as a singular characteristic is described as "an aspect, characteristic, attribute, a property", "a special or distinguishing attribute" (Webster, 1986).

1.5.4 Description of the Phenomenon of Movement Quality

Below follows an overview of central findings, revealed through the literature search of 1997 and 2007. Table 1.1 presents examples identified as being most meaningful for the understanding of the phenomenon of movement quality drawn from the descriptions of the most important publications. We can recognise a differentiation between elements and aspects (characteristics) in the listing of the described components.

If the phenomenon of movement quality, however, is seen merely, from a neurophysiological perspective, stressing "normal" movement and movement perfection, if the phenomenon is seen

Table 1.1: Components and descriptions identified in the phenomenon of movement quality reflecting literature, overviewing publications 1985-2005.

Subject	References	MQ components	Descriptions
German Expression Psychology and Psychiatry. Focus: Diagnostic aspects of psychopathological disorders.	(Wallbott, 1985, 1989)	MQ components: Circumference (space); velocity and acceleration; poetic, impressionistic and emotional characteristics (aspects) of MQ.	MQ is the way in which human movements are executed with respect to the dimensions of time and space.
Children with Cerebral Palsy (CP), Treatment. Focus: Children with Cerebral Palsy (CP), Treatment.	(Bach et al., 1994; Beauregard et al., 1998; Boyce et al., 1991a,b, 1995; Gowland et al., 1995; Hickey and Ziviani, 1998; Johnson et al., 1994; Thomas et al., 2001)	MQ Components: target accuracy; grasp; release; fluency; Five Attributes of Quality: alignment; coordination; dissociated movements; stability; weight shift. Vital aspects: control; speed; smoothness; goal accuracy; movement flow.	
Preterm Infants' Quality of General Movements. Focus: Predicting Neuro-logical Outcome in Preterm Infants with Brain Damage	(Bos et al., 1998a,b; Bos, 1998; Bos et al., 2001; Einspieler and Prechtl, 2005; Geerdink and Hopkins, 1993a,b; Hadders-Algra, 2004; Hadders-Algra and Groothuis, 1999; Kakebeeke et al., 1997, 1998; van Kranen-Mastenbroek et al., 1994)	"General Movement": "To have a global impression is to observe the whole body, arms, legs, trunks, and head in one". MQ-components: Attainment of midline position as indicative of postural stabilization.	Optimal MQ is an integrated, organised appearance of complexity, fluency, variability in speed, amplitude, and elegancy. Attunement of mid-line position in supine was found to be indicative of improved postural stabilisation and movement quality.

and handled as a technique, it represents a passive instructional view of the phenomenon (Ketelaar et al., 2001).

Next, in Table 1.2, follows a selection of five strategic chosen references and descriptions, revealing elements and aspects as components included in the phenomenon of movement quality.

1.5.5 Summary – Description of the Phenomenon of Movement Quality

An attempt to isolate movement elements and aspects, from a chosen period of time, is presented. The two tables are overviewing findings that has shown to influence understanding of the phenomenon of movement quality. On this background, the phenomenological study on the phenomenon of movement quality was made and the Movement Quality Model was presented (Skjaerven et al., 2008) and adapted in 2018 (Skjærven et al., 2018). The study of 2008 provided the following tentative descriptions of the phenomenon:

> *. . . "movement quality, in general, represents a global impression of how a person move. It covers preconditions and a range of movement characteristics (aspects/qualities)"*
> *– (Skjaerven et al., 2008).*

> *"Movement quality is an umbrella term embracing physical, physiological, psycho-socio-cultural and existential perspectives of human movement, expressed in diverse movement aspects or qualities"* *– (Skjaerven et al., 2008)*

> *"Movement Quality is how the movements are performed and/or experienced according to space, time and energy"* *– (Skjaerven et al., 2008).*

The phenomenon of movement quality has showed to be described within the presented publications and literature. As seen, the findings are carrying a variety of potential movement elements and aspects important for treatment in relation to promoting movement quality, for professional communication, clinical practice, education and further research in the field. As also seen from the table-presentation, there is identified a differentiation between a movement element and movement aspects (see list of Definitions).

1.6 Movement Awareness – Influencing Traditions

Below follows descriptions, as extracts of the rich variety of influencing traditions of movement awareness and this kind of learning, of philosophy, psychology, European movement awareness traditions, modern dance, actors training, t'ai chi, a focused sitting function and fine art. The presentation is covering influences mainly from the 20th century, presenting extracts views, elements and aspects considered important for this project.

Table 1.2: Descriptions of the phenomenon of movement quality strategic extracted from five (5) references, according to criteria, selected from literature in the field.

Reference	View	Descriptions
Mabel Todd (Todd, 1959)	MQ is composed of 1) how each body part relates to the other when moving, 2) the direction of movement and 3) the intention and desire to move.	"Movement quality is determined by bodily and mental factors including the emotional drive behind the movement" (Todd, 1959), p. 279).
Ernst Idla (Idla, 1981)	Describes MQ to include stamina, coordination, power, elasticity, speed and balance as a base to gain a general movement quality.	Promoting MQ is "..to develop a special sensitivity to quality and style of movement". MQ is described as "an economical, energy-efficient, well coordinated, rhythmical, flowing, well placed and empathic movement". (Idla, 1981), p. 33).
Prohl R. (Prohl, 1986)	Describes movement quality to include a variety of movement characteristics (aspects), including both bodily and mental characteristics.	"Quality designates objective-physical as well as subjective-psychological (also aesthetical) characteristics of motor (inner) and movement (external) perception" (Prohl, 1986), p. 532).
Sandra Minton (Minton, 1989)	Energy is one of the elements of movement, motivated by energy (Minton, 1989), p. 161)	"Quality is movement characteristics as determined by use of bodily energy" (Minton, 1989). p. 166).
Bonnie Bainbridge Cohen (Cohen, 1993)	Provides specific emphasis on the physiological processes, seeing them as a source for the movement qualities (aspects), such as flow, rhythm and vitality.	"The qualities of any movement are a manifestation of how the mind is expressing itself through the body, at any moment " (Cohen, 1993), p. 1).

1.6.1 Philosophy

The Danish philosopher and theologist Søren Kierkegaard (1813-1855), the German philosopher Martin Heidegger (1889-1979), and the French philosopher Jean-Paul Sartre (1905-80), all represented the closely related philosophical traditions of existentialism and phenomenology (Wulff Pedersen, SA, Rosenberg, R, 1991), focusing on human existence and basic condition. Within an existential-phenomenological philosophy, phenomena such as experience and being in are highlighted. Kierkegaard and Heidegger maintain that man's existence differs radically from that of dead matter, being alive. The whole, living human being is in focus. Kierkegaard (Wulff Pedersen, SA, Rosenberg, R, 1991) describes man "as a free acting individual", a synthesis of mind and body, describing man as a person, and the self as the element that constitutes man, stating that man is unified and complete through the self (Wulff Pedersen, SA, Rosenberg, R, 1991). It is through the function of the self that man achieves his unique existence compared to other living beings, with an awareness of himself as a free and acting individual, including self-reflection and freedom.

The French phenomenological philosopher Merleau-Ponty (1907-1961) focused on bodily aspects of man, the living body as man's existence in the world (Merleau-Ponty, 1962). He describes the subjective body as living and acknowledging. This is linked to man's relationship with space and time; human movement is an expression of perception, a continual process of self-constituting (Merleau-Ponty, 1962). Merleau-Ponty was a contemporary of Sartre in Paris. Sartre pointed out that "the body is lived, not known" (Sartre, 1969). Accordingly, man's existence has both a pre-reflective and a lived dimension (Engelsrud, 1990). The idea of the living body, as described by Merleau-Ponty, relates to this fundament.

Yasuo Yuasa was a contemporary Japanese philosopher, knowledgeable in Western existential/ phenomenological philosophy, and rooted in Japanese philosophy with its origin in Za Zen (Yuasa, 1987). According to Yuasa, Eastern philosophy relates to body and mind as a unity, attained through cultivation and practice. In Eastern philosophy meditation and philosophical insight are inseparable, describing a wisdom that cannot be acquired purely through intellectual knowledge. This characteristic needs to be acquired through the body to become integrated and embodied. This type of wisdom is not verifiable with words but through concrete practical, bodily actions. The aim of Za Zen practice is not the goal itself, but the experience of being, strengthening the ability to being present. The true knowledge in this context is described as a psycho-physical awareness, beyond intellectual knowledge (Yuasa, 1987).

1.6.2 Psychology

The Swiss psychologist Carl Gustav Jung (1875-1961) studied the interrelationship between posture and muscle tension regarding the development of neurosis. He had a strong influence on the development and current view of humanity of his time. He maintained that man's actions were not only decided by material and causal conditions, but also through sub-consciousness, which creates the intention and meaning in life (Jung, 1995). He described man as a carrier of an inherent potential for making symbols, inner images, searching for existential basis (Jung, 1991). From the point of view of the collective unconscious and archetypes, Jung maintained that all archetypes are aspects of the self. Jung described the self as the driving force of all human

development and underlined the relationship between the self and the subconscious, between the self and breathing, and between conscious will and subconscious regulations.

The Austrian Doctor of Medicine and psychoanalyst Wilhelm Reich (1897-1957) developed a theory based on Freud's interest in the neuromuscular basis of psychology (Reich, 1990). Reich revealed a manifestation of suppressed emotions, followed by immediate changes in breathing and muscle tension (Reich, 1990). He introduced the concept of muscle armour as a blocking of emotions, such as anxiety and joy. He described an interrelation between muscular rigidity and psychological conflicts, maintaining that neurosis did not exist without respiratory restraint and muscular tension. Furthermore, he described how personal character traits became expressed in human movement, particularly in the opening-closing coordination in the trunk, through the interrelationship between movement, breathing and emotions. Reich underlined the explorative aspect of movement as being important, stating that the experience of identity and self-esteem related to a person's experience of the moving body.

Alexander Lowen (1910-2008), was an American psychotherapist, a pupil of Reich and the creator of the Bioenergetic. He was born in New York, and educated thorough studies on human movement. He described the obvious relationships between psychological inhibitions, muscular blocks and the consequence for the quality of human movement (Lowen, 1974). Inspired by Eastern therapies and acknowledged as the developer of body-oriented psychotherapy, established in New York, he noticed how integration of free movements and breathing would promote health. He maintained that a more conscious experience of identity was related to a more conscious and attentive awareness of the body and its movements. If the experience of identity was inadequate, it could lead to a disconnection, a lack of contact, between the self and the body, producing dissatisfaction, discomfort, dissociations and disorders.

The Norwegian psychologist Guldbrandsen (Nielsen and von der Lippe, 1993) refers to two experienced spheres: instrumental activity and the being. Instrumental activity represents a part of life related to efficiency, work, and daily routine, representing having a body. The being is related to experiences of meaning, togetherness and fellowship created through an attentive awareness, relating to being in contact with the body. Such awareness promotes greater intimacy to the self. Furthermore, two types of attention are described, instrumental and receptive. Instrumental or automatic attention refers to what is fixed in life: everything becomes efficient, static, leading to experiencing boredom and emptiness. Receptive attention is presented as an entrance to the body and the key to being, and to the relationship between the body, the self and personal development. Both need to be considered in therapy.

1.6.3 European Movement Awareness Tradition

Historically, movement exercises for health promotion can be traced back, several hundred years. This presentation starts with Ling's movement system (1776-1839) rooted in the German military drill of physical gymnastics. As a reaction, several movement awareness approaches, with their origin in the phenomenological tradition, appeared at the end of 19th century and beginning of 20th in Germany, Austria, France and England, before spreading to USA and Scandinavia (Johnson, 1983). Johnson studied the background of several pioneers: Gindler, Selver, Alexander, Idla, Feldenkrais and Alon. A common feature was a turn towards health as a driving force through movement awareness. The distinctive feature was the body's sensory experience,

learning from being in movement, rather than learning from external corrections. The aim was to recognise dysfunctional movement patterns and explore healthier, functional movement, including breathing and presence, regaining contact with the body's wisdom (Johnson, 1983).

Elsa Gindler (1885-1961) was a German gymnastics teacher from Berlin (Johnson, 1983). Gindler developed as a pioneer, pointing to the curative forces inherent in movement awareness (Johnson, 1983). She promoted mental awareness, free breathing and tension release combined with movement experience as core elements, aimed at an experience of health and well-being. This contrasted with the mechanical exercises that she referred to as empty and meaningless. Movement awareness was the basis of the Gindler School, described as a regeneration process for awareness of the body as a whole through movement. Gindler schools were established in Europe. She firmly believed that every person had a developmental potential, being able to experience this through movement. The aim was to promote health and develop as a person through movement awareness.

Frederick Mathias Alexander (1869-1955), born in Australia, he travelled to London and later to the USA, focused on the position of the head and the neck in relation to the vertebral column and how awareness of poor body alignment led to altered erect position (Barlow, 1990). He developed the Alexander method well known in Great Britain and the USA. He emphasised the principle of seeing man as one psycho-physical unity (Barlow, 1990, p. 18). The Alexander method is aimed at exploring ways to move, described as a golden road to health (Barlow, 1990). What matters is learning a functional use of the body, balancing posture, becoming aware. The importance is to rediscover a more functional way to move. Alexander's pedagogic doctrine underline that it is not the goal itself that is paramount, rather the being in movement, in a light and easy manner. The best way to promote this is to listen, explore and experience, in the movement awareness learning, not to try extra hard, which may easily hinder more functional use to be revealed and developed (Johnson, 1983).

Ernst Idla (1901-1980), born in Estonia, was a pioneer within rhythmic gymnastics that he himself described as health promoting (Idla, 1981). He used a ball as support to develop sensitivity to space and rhythm in movements. When rhythm was integrated into the movements, a subjective experience of lightness and well-being was described. Fundamental was a search for equality between force and resistance, gravity and postural reflexes, integrating such polarities of components into the movement awareness. Movement aspect such as flow and rhythm were described as effort saving, and organic-biological in man. A sense of rhythm is fundamental for establishing any rhythmic rhythm, a dynamic interaction between tension and release: "When movements become rhythmical, the movements are more functional, energy efficient and at the same time aesthetically beautiful" (Idla, 1981, p. 26).

Moshe Feldenkrais (1904-1984), an Israeli engineer and physicist, is the founder of the Feldenkrais Method, relating to body awareness through movement. Central to this was "[... improving human capacity, inspiring people to get in contact with the organic wisdom of coordination in tune with nature's intent" (Johnson, 1983, p. 172). He developed a process of personal experimentation, "through which you can train gradually and patiently, safely and gently, how to move in and out of pitfalls in varying and changing situations" (Johnson, 1983, p. 173). He underlined the importance of the function of the nervous system, meaning that when a movement is perceived by the nervous system, the body remembers and learns more easily. Breaking

habits was important for the development of more functional movement patterns. Crucial to the approach is that the whole person is involved in movement learning, sharpening the senses, turning blocked movement habits into awareness of healthy movement aspects.

Charlotte Selver (1901-2003), a German immigrant to the USA in 1938, developed the term "sensory awareness", as separate from intellectual awareness: "sensory awareness is an awareness of direct perception" (Johnson, 1983, p. 161). It was described as essential to relearn the inner dialogue with the living organism, promoting attentive presence in natural, organic movements, laying, sitting, standing and walking, named "the four dignities of man" (Brooks, 1976, p. 21). She underlined the importance of being personally involved, leading to closer contact with oneself. She argued that it is necessary to be receptive, acting like an explorer: however, the thought may easily distract the senses, and thus the movement quality. Becoming more aware of one's own natural, organic movements, tends to make the movement function more optimally (Behnke, 1989). Thus, the movements can become less empty and mechanical, and instead, express a living fullness, related to increased movement awareness.

Ruthy Alon (1930-), a pupil of Feldenkrais, underlined the importance of movement experience to helping people to find meaning and gain insight (Alon, 1990): "The human being has a particularly deep attachment to his own movement habits since he created them himself" (Alon, 1990, p. 72). Through contact with movements, man has a unique opportunity to turn a vicious circle of tensions and pain toward functional movement quality and health, exploring a sense of lightness. They are the same qualities that make music flow as those leading to functional movement quality. Before starting any movement, there is the preparedness, a contact with oneself, because in starting to move: "paying attention is the alchemy that improves the quality of action" (Alon, 1990, p. 65). Becoming aware is the mental element needed to restore its aspiration for a more optimal function, the main entry to learning and the main therapeutic aspect of restoring contact with the self.

Several well-acknowledged therapists have implemented movement awareness learning principles promoting movement quality: Bess Mensendieck, Lillemor Johnsen, Gerda Alexander, Gerda Boyesen, Jean Ayres, Emilie Conrad, Judith Aston and Miriam Goldberg (Hölter, 2011; Johnson, 1983). The pioneers all experimented, discovering how to promote health through movement awareness learning.

1.6.4 Modern Dance

Modern dance has been a powerful source of inspiration for the origin of the movement awareness tradition. A similar reaction found in classical gymnastics also occurred within modern dance. Below follows a presentation of some of the most influential pioneers. Fundamental to modern dance is the rediscovery of the body's potential through movement awareness in order to promote movement quality, described as inherent potential, equal in all humans (Johnson, 1983).

The musician Emile Jacques-Dalcroze (1865-1950), professor in harmony at the Geneva Conservatory, provided pioneering work with rhythmic gymnastics, a reaction to the technical movement training. He became the developer of Dalcroze eurhythmics, or just eurhythmics. Several contemporary dancers were pupils of Jacques-Dalcroze, such as Isadora Duncan and

later Wigman (Horosko, 1991). Both went against the ideals of classical ballet and its striving towards external, beautiful forms, one-sidedly. According to Johnson (1983) the form of Jacques-Dalcroze aimed at expressing life (livelieness opposed to stiffness) in movement. Only then could a deeper meaning from movement experience be expressed and movement would achieve denser and unified quality (opposed to a split movement).

Isadora Duncan (1877-1927), born in San Francisco, California, who later lived in Europe, developed to become a well-known American and French choreographer and dancer, a pioneer who strongly influenced choreographers and dancers of the time, with her innovative education (Johnson, 1983). Her dance was revolutionary as she rejected the traditional external technique. Inspired by Greek Antiquity, she promoted the expression that a movement could develop from inside (Daly, 1995).

Rudolf Laban (1879-1958), born in Hungary, was the foremost movement scientist of his time (Laban, 1960). Rooted in modern dance, he studied human movement throughout his life (Redfern, 1965, p. 4). As a choreographer and philosopher he developed a theory and method of observing, describing and teaching movement (Bartennief, 1963; Laban, 1963, 1974; Laban and Lawrence, 1965; Redfern, 1965). He is well known for the factors of time, force, space and flow, seen as fundamental for human movement. His approach is based on recognition of physical, emotional, cognitive and existential elements (Thornton, 1971). Strengthening the self through movement awareness was considered basic for an optimal health, and deepening movement experiences would promote recognition of one's own potentials (Thornton, 1971, p. 8).

Mary Wigman (1886-1973), the German dancer and choreographer, is described as one of the greatest pioneers of modern dance (Johnson, 1983). As part of her innovative development, she especially underlined the importance of energy as an element in relation to human movement in general. The use of one's own energy was expressed in human movement, whose rhythmic innovations challenged and established energy norms. She worked on contrasts in the movements, like polarities between expansion and contraction, and between pulling- and pushing-movements. Uses of energy in dance were implemented, based on concepts drawn from Laban, theorised with reference to historical, social and cultural contexts and to phenomenological approaches to the embodied subject.

Martha Graham (1894-1991), the American dancer and choreographer, was developer of modern dance in the USA (Horosko, 1991). Graham approached the promotion of personal potentials by implementing an exploring attitude towards being in movement. She underlined the importance of becoming more conscious of what she called the physical movement principles, referring to the integration of breathing and movement. She focused on the "contract-release principle", related to the elastic properties of muscles and breathing, as fundamental to promote a change in the general movement quality (Horosko, 1991). Highlighting the difference between ballet and modern dance, she stated that "... while ballet imposed movement on the body, modern dance sought to draw out what was already there, to simply rediscover what the body can do" (Horosko, 1991, p. 8), with consequences for the movement pedagogy.

1.6.5 Actors Training

European movement awareness traditions are linked to the current teaching of drama in Europe and the USA. Both psychological and physical aspects were identified within literature describing the art of actors training. The most influential originators lived around the turn of the century (Riege, 1997). Leading actors underlined the importance of emotions, personal aspects, imagination and creativity as elements to be implemented to achieve such movement quality in acting.

Konstantin Stanislawski (1863-1938), the great Russian actor and director, is well-known for the development of a theory of performing art and practical application of pedagogy for the art of acting, and consequently on the quality of the way to move and express one-self at stage (Stanislavski and Hapgood, 1996; Stanislavski, 1988; Stanislavski and Hapgood, 1992). His aim was to achieve authenticity of feeling and expression as actor. He described two approaches: the external way, through physical training and the internal way, through movement awareness refining movement quality, both important in actors' training (Stanislavski and Hapgood, 1992). He underlined the importance of movements being genuine, full and not empty, rhythmically alive and purposeful, not artificial and stiff. He is well-known for introducing the metaphor of the magic "as if" as a learning component (Stanislavski, 1988). By repeating movement and metaphor (for example of integrating flow and rhythm in the movement), the quality aims to be "transformed into becoming organic, natural and free" influencing movement quality and acting.

1.6.6 T'ai chi

T'ai chi is an ancient Chinese form of movement awareness training and has more than a thousand year-long tradition, regarding body and mind as a unity. There exists very many forms of T'ai chi, but, as a sum, it consists of series of movements rooted in the nature of the human being, promoting health and psychological and physical balance (Lash, 1995). The movements are action oriented, related to life, as being container of a condensation of fundamental movements. The movement are both simple and complex, and the way to perform them is described as meditation in movement, and can be presented as a set of psychomotor movements (Klein, 1987). The latter is of interest in this context. T'ai chi contains actions related to the environment, sequences of movements performed in a slow, rhythmically, flowing and intentional manner (Lash, 1995). The movements are compound actions put into a system extracted from daily life. One aim is to promote optimal and avoid a maximal range of movement, aiming for the movements to become economic, rhythmical, effortless and efficiently functional. The elements of a stable balance, free breathing and attentive presence are integrated into the numerous sequences of movement actions.

1.6.7 A Focused Sitting Function

A focused sitting function has old roots in meditation. Meditation developed in India as early as 1500 BC, spreading during the years to China. In the eleventh century AD meditation became important in the Japanese culture. In the middle of the 1900s several Japanese Zen masters

arrived in the West, in the USA and Europe, influencing philosophers, psychologists, educators, actors and dancers in their personal, professional and artistic development (Deshimaru, 1988; Suzuki, 1988). There exists many meditation traditions and forms.

A focused sitting function has more recent roots in the Japanese culture, as also adapted to the Western culture. The Japanese Za-Zen is described as an Eastern training form and not a specific meditation. With Za Zen is meant a focused sitting function, practiced with a relaxed attention in an upright functional balance, allowing a free and effortless breathing, developed for use in every day life. The training focuses on the unity of the body and mind, and of attaining health. Of interest in this PhD, is the three incorporated elements and the training of the unity of them, the postural balance, free breathing and awareness. This is a simple form of training the presence and also free, stable, functional sitting. Such awareness training of attentive sitting is described to develop a clearer perception, becoming aware and more calm (Kapleau, 1989; Hof, 1985).

Practicing a focused sitting function may open to experiencing how a more stable and light awareness of oneself can lead to a sense of unity, as a (re-)collection of one-self (Levin, 1985; Kapleau, 1989). As described in the literature, the living human being is not just a collection of bodily parts, but an organically integrated whole. The human being is "made" in such a way that when one part of the body moves, however subtle the movements are, they will, immediate, make the whole body move in accordance with it. Contemporary scholars are finding interest in the description of the practice of Za Zen to therapeutically promote a sense of unity of body and mind (Kabat-Zinn, 1991). According to Dropsy, the three elements, the balance line (vertical axis), breathing and awareness, together, are a key to an experience of unity, well-being and health, contributing to a sense of being whole and collected (Dropsy, 1993; Skjærven et al., 2003).

1.6.8 Fine Art

Fine art is described as an expression of true feeling and form (Langer, 1953), where artists are seeking to visualise the moving human being. As early as 3500 years ago, the Minoan people of the Mediterranean made beautiful action sculptures (Davidson, 1993). Artists sought to express movement experiences and many of their frescoes show great vitality and life. In our culture we are still drawn to Greek sculptures (Heidegger and Krell, 1978; May, 1975). The Greek people were skillful in their own movements and good observers of others (Charbonneaux et al., 1970, 1972). The Greek sculptors studied bodies and minds to discover qualities to be embodied in their works. Later, the French sculptor August Rodin (1840-1917) was attracted to Greek sculptures and derived pleasure from studying them to refining his own work in terms of expressing universal movement characteristics, as well as personal traits in his sculptures and drawings (Jarrassè, 1995). Fine art and the vocabulary describing such art can express truths and provide perspectives, elements and aspects of movement quality derived from the senses. This can help us to become aware of movement element and aspects we were previously unaware of (Skjærven et al., 2004).

1.7 Summary

The introduction provides background for this thesis through glimpses of perspectives, elements and aspects implemented in the philosophy, psychology, and approaches concerned with how to promote movement quality through movement awareness. It is not the dance, the acting, the art itself that is of interest, rather the implemented perspectives, elements and aspects that can be extracted from it, and considered for physiotherapy. Physiotherapy in mental health is a growing discipline worldwide, and movement awareness strategies, for treatment, rehabilitation, preventive health care and health promotion, strives to be described, critical viewed and structured, aiming towards an evidence-based practice.

Conducting clarification in phenomena is the basis for any clinical intervention reaching towards the complex field of long-lasting musculoskeletal pain and mental health disturbances. Clarification in terms of phenomena, terminology and theory construct, is needed to heighten the professional quality and communication of it, in order to be reliable and predictable, for patients, society and policy-makers.

The background of the study is rooted in my earlier research published during the period of 1999-2015 (see Table 1.3). The curiosity to study human movement, has a long and rich history in society in general, as within the profession of physiotherapy. In this thesis, the two phenomena, movement quality and movement awareness is studied.

The thesis is centred on and bringing a dynamic, lived and experienced dimension of human movement to the fore, following a phenomenological and a salutogenic approach as an assumption. The introduction concentrates on the two phenomena, movement quality and movement awareness, presenting a differentiation between a concept and a phenomenon, clarifying the terms of quality and qualities, proceeding to the phenomena of movement quality and an extract

Table 1.3: Developmental timeline of personal research on the phenomenon of movement quality and movement awareness in the period of 1999-2015.

Year	Title
1999	An Approach to Movement Quality. A Field Study of the Movement Practice of the Movement Educator and Psychotherapist J. Dropsy. MSc Thesis, Faculty of Medicine, University of Bergen, Norway. (Skjærven, 1999)
2003	Basic Elements and Dimensions to Quality of Movement – a Case Study. (Skjærven et al., 2003)
2004	Greek Sculpture as a Tool in Understanding the Phenomenon of Movement Quality. (Skjærven et al., 2004)
2008	An Eye for Movement Quality – a Phenomenological Study of Movement Quality Reflecting a Group of Physical Therapists' Understanding of the Phenomenon. (Skjaerven et al., 2008)
2010	How can Movement Quality be Promoted in Clinical Practice? A Phenomenological Study of Physical Therapy Experts. (Skjærven et al., 2010)
2015	Reliability and Validity of Body Awareness Scale (BARS) – an Observational Assessment of Movement Quality. (Skjaerven et al., 2015)

of influential movement awareness traditions, arising during the twentieth century in Europe.

Various components implemented in the phenomena of movement quality and movement awareness are searched to be clarified. Increased perception and understanding of the phenomena are the basis for developing a more differentiated description of the two phenomena. The aim of the thesis is to justify and develop a further clarification in the terminology and structure of movement quality and movement awareness learning, revealed through qualitative research, with data emerging from clinical practice. As movement quality and movement awareness are both important terms in physiotherapy communication, the purpose is to study the complexity of the phenomena through three studies with cohorts of movement experts within physiotherapy as informants and to further develop findings into a potential construct of a movement awareness domain for mental health physiotherapy(see Table 1.4).

Table 1.4: Studies included in this thesis, titles of Study I, II and III.

Study I	**Study II**	**Study III**
Consensus on core phenomena and statements describing Basic Bode Awareness Therapy within the movement awareness domain in physiotherapy	A Vocabulary Describing Health-Terms of Movement Quality – a Phenomenological Study of Movement Communication	Mapping a Road to a Movement Awareness Domain for Mental Health Rehabilitation – A Meta-analysis of Qualitative Studies

Chapter 2

Purpose

The overall purpose of this thesis is initially directed towards the two phenomena of movement quality and movement awareness trough studying core phenomena in the context of clinical physiotherapy. Furthermore, the thesis is directed towards a movement vocabulary of health characteristic terms of movement quality for professional communication, and, last, synthesising previous research on movement quality and movement awareness, aiming towards mapping a construct of a movement awareness domain and to communicate this within the field of mental health physiotherapy.

2.1 Study I Purpose and Research Questions

The purpose of Study I, Part 1, is directed towards identifying and describing core phenomena in BBAT, to see more clearly the phenomena of movement quality and movement awareness, the relation between them, their related phenomena and how these terms interrelate. The purpose of Part 2 is directed towards identifying most preferred statements describing BBAT, serving to be implemented in professional communication on the phenomena.

- What are the core phenomena identified in Basic Body Awareness Therapy (BBAT), and how can they be described, analysed, clustered, and related to each other, in clarifying a terminology?
- What are the most preferred statements describing BBAT for professional communication in physiotherapy?

2.2 Study II Purpose and Research Questions

The purpose of Study II is directed towards identifying a movement vocabulary, describing health characteristic terms of movement quality for professional communication in physiotherapy, rehabilitation, education and research.

- What is the movement vocabulary identifying and describing health characteristic terms of movement quality, revealed by a group of expert physiotherapists within rehabilitation?

2.3 Study III Purpose and Research Questions

The purpose of Study III is to conduct a meta-synthesis of three previous publications, text-material and models, from the period of 2008-2018, focusing on the phenomena of movement quality and movement awareness. The purpose is constructing and mapping a movement awareness domain for mental health rehabilitation.

- What are the findings from a meta-synthesis conducted on three previous publications on the phenomena of movement quality and movement awareness, and what construct can be identified as a potential movement awareness domain in mental health rehabilitation?

Chapter 3

Material and Methods

This chapter starts by outlining the literature search conducted during the study, before proceeding to present the study design and population in the three studies.

3.1 Literature Search

A third, revised literature search was carried in October 2018 as a screening, including Medline, Cinahl, Embase AMED and PsycInfo, implementing the same keywords as in the first and second literature data search: movement quality, quality in movement and quality of movement. The search included titles and abstracts related to references in published articles. When limiting the screening to physiotherapy / physical therapy, the search was left with 93 references. An increase in the use of the phenomena of movement quality, quality in and quality of movement was identified, however, no additional information was identified concerning the two phenomena of movement quality and movement awareness, thereby adding no new meaning or knowledge.

However, through this screening, some additional studies integrating the term movement quality were identified, among which the most significant references in this thesis ranged from neurological physiotherapy (Langhammer and Stanghelle, 2011), to studies in relation to low back pain (Kaarbø et al., 2018; van Dijk et al., 2017a,b), cerebral palsy (Sorsdahl et al., 2010, 2011), eating disorders (Catalan-Matamoros, 2007; Catalan-Matamoros et al., 2011), fibromyalgia (Bravo et al., 2018), rheumatic diseases (Olsen et al., 2016; Olsen and Skjaerven, 2016), osteoarthritis (Olsen and Skjaerven, 2016; Strand et al., 2016), studies in relation to persons with severe mental illnesses (Hedlund et al., 2016), as well as phenomenographic study of physiotherapy students' movement experiences (Ahola et al., 2016). As reported above, no new element or aspect were identified.

3.2 Study Design and Population

The three studies in this thesis, each of which have different purposes, required a different design, methods, informants, data-collection and data-analysis, see Table 3.1. For research method, Study I required the nominal group technique for a consensus-building process. Study II required

a phenomenological design to reveal an essence of the phenomenon of movement quality as terminology for a vocabulary for communication. Study III required a meta-synthesis for mapping a road for a movement awareness domain, through three previous publications.

Table 3.1: Overview of research design, setting, study population/informants, sample size, method of analyses and results in Studies I-III.

	Study I	**Study II**	**Study III**
Research Design	Nominal group technique (NGT)	Phenomenological design	Meta-synthesis
Setting	A condensed three-days workshop of 20 hours	In-depth, face-to-face, semi-structured Interview	Previous research done by the authors of the article
Study Population/ Informants	BBAT expert clinicians	Experts clinicians, five from each, from neurology, primary health care, psychiatry	Three previous publications: 2008, 2010, 2018
Sample size	21 international physiotherapy experts from 10 European Countries	15 physiotherapy experts, national, local	Text-material and four published models, in total 51 informants
Analysis Method	Content analyses	Giorgi/Malterud Qualitative analysis	Content analysis
Results	Core phenomena and statements describing BBAT	A movement vocabulary of health characteristic terms of movement quality	Construct for a movement awareness domain, with learning components

3.2.1 Study I

In Study I, a research group of five physiotherapy researchers was organised eight months before the study. The members were from four countries in Europe, all teachers in BBAT. An additional, external researcher was invited to be a member of the research group six months before the study. The research team took the role of facilitators during the research process of data-collection, and were responsible for organising sessions on research methodology and group dynamics as well as organising the consensus-process. The external researcher was recruited to ensure neutrality and a stringent data-collection without influences from research-group members. In addition, the external researcher was invited to bring her own philosophy, experience and understanding

to the research (Dickson G, 2001). All six are co-authors of the publication.

The research group planned an intense, 20-hour weekend-workshop, at HVL, Bergen, Norway as the arena for a consensus study, and the nominal group technique (NGT) was chosen as the research method for the consensus-building process. The NGT was chosen because of its participatory character, its inclusive atmosphere and its structure of encouraging participants to contribute equally (Potter et al., 2004). It was described as cost- and time-effective and easy to implement and was reported as being attractive for research within clinical settings.

The purpose was to study core phenomena and statements in BBAT, because its clinical practice, vocabulary, communication and therapeutic strategy with regard to human movement needed to be clarified. The research group considered physiotherapy teachers and candidates in BBAT as movement experts having been experienced clinicians for years, treating patients with complex combinations of long-lasting musculoskeletal pain and mental health problems. The recruitment of this group of informants was intended because of increased clinical, educational and research interest in BBAT internationally and because the phenomena included in BBAT were movement-related in a way that had not been recognised and described within physiotherapy before.

The process of recruitment and motivation of informants lasted for seven months (see Table 3.2). 21 out of 35 invited informants were recruited. The 21 recruited experts were from 10 European countries and had between five and 35 years of clinical and educational experience, 16 worked within clinical settings and five at a faculty, one at a faculty only. The numbers of years spent working as a as teacher in BBAT varied between one and 24 years and for the candidates between one and 5 years. Of the 35 invited informants, 14 could not attend the workshop because of teaching or financial reasons (too expensive travel cost).

Table 3.2: Study I Recruitment-process, motivating BBAT experts participating in the consensus study.

7 months before	**6 months before**	**4 months before**	**1 month before**
First information about a planned consensus workshop:	Written information on workshop program and definition of consensus	Motivation to contact other colleagues, initiating discussion on core phenomena	Deadline for workshop application; signing informed consent
Email sent to 35 BBAT teachers and candidates	Email sent to 35 BBAT teachers and candidates	Email sent to 35 BBAT teachers and candidates	21 teachers and candidates agreed to participate

The consensus-building process of the NGT-protocol ensured the participants collected, organised and analysed the data, through a six-step strategy, reflecting their thoughts and actions drawn from clinical settings, and, at the end, presenting consensus on core phenomena (see Table 3.3). The same step-wise process was followed in both Part 1 and Part 2 of the study. It was considered appropriate that implementing NGT could make a professional contribution, required for an evidence-based practice in physiotherapy (Potter et al., 2004).

Table 3.3: Study I Step 1-6 in the research process of data-collection for the two research questions, core phenomena and statements describing BBAT.

	Core phenomena in BBAT	**Statements describing BBAT**
STEP 1	Introduction and explanation	Introduction and explanation
STEP 2	Silent generation of ideas	Silent generation of ideas
STEP 3	Sharing ideas	Sharing ideas
STEP 4	Group discussion, small and large group	Group discussion, small and large group
STEP 5	Voting and ranking	Voting and ranking
STEP 6	Summing up and evaluation	Summing up and evaluation

At the end of the workshop, all data-material developed by the participants, from Part 1 and Part 2, was collected and safely taken care of by the external researcher.

For data-analysis in Part I, content-analysis was used (Graneheim and Lundman, 2004). This was conducted by the research-group, both individually (separately), and together in three meetings, through a multi-step analysis, back and forth, identifying clusters of (i) overarching categories, (ii) categories of clinical core phenomena, (iii) sub-categories and (iv) phenomena, as presented (see paper of Study I).

For data-analysis in Part 2, data were calculated and organised according to the three following levels: 100% agreement, 67% and 33% agreement (see paper of Study I).

3.2.2 Study II

In Study II, a phenomenological design was chosen to identify clinical phenomena used in movement descriptions by physiotherapy experts' reporting from clinical communication with patients. The purpose was to search for an essence of movement terms, tapping as many features and characteristics as possible of movement-related phenomena considered to be verbalised, also as tacit information (van Manen, 1997). A population of 15 physiotherapists, defined as movement experts according to criteria, from three fields, namely neurology, primary health care and psychiatry were recruited through a six-step nomination and recruitment process (see Table 3.4). This design was chosen to uncover health-characteristic terms of movement quality, reported from their dialogue with the patients. For the study they were invited beforehand to bring two or three narratives from their practice for use in the interview situation. The purpose was to uncover terms as well as to broaden the understanding of the clinical dialogue, thereby identifying terms used to facilitate movement learning and communication (Malterud, 2001a,b, 2012).

Data-collection was conducted through individual, face-to-face interviews with the experts, each lasting for about one and a half hours, and was directed towards the experts' reported verbal communication of movement observations as they guided the patients' movements. The aim of using phenomenology was to transform the clinicians lived experiences into textual expression (van Manen, 1997). In the interviews, the informants were given situations to describe, as

Table 3.4: Study II Overview of recruitment of nominee committee and informants.

Nomination committee		**Nomination**	**Recruitment of informants**	
Step 1	**Step 2**	**Step 3**	**Step 5**	**Step 6**
Request	Information	Nomination	Request	Information
Phone 6 Head PTs at University hospital, primary health care and psychiatry: all willing to participate	Information letter to the 6 Head PTs establishing a nominee committee	Meeting: each brought a list of 10 experts, prioritising informants in each field, according to criteria.	Informants: invitation through phone. All agreed to get information letter.	Invitation letter and informed consent to informants. Recruitment of five PTs from each field: in total 15 clinical PTs, agreed.

if being in the treatment situation, an extract of movement guidance, as example of how they brought the therapeutic guidance forward, helping the patient to explore, experience and understand what was concretely meant regarding (re-)learning more functional movements. The interviews with the 15 informants took three months.

In accordance with the research protocol, a sample size of 30 informants was prepared for in the nomination process to reach saturation. However, a sample-size of 10-12 informants was expected to be sufficient and realistic for reaching saturation in the material, because of the in-depth interview of about one and a half hours and the nomination criteria of the informants. As expected, saturation was identified in the data material during interviews 12-13. The research-group decided, however, to complete the planned 15 interviews.

A reliability check of the interviews was performed by the informants by reading their transcribed interviews, which were sent to them. They were allowed to add meaning and descriptive words by making adjustments to the file. All informants confirmed the content. Only one made a minor comment.

The data-analysis followed the recommendation from Giorgi's methodology, modified by that of Malterud, as qualitative analysis (Malterud, 2012). The texts were read several times during the analytic process, along with further analytic steps, searching for meaning units, codifying meaning units, identifying themes, clustering aspects and descriptive terms, finally leading to a coherent whole of the vocabulary of health-characteristic terms, as presented.

3.2.3 Study III

Study III is a meta-synthesis of three previous qualitative publications, from 2008 (Skjaerven et al., 2008), 2010 Skjærven et al. (2010), and 2018 (Skjærven et al., 2018), on the phenomena of movement quality and movement awareness. The meta-synthesis was developed to review earlier published data-material, text-material and models (see Study III, Method, Table 2). A

meta-synthesis differs from a meta-analyses in that the synthesis not only combines studies together, but also broadens and deepens understanding of a particular phenomenon (Grant and Booth, 2009).

The purpose was to include the three papers, with their common subject, but with 10 years between the publications and with different cohorts of informants as expert clinicians. A meta-synthesis is a strategy for conducting secondary qualitative analysis of primary, published findings. Through combining the findings reported in the previous studies, the aim was to deepen the understanding of movement quality and movement awareness and to create one single, more in-depth presentation in the field.

Content analysis (Graneheim et al., 2017; Graneheim and Lundman, 2004) was used during the meta-synthesis, de-contextualising and re-familiarising with the text-material and model-material, both separate and a whole. This was followed by a four-step analysis of the text-material. This led to synthesising the material of the phenomena of movement quality and movement awareness (see Table 3.5).

Table 3.5: Study III Overviewing the meta-synthesis process, analyzing text-material and models in the three previous publications from 2008, 2010 and 2018.

STEPS	**Original Text-Material from the Three Publications**	**Four Models**
1. Reviewing Process	De-contextualizing and re-familiarising with the total text-material	De-contextualising and re-familiarising with the four published models
2. Analysis 1	Learning focus (what) and form (how) was identified. Start analysis of text-material	Learning focus was identified and specified. Start analysing four published models
3. Analysis 2	Three main themes were identified within the text-material	Condensed description of each model of structure and content
4. Synthesising Process	The text was synthesised into one whole, including three pillars as base for the construct	A construct of the domain visualised by a small- and large-scale map

The meta-synthesis of the four previous published models on movement quality and movement awareness, led to a condensed description of each model (see Table 3.6). The four models 1-4 (see Appendix A-C; for model 4, see Study I, Result) are described according to its format, structure and content. Formatting is here understood as the description of the shape of the model, designed to organise and arrange the data. The four models have been formatted differently as a consequence of the type of data they rely on. In the table, formatting is followed by a presentation of the structure and finally, the content.

Merging text- and model material led to a small-scale and large-scale map presented in the Results section.

Table 3.6: Study III Description of each of the previous published models.

MODELS	DESCRIPTION OF THE FOUR MODELS
Movement Quality Model (Skjaerven et al., 2008) Appendix A	Model I includes movement quality components and is formed as a two-layer flower-model: the first layer contains a central composite and the second layer contains a differentiated perspective-specific structure of movement elements and aspects. The first layer, the general movement quality, describes a unifying and general essence of the phenomenon, a synthesis of all interacting movement processes, of elements and aspects, representing a whole. In the second layer, the four leaves each describe perspective-specific movement elements and aspects (characteristics or qualities)
Therapeutic Components Model (Skjærven et al., 2010) Appendix B	Model II includes therapeutic and pedagogic strategy components and is composed of three boxes, shaped as a triangle of three themes, all interrelating with each other, conceptualising a close interrelation. The model includes three sets of therapeutic factors, the therapists own movement awareness, factors used to prepare the patients'learning, and concrete action strategies, all serving as a framework for implementation in rehabilitation settings. The three themes are (i) preconditions for promoting movement quality, (ii) platform for promoting movement quality; and (iii) movement awareness action strategies for promoting movement quality
Movement Awareness Learning Cycle (Skjærven et al., 2010) Appendix C	Model III includes components of a step-wise movement awareness learning and has a cyclic format of seven periodically recurring learning-steps, where the output of one set of processes serves as the input to another. The first steps in the movement awareness learning are to make contact with and explore the specific movement. Furthermore, attention is focused on the experience, integration, meaning, mastering and conceptualising and reflecting on one's own movement quality and learning
Consensus on Clinical Core Phenomena Model (Skjærven et al., 2018)	Model IV includes an overview of clinical core phenomena identified in BBAT and has a square rectangular format of three layers, containing altogether 106 clinical core phenomena, in three clusters: (i) 44 movement quality phenomena of five clusters, (ii) 18 movement awareness practice phenomena of two clusters and (iii) 44 movement awareness therapy and pedagogy phenomena of four clusters

3.3 Ethical Issues

Ethical considerations, in accordance with the Declaration of Helsinki, have been followed. No patients were involved in the three studies, so the Regional Committee for Medical and Health Research and Ethics in Western Norway was not contacted. The informants in Study I and Study II were healthy, professional physiotherapists. Their willingness to participate was ensured before the consensus-workshop in Study I, and before he individual interviews in Study II, by written informed consent (Malterud, 2003). The same procedure was followed in the studies included in the meta-synthesis. All studies were approved and in line with the regulations of Western Norway University of Applied Sciences, Bergen, Norway.

Chapter 4

Results

This chapter starts with presenting an overview of purpose and main results of Studies I, II and III, in table 4.1. This is followed by more detailed presentation of results from each of the three studies.

Table 4.1: Overview of purpose and main results of Studies I-III.

Purpose	**Results**
	Study I
To identify and describe core phenomena and most preferred statements describing BBAT, for professional communication in physiotherapy	Part 1: Total of 138 core phenomena, clustered in three categories: clinical core, historical roots and research and evaluation phenomena. 106 of total the 138, were identified as clinical core phenomena, clustered in (i) movement quality-, (ii) movement awareness practice-, and (iii) movement awareness therapy and pedagogy phenomena. Part 2, the participants reached 100 % consensus on 16 out of 30 statements describing BBAT.
	Study II
To identify and describe a movement vocabulary focusing on health-terms of movement quality for professional communication	A multi-perspective movement vocabulary consisting of five themes, 16 categories and a total of 122 health characteristic terms of movement quality
	Study III
To conduct a meta-synthesis of three previous publications, on the phenomena of movement quality and movement awareness, to construct a movement awareness domain for mental health physiotherapy.	A construct of a movement awareness domain was identified, visualised by a small-scale and a large-scale map, including three learning pillars: (i) movement quality components, (ii) choices of movement components, (iii) movement awareness strategy components

4.1 Study I

Consensus on core phenomena and statements describing Basic Body Awareness Therapy within the movement awareness domain in physiotherapy. Skjærven LH, Mattsson M, Catalan-Matamoros D, Parker A, Gard G, Gyllensten AL. *Physiotherapy Theory and Practice* **35**:80-93 (2019).

In Study I, Part 1, the results are the phenomena identified and reported by the 21 informants during the consensus-building process. Through the six-step process to reach consensus, they identified 138 core phenomena, further clustering them into three overarching categories: (i) clinical core phenomena, (ii) historical root phenomena and (iii) research and evaluation phenomena. Of 138 core phenomena, 106 clinical core phenomena were identified, further clustered into three categories of phenomena: (i) movement quality phenomena, (ii) movement awareness practice phenomena, and (iii) movement awareness therapy and pedagogy phenomena (see Tables 4.2 and 4.3).

Table 4.2: Study I, Part 1, Result of Core Phenomena in BBAT.

Overarching Categories of Phenomena	**Categories**	**Subcategories**	**Phenomena**
Clinical Core Phenomena	3	11	106
Historical Root Phenomena	1	5	23
Research and Evaluation Phenomena	1	3	9

Table 4.3: Study I, Part 1, Result of Clinical Core Phenomena in BBAT.

Clinical Phenomena Core	**Sub-Categories**	**Phenomena**
Movement Quality Phenomena	5	44
Movement Awareness Practice Phenomena *	2	18
Movement Awareness Strategy Phenomena	4	44
Sum Clinical Core	**11**	**106**

*Movement Awareness Practice Phenomena is in Study III changed into "Choice of Movement Components", on the background of data-analysis in the meta-synthesis.

The findings presented in Tables 4.2 and 4.3 are summarised, overviewing findings of Part I in the study. More details are presented in the Consensus of Core Phenomena Model (Study I, Part 1, Results).

As regards the results of Part 2, Study I, the participants reached 100% consensus on 16 out of the 30 statements describing BBAT. Furthermore, the participants reached 67% consensus on six out of 30 statements, and 33% consensus on the last eight statements (Study I, Part 2, Results). The data provided clarity in important statements describing BBAT, representing descriptions ranked as important for communication with patients, health professionals and society.

4.2 Study II

A Vocabulary Describing Health-terms of Movement Quality – a Phenomenological Study of Movement Communication. Skjærven LH, Gard G, Gomez-Coneza A, Catalan-Matamoros D. Journal of Disability and Rehabilitation; Epub 22.04.2019

In Study II, the results comprise the identified and described vocabulary of health characteristic terms of movement quality for communication. The presented vocabulary consists of five themes, 16 categories and 122 movement terms (see Table 4.4).

Table 4.4: Study II, Summary of results – a movement vocabulary clustered in perspectives, categories and movement health-terms.

Perspectives (Themes)	**Categories**	**# Movement Health-Terms**
Biomechanical 2 Categories 29 Descriptive Terms	1) Path 2) Form in the Movements	29
Physiological 3 Categories 25 Descriptive Terms	1) Flow 2) Elasticity 3) Rhythm	25
Psychosociocultural 6 Categories 33 Descriptive Terms	1) Attention 2) Intention 3) Emotion 4) Effort 5) Relational 6) Cultural	33
Existential 2 Categories 26 Descriptive Terms	1) Personal 2) Universal	26
Overarching 3 Categories 19 Descriptive Terms	1) Aesthetic 2) Practical 3) Economical	19
5 Perspectives	**16 Categories of Aspects**	**122 Movement Health-Terms**

The results present a summary of the movement vocabulary, however, without the vocabulary itself. The assumption is that the vocabulary can be useful within a broad spectrum of rehabilitation settings, as in physiotherapy in particular, when human movement is in focus (see Study II, Result).

4.3 Study III

Mapping a Road to a Movement Awareness Domain for Mental Health Rehabilitation – A Meta-synthesis of Qualitative Studies. Skjærven LH, Catalan-Matamoros D, Sundal MA, Gomez-Coneza A, Gard G. Submitted to Journal of Disability and Rehabilitation; In review.

The results from the meta-synthesis of the three previous publications comprise findings from the de-contextualised text-material and models. Early in the meta-synthesis a specific learning perspective was identified as a new, expanding view on the material, across all texts in the three publications. A relationship between learning content and form was identified and is presented, with "what" (content) to learn along a horizontal axis and "how" (form) to learn along a vertical axis (see Table 4.5).

Table 4.5: Learning to promote Movement Quality Components through Movement Awareness Strategy Components – what and how (from Study III, revised: Mapping a Road to a Movement Awareness Domain for Mental Health Rehabilitation – A Meta-synthesis of Qualitative Studies).

Learning	Learning	Learning	Learning
MOVEMENT **What ⟶** **How ↓**	**MOVEMENT QUALITY COMPONENTS***	**CHOICE OF MOVEMENT COMPONENTS**	**MOVEMENT AWARENESS STRATEGY COMPONENTS****
1: THEORY Learning *about*	MQ-components: Five Perspectives of MQ-components	1) Movement Position in Space; 2) Movement descriptions	1) Therapeutic Factors; 2) Movement Pedagogy
2: SKILLS Learning *through*	1) Therapist personal skills in MQ-components; 2) Skills in guiding patients in the same MQ-components	1) Therapists personal skills in simple, daily movements; 2) Skills in guiding patients in the same simple, daily movements	1) Therapists personal skills in movement awareness strategy components; 2) Skills in guiding patients in the same strategies
3: ATTITUDE Learning *being in*	Being *in* – Embodied and reflective know-how of the MQ-components	Being *in* – Embodied and reflective know-how in simple, daily movements	Being *in* – Embodied and reflective know-how of movement awareness strategy components

*The MQ-components refer to the multi-perspective view and its perspective-specific components in the phenomenon of movement quality, its movement elements and aspects, and how to move in relation to space, time and energy (Skjaerven et al., 2008; Skjærven et al., 2018). **The movement awareness strategy components refer to the therapeutic component model and its specific movement pedagogy (Skjærven et al., 2010, 2018).

The learning content, at the horizontal axis, is clustered in three pillars, Pillar I, movement quality components, Pillar II, choice of movement components and Pillar III, movement awareness strategy components.

The learning form, at the vertical axis, is clustered in three forms, theory (learning about), skill (learning through) and attitude of being present and focused, were learning takes the form of self-practicing, acquiring a personal, self-experience, a know-how, in the particular movement (learning by being in).

As seen, the three learning pillars in the construct of the movement awareness domain are:

Pillar I Movement quality components: multi-perspective movement-elements and aspects of movement quality of physical, mental and relational movement components included in the movement awareness learning.

Pillar II Choice of movements components: movement as the learning-arena, relating to space and descriptions of movements to introduce in the movement awareness learning.

Pillar III Movement awareness strategy components: implementation of specific learning components, the therapeutic factors as the movement awareness learning cycle and the movement pedagogy of self-experience and integration identified in this learning cycle.

On this background, a small-scale and a large-scale map are developed to visualise findings, representing a two-level construct of a movement awareness domain (Figure 4.1 and Table 4.6).

The small-scale map is a first overviewing presentation on how the three pillars, the movement quality components (Pillar I), the choice of movement components (Pillar II) and the movement awareness strategy components (Pillar III) interact and relate to each other, all three are composing the construct of the movement awareness domain, and the three are needed and intertwined in a therapeutic learning situation (see Figure 4.1).

The large-scale map deepens the small-scale map, including two more levels, specifying the components of movement quality (Pillar I), choice of movements (Pillar II) and movement awareness (Pillar III) (see Table 4.6).

The movements itself, Pillar II, is identified as the unique movement learning arena; components and strategies from both Pillar I and Pillar III are needed for Pillar II, brought into the movement awareness learning.

4.4 Summary

Results from Studies I-III, are presented as answers to the research questions. From Study I, is presented overviews of general core phenomena followed by specific clinical phenomena derived from BBAT, together with descriptions of BBAT, all for communicating its content to clinical practice, patients and society. From Study II, is presented a vocabulary of health-characteristic terms of movement quality, as a tentative glossary for movement communication. From Study III, is presented a construct of a movement awareness domain in mental health physiotherapy, visualised by a small-scale and a large-scale map of the domain, providing overview of learning components. These findings will, in the following chapter, be discussed.

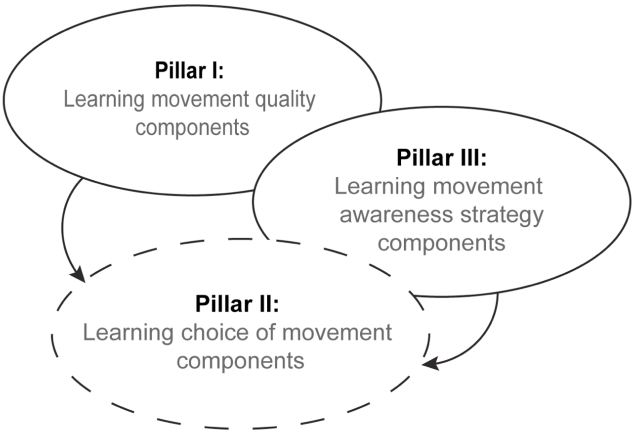

Figure 4.1: Small-scale map as construct of a Movement Awareness Domain (from Study III: Mapping a Road to a Movement Awareness Domain for Mental Health Rehabilitation – A Meta-synthesis of Qualitative Studies).

Table 4.6: Large-scale map as construct for a movement awareness domain (from Study III: Mapping a Road to a Movement Awareness Domain for Mental Health Rehabilitation – A Meta-synthesis of Qualitative Studies).

A Movement Awareness Domain		
(i) Movement Quality Components	(ii) Choice of Movement Components	(iii) Movement Awareness Strategy Components
Movement Perspectives Movement Elementss Movement Aspects	Movement Position in Space Movement Descriptions	Therapeutic Factors Movement Pedagogy
Perspectives: Anatomical, Physiological, Psych-Socio-Cultural and Existential. **Elements**: Postural Stability, Free Breathing, Awareness. **Aspects**: Form, Path, Flow, Elasticity, Rhythm, Attention, Intention, Emotion, Social/ Cultural, Personal, Unity.	**Movement Position in Space**: Lying, Sitting, Standing, Relational, Walking Movements. **Movement Descriptions**: Simple, Economic, Effortless, Efficient, Grounded, Functional, Mindfull	**Therapeutic Factors**: PT's Own Movement Awareness, Platform for Promoting MQ, Therapeutic Action Strategies. **Movement Pedagogy**: Movement Awareness Learning Cycle: Contact – Explore – Experience – Integrate – Meaning – Master – Conceptualise and Reflect
Movement Awareness Learning Forms: About, Through, Being in		

Chapter 5

Discussion

This study is the first to describe the phenomena of movement quality and movement awareness, drafting a movement vocabulary and mapping a road, constructing a movement awareness domain for communication in physiotherapy of mental health and psychiatry. The chapter includes four subchapters of discussion, namely method discussion, result discussion, strengths and limitation of the PhD thesis and future research derived from the PhD.

5.1 Method Discussion

The method discussion provides methodological reflections, reflection on the literature and the phenomenological approach, followed by discussion on research methodology and informants in Studies I-III, as well as perspectives and lived experiences on movement quality.

5.1.1 Methodological Reflections

Detailed steps were accomplished before, during and after development of the study design to fulfil the purpose of the study, through the chosen research methodology. Recruitment processes were prepared as detailed in Table 3.2 and Table 3.4. The choice of movement experts, as informants in Studies I and II came together with the development of criteria for movement experts along with the recruitment processes, as well as inclusion and exclusion criteria.

To ensure confirmation in qualitative research, detailed recording of the research practice is needed (Cypress, 2017). Accordingly, protocols were developed throughout the research-process. This led to continual verification of the data.

Reliability and validity within qualitative research are much debated (Creshwell and Poth, 2018; Cypress, 2017). The concepts are described as being of little relevance within qualitative research because of their origin in quantitative research. However, in this research, reliability is understood as consistency, with the aim of being careful, mindful and reflective in all steps of the research practice, bearing in mind limitations in the results, and seeing the phenomena as context-specific. Validity is here understood as investigating, questioning and theorising, including activities needed to ensure rigour and sense-making, gaining knowledge and understanding of the phenomena under study (Cypress, 2017).

A qualitative research methodology aims at developing new knowledge based on participants' own experiences and descriptions and is not research on pre-defined, testable hypotheses (Öman, 2005). In qualitative research trustworthiness is considered a useful and important term, as it refers to the researcher‘s ability to reveal a comprehensive sense of trust to the entire study. The author, as the researcher, is responsible for presenting a trustworthy report on the entire research process. Trustworthiness is an overarching concept for use in qualitative research, including the four elements of credibility, dependability, confirmability and authenticity (Graneheim et al., 2017). In this study these four elements have been taken into account in all steps. Credibility and authenticity have been important in the search for the logic of clustering themes and categories, as well as for their interrelation and meaning. The level of abstraction and degrees of interpretation have been a challenge for the logic of relating the phenomena (Graneheim et al., 2017). As seen, there does not exists only one single meaning and understanding of a phenomena like movement quality, nor of movement awareness. The phenomena and learning-forms, as presented, must be understood and read from the specific context provided in this thesis.

5.1.2 Literature

The literature used in the thesis is rooted in physiotherapy, but draws also on several traditions, as from BBAT. The literature related to the phenomena of movement quality and movement awareness originated in the late 19th and during the 20th century. This was a period in Europe with a creative development of movement awareness traditions and increased perception of movement and how to promote it, influencing several fields. The view on human movement is strongly related to history, geography and to cultural needs in a population (Robinson, 1997).

The literature search has aimed for definitions and descriptions related to the phenomena of movement quality and movement awareness. For some phenomena, tentative or preliminary definitions were found in the Merriam-Webster dictionary. Through the study, there has been searched for descriptions that provide meaning for the physiotherapist and, at the same time, to be critical and reflective in these choices. Altogether, three extensive literature searches, guided by librarians, have been accomplished, related to the phenomena, the last in October 2018. In the process of identifying movement quality and movement awareness related phenomena, searching to describe them, it was also important to root them into the profession of physiotherapy and at the same time, search to relate the phenomena to existing physiotherapy phenomena, and thus, expanding the vocabulary related to movement. The descriptions presented in the thesis, are reported as being useful by clinicians, teachers and researchers, but must undergo further research.

Study I refers to core phenomena presented as components used in practice of BBAT. By core phenomena here is meant the most important and fundamental terms recognised, as a base for describing theory (Skjærven et al., 2018). The core phenomena have led the way for a detailed search for literature incorporated in the thesis.

5.1.3 Phenomenological Approach

Phenomenology is rooted in the 20th century, and as a research method it is based on the academic disciplines of philosophy and psychology, and has developed into a widely accepted research method for describing human experiences (Merleau-Ponty, 1962, 1994; van Manen, 1997, 2014). Phenomenology as qualitative research method is developed to investigate lived experiences, to reveal as many features and components as possible, describing how human beings experience a certain phenomenon. A phenomenological study attempts to set aside biases and preconceived assumptions about human experiences, feelings and responses in specific situations (van Manen, 1997).

A phenomenological approach is useful when searching for the development of knowledge to broaden understanding of clinical processes of lived experiences (Malterud, 2001a,b; van Manen, 1997, 2014). In this thesis, a phenomenological approach is implemented in Study II and in two of the publications in the meta-synthesis. For the research, the purpose was to obtain descriptions from treatment processes, focusing on how physiotherapy experts promote movement quality, revealing their very close interrelation between terminology and strategy. Such descriptions are best obtained through in-depth interviews (Kvale and Brinkman, 2009). The ability to recognise what is significant in a specific situation is one of the characteristics of an expert (Jensen et al., 1999). Thus, the intention was to transform lived movement experiences described by the informants into textual descriptions (van Manen, 1997, 2014).

Human beings are experiencing aspects that constitute internal and external environment trough the sensory system (Arnheim, 1997; Brodal, 2016; Dewey, 1934b; Dropsy, 1998b; Eisner, 1991). The thesis illustrates experts' experience of essential movement features. The ability to experience movement nuances in a rehabilitation process requires more than the therapists' presence. Experience is a form of human achievement and depends on many components, how we sense and move and how such learning brings this into understanding and acquirements of a more functional way to move. This depends on the physiotherapists professional competence and clinical experience in implementing anatomy, physiology and psychology into treatment and evaluation of human movement and the actual use of the professional knowledge on movement. Furthermore, it depends on the therapists' direction of attention, on the treatment climate, and on a non-judgmental attitude in the movement awareness learning. The therapists' transference and communication of the particular movement component, depends on the therapists'qualification, receptiveness and ability to reach out to the patient. As also, this depends on the patients' receptiveness, ability to understand and letting it reach into movement. Such moments are fragile, and it needs the therapists' sensitivity and firm focus to progress therapy and rehabilitation (Moore and Yamamoto, 2012).

5.1.4 Research Methods in Studies I-III

In Study I, a nominal group techniques was chosen for the study, described as a structured group-based technique used to build consensus (Potter et al., 2004). The researchers considered the NGT to be useful because of its participative characteristics, together with its structure of a six-step data-collection strategy. In the planning period, the research-group included three introductory sessions into the workshop-programme. These sessions, each of which lasted

three-quarters of an hour, were on the research methodology, group dynamic and interpersonal relationships. This was carried out to support the consensus-building process, including how to create agreement when/if disagreement appeared in the consensus-process. These sessions intended both to inform and involve the participants, and to elevate the quality of the research. The research group members had the role of facilitators of the organisation of the workshop and the external researcher had the role of securing the research methodology and a stringent process of data collection.

In Study II, a phenomenological approach was chosen for the individual, in-depth interviews. One and a half hour were needed for each interview to enter the therapists' situation of describing experiences, imagining as if they were guiding the patient. Supervised interview training was carried out before interviewing the informants in order to promote quality and focus in the interviews (Kvale, 1992; Kvale and Brinkman, 2009). In qualitative studies, the researcher is the sole instrument, and thereby the primary person collecting information, and the one concerned with several layers of preparation to ensure the quality of the research. Accordingly, several actions were undertaken, to secure precision.

The use of fine art, as a stimulus for the description of movement quality was developed together with a professor in fine art at the local university (Skjærven et al., 2004), and was also discussed in a phenomenological seminar, that included the issue (Sævi, 2005; van Manen, 1991). Accordingly, in the last 10-15 minutes of the interview, the informants were invited to choose a copy of a drawing/painting, by Rodin (Lampert, 1986) or Van Gogh (Walther and Metzger, 2006). All informants agreed to describe movement quality, 10 choosing the drawing by Rodins', Cambodian Dancers, and five the paining by van Gogh, The Mower. This was considered contributing to identification of MQ-components (Sævi, 2005; van Manen, 1991, 1997).

The data-analysis aimed at providing thick descriptions of the phenomena (van Manen, 1997), their inter-relationship and the organisation. Through the research, several steps were undertaken to minimize distortions of data, including a critical review on documenting components in the analysis (Creshwell and Poth, 2018). In dealing with categorising and systematising information, efforts were made to coordinate methodology and analytical material. There was a continuous return to original material, checking for misinterpretations, re-reading and cross-checking data. In all studies, meetings were arranged with co-authors for such reflective checking, and efforts were made to illuminate themes and categories of descriptions as they emerged in the data. The researchers were wary of biases, directed towards content as well as the research process. This was done trough reflexivity and bracketing of findings in order to be as true as possible to what emerged in the data (Creshwell and Poth, 2018).

In Study III, meta-synthesis of qualitative data was chosen, given the limited numbers of publications (Paterson et al., 2001). Meta-synthesis involves analysis of previous findings, critically viewing and synthesising insights into new ways of thinking about phenomena, accounting for the analytic steps, to provide clarification (Paterson et al., 2001). In doing so, we intended to create an opportunity to re-articulate previous findings and their complexities.

There is a bias related to the first authors' closeness to the research. Two of the authors, Gard and Skjaerven, were authors of all publications. In Study 1 four new authors were added, namely Mattsson, Catalan-Matamoros, Parker and Gyllensten. In Study II, Conesa, Catalan-Matamoros

and Parker, were added. In Study III, Sundal, Conesa and Catalan-Matamoros were added. The shift in co-authors is considered to have added a widened and critical view on methodology, data-analysis and the outlining of the publications.

5.1.5 Informants in Studies I-III

In Study I, a population of 21 physiotherapy experts, were recruited from the International Association of Teachers in BBAT (IATBBAT), as a first approach in the thesis. This group of informants was chosen because of their long clinical practice within mental health physiotherapy, in-depth interest and qualification in human movement, and because clarification in core phenomena in BBAT was requested. The experts had clinical experience in treating a wide spectrum of complicated diagnoses, and represented 10 European countries in terms of physiotherapy, and thus different physiotherapy cultures. The experts with several years of clinical practice in using BBAT can be a bias, if too dedicated to BBAT, given their ability to stand back and not be critical enough toward BBAT. On the other hand, their theoretical knowledge and motivation made them important contributors to answering the research questions. The external researcher in the group had the job of ensuring that each informant had a "free voice" during data-collection, and was not too attached to BBAT.

In Study II, 15 physiotherapy expert, from neurology, community health care and psychiatry, were recruited as informants. The recruitment process was carried out by a group of physiotherapy leaders, external to the research group, invited for the specific task of recruitment. The leaders, or head physiotherapists, represented the local university institution and community health care, and, thus, a broad spectrum of clinical physiotherapy, treating from preterm children to seniors. The recruitment process was completed by a group of six regional head physiotherapists, without intervention from the researchers. They provided a list of 30 informants, ten from each of the three fields

In Study III, the meta-study included three primary publications (2008, 2010, 2018), with three different populations included: the two publications of 2008 and 2010 had in total 30 informants, all of whom were physiotherapy experts, both with similar recruitment procedure as in Study II. The Study I of 2018, included 21 informants as described above.

To sum up, Studies I and II included 36 informants, with two different cohorts of movement experts. Study III, based on the three previous publications, included a cohort of 30 informants (from 2008 and 2010). This gives in total 66 informants as movement experts. In total 88 hours were used for data-collection in all included studies.

5.1.6 Perspectives in the Thesis

Presenting perspective as a basis for an approach is considered more general than a theory. Theory originates from a coherent interpretation of one or more phenomena and can take a variety of forms. All studies in the thesis, especially Study III, had the purpose of expanding beyond the explained phenomena, by including multiple perspectives, structures and processes, organising principles not described before. Interpretation and organisation of phenomena, becomes a theory because it has been described within a field. Theories provides more accurate interpretations of known phenomena (Nutbeam et al., 2010).

One purpose of a theory is to organise phenomena in ways that help people to think about them and use them, more clearly and efficiently (Nutbeam et al., 2010). The phenomena of movement quality and movement awareness, are organised in a multi-perspective view, with the purpose of making sense of a large number of seemingly unknown phenomena and strategies for physiotherapy in mental health. This is made to clarify clinical processes in mental health physiotherapy.

It may help to situate philosophy and framework of perspectives in the research process (Creshwell and Poth, 2018). To understand the philosophical assumptions behind the research, it is necessary to describe what perspectives are brought to this particular research. The authors' philosophical basis has guided steps in the thesis including the development of theory, methodology, interpretation of data-analysis and presentation.

It has been a challenge to keep such a multi-perspective view and to identify a vocabulary, that is nuanced and specific enough to communicate a broad set of components. A bio-psychosocial perspective is described as most common in physiotherapy curricula as well as in clinical practice (Gard and Skjaerven, 2018). In study II, the movement vocabulary, includes terms not so commonly used in physiotherapy. These were identified as meaningful and, in the data-analysis, possible to categorise in a broad span of perspectives.

This thesis includes also an existential perspective (Yalom, 1980). This is in line with the recommendation to obtain a broader and deeper understanding of the complexity of human movement (Noronen and Wikström-Grotell, 1999; Wikström-Grotell and Eriksson, 2012). This thesis refers to the unified, living human being, with identification of the self, expressed as the "I", the simple experience of being present here and now (Deikman, 1986; Dropsy, 1973; Karterud and Stone, 2003; Skatteboe, 2005). An existential perspective is integrated in the Movement Quality Model, referring both to the specific personal characteristics and to the universal movement characteristics, that are expressed in the movements of every human beings (Dropsy, 1973; Skjaerven et al., 2008) (see Appendix A).

5.1.7 Lived Experiences and Movement Quality

The thesis describes a focus on an experienced dimension of human movement as a basic assumption. Experiences occur continuously through the interaction between the living human being and environmental conditions in the very process of being alive, as in learning (Brodal, 2016). The thesis focuses on specific movement experiences either of a general nature, the general movement quality, or a specific single movement quality (an aspect) like the experience of a rhythmically, balanced and unified walking.

As human beings we are implicated in a flow of experiences from the organism, of emotions, thoughts, ideas and associations, continually emerging (Dewey, 1934a, p. 35). According to Dewey and his theory of experiences, situations are, to a varying degree, experienced, but not always in such a way that they turn into and become an experience. He describes a contrast between a general experience and a particular experience. When an experience turns into understanding, being integrated in the general stream of experiences from other experiences, it is turned into a specific experience, which leads towards learning (Dewey, 1934a, p. 35).

An experience gives an impression of being whole and carries a specific quality, as a sense of satisfaction and self-efficacy, turning into the specific experience (Dewey, 1934b,a). Such an

experience has a unity that can be named, e.g. that meal, that trip, that action, that movement, or that specific component identified in the movement, as a specific movement quality component, like a sense of rhythm, elasticity and of being alive. An experience has a pattern and structure (Dewey, 1934b, p. 44), as in the movement quality components, as specific movement experience.

With regard to the movement quality components, we may experience one component rather than another as sufficiently dominant, so that it characterises an experience as a whole. It has been possible during this project to differentiate more clearly between either a general and unifying movement quality, as a sum, and a specific movement quality, referring to (the many) movement qualities (plural). As we have seen, movement qualities, aspects and characteristics are synonymous.

5.2 Result Discussion

The three studies present core phenomena of movement quality and movement awareness (Study I), a movement vocabulary of movement quality (Study II) and a construct of a movement awareness domain (Study III). The studies are derived from clinical practice and aims towards clinical practice. Accordingly, a clinical perspective is integrated into the discussion.

Discussion of results starts with identification of the domain, differentiating awareness terminology, proceeding to discussing findings from Studies I to III, first movement quality components and a movement vocabulary, second choice of movement components and third movement awareness strategy components, following the three pillars in the domain, along with a differentiation of movement awareness learning strategies. This is followed by a presentation of future visions and missions for the movement awareness domain in mental health physiotherapy, of strength and limitation of the studies and ends with potential future research derived from the thesis.

5.2.1 A Movement Awareness Domain

A movement awareness domain in physiotherapy of mental health is first indicated in Study I, and confirmed in Study III, and includes three main themes, named “pillars”, as the construct of the domain, learning: Pillar I Movement quality components, Pillar II Choice of movement components and Pillar III Movement awareness strategy components. Initially, a differentiation between awareness, body awareness and movement awareness, is briefly described and a draft definition of movement awareness is presented. The discussion on the movement awareness domain develops along the three pillars, where Study II, the movement vocabulary, is discussed within Pillar I, because of the close relation to the phenomenon of movement quality.

5.2.1.1 Differentiating Awareness Terminology

Awareness is derived from human consciousness and experiences (Brown and Ryan, 2003), see list of definitions initially presented in the thesis. Consciousness encompasses both attention and

awareness, and awareness is described to include being relaxed and present, which is slightly different from concentration. According to Brown and Ryan (2003), being aware means continually monitoring internal sensations and the external environment (Brown and Ryan, 2003). It is possible to be aware of stimuli without making them the centre of concentration (Brown and Ryan, 2003). Attention can be described as an ongoing process that includes focusing on conscious awareness, thereby providing heightened sensitivity to experiences (Siegel, 2007). Presence can be described as an attentive, relaxed and alert being in the here and now moment (Varela et al., 1993).

Body awareness is a frequently used term, often referred to in physiotherapy, and also recognised in the name of Basic Body Awareness Therapy. Body awareness can be defined as the subjective, phenomenological aspect of proprioception and introspection that enters conscious awareness (Mehling et al., 2011). According to Mehling, body awareness is modifiable by mental processes including attention, interpretation, appraisal, beliefs, memories, conditioning, attitudes and effect, described as a complex, multi-dimensional construct, in need of more nuanced conceptualization (Mehling et al., 2011).

Ginzburgh describes sensitivity as the core of the definition of body awareness, describing body awareness as sensitivity to bodily signals, being aware of bodily states and identifying subtle bodily reactions to internal and external environmental conditions (Ginzburg et al., 2014). Ginzburgh differentiates between sensitivity to and monitoring of bodily signals and sensations, underlining that the two components are often used interchangeably (Ginzburg et al., 2014).

The phenomenon of movement awareness direct a specific attention towards movement itself and movement sensations which is the centre of the draft definition:

> *Movement awareness can be described as becoming aware of, identifying and monitoring subtle nuances of movement quality concerning how the movements are performed and experienced, relating to space, time and energy, identifying movement reactions of internal, relational and environmental conditions.*

As seen, the description leans on the definition of body awareness (Ginzburg et al., 2014), and also integrates components identified and presented in the movement quality model (Appendix A).

5.2.1.2 Identification of Domain

Study III uncovered and named a movement awareness domain. A domain is composed of related components that reflect a unified discipline, it is a field of knowledge, or a term used to refer to or name something, communicating a specific field (Merriam-Webster, 2017).

Theory is an important indicator of an evolving scientific and professional clinical approach (Nutbeam et al., 2010). The construct of the domain directs specific attention to movement awareness learning within physiotherapy in mental health and psychiatry. Through the thesis, it has been strived to visualise features by using tables and maps as indicators for practice. This is done because of a need for theory and guidance on how to promote movement quality through a movement awareness approach.

A model, in the form of a map, is important because it simplifies patterns and provides insight and overview in complex fields, like in this domain (Merriam-Webster, 2017). In this

study, results are visualised in a small-scale map, followed by a large-scale map, indicating a map as a road to follow within the movement awareness domain. Although modelling or mapping are an abstraction from practice, it is widely used for theory constructs within neurology (Brodal, 2016), occupational therapy (Townsend and Wilcock, 2004) and nursing theory (Peterson and Bredow, 2009), to name a few. Models have value because they provide directions for the development of theories, thereby broadening questions and clearing the way for practice. They cannot be proven, but may be clinically useful.

The revealed construct of this domain suggests a conceptual framework for clinical use. Unless models and frameworks reflecting current clinical practice are described, misinterpretations may be reinforced and communication can fail. The components as revealed in the meta-synthesis, may have an impact on practice, acting as a basis for understanding.

5.2.2 Movement Quality Components

The first pillar in the construct of the movement awareness domain is the movement quality components, representing important findings in Study I as well as in Study III, from our previous publications on movement quality (Skjærven et al., 2018; Skjaerven et al., 2008).

Human movement, or movement quality from a phenomenological point of view, is described as a basic need, an organic and existential function (Maslow, 1943). The phenomenon of movement quality is a term used within sport, dance, actors- and musicians training, in fine art, in the general population, as well as within physiotherapy. The singular term quality seems difficult to grasp, as also discussed within qualitative research (Cypress, 2017). The term of movement quality, is influenced by different views, perspectives, cultures, terminology, components and descriptions, all shaping its content. From a biomechanical perspective, strength, speed, power, agility and endurance are described as important components for reaching a "high" quality performance, referring to the skeleton, joints, and muscles (O'Sullivan et al., 2019). A bio-psycho-social perspective also incorporates emotional, cognitive, environmental and relational factors, all influencing a general movement quality (Moore and Yamamoto, 2012).

There is a need for knowledge development pointing to the gap between movement as a scientific concept and the concept of movement used in clinical physiotherapy (Wikström-Grotell and Eriksson, 2012). Furthermore, there is a need to deepen the understanding of movement as a basic concept within the profession of physiotherapy (Wikstöm-Grotell et al., 2017; Wikström-Grotell, 2016; Wikström-Grotell and Eriksson, 2012).

This thesis aims at developing a framework, describing observable movement phenomena. As seen, in the introduction of the thesis, movement quality is a phenomenon, described in the literature of European movement traditions (Johnson, 1983), within German expression psychology (Wallbott, 1989), and in the treatment of children with cerebral palsy (Boyce et al., 1991a), as well as preterm infants (Einspieler and Prechtl, 2005). These references represent publications containing descriptions of components, to observe or therapeutically use, like the vertical axis (as element) and vitality, fluency and unity (as aspect). Breathing is another element described in the movement awareness traditions important for the quality in the movement. Breathing does not exist as a separate entity in the living human being. Breathing and emotions are closely linked to human movement and expressed in all movements. It is also well documented that the mind, like breathing, influences a persons' movement quality (Yalom, 1980;

Yuasa, 1987; Yalom, 1989; Alon, 1990; Yalom, 1995; Skjærven, 1999).

Dilthey was one of the first theorists to consider how "understanding" is more than "explanation" (Dilthey, 1979). Drawing on Gendlin, there is, in the thesis, a search to stretch towards sense-making, not just being logical as through concepts, but rather connecting the terminology, as phenomenon, to an embodied world of meanings (Gendlin, 1997). Fine art is described as a door-opener of such a tacit knowledge and can help us see features and characteristics we previously were unaware of, communicating a sense of movement nuances with extraordinary delicate energy (Dewey, 1934b; Langer, 1953; Heidegger and Krell, 1978).

As seen in the results, movement quality embraces both universal and personal aspects, as well as general and perspective-specific aspects. Together these compose a sense of a whole. From a multi-perspective view, movement quality is a continuous process of attuning and timing oneself, the search to be in balance, free and unified (Dropsy, 1998b). Accordingly, the movement quality components represent the shaping of the movement pattern in our lives. From a rehabilitation point of view, most patients receiving mental health care need physical, psychological, social and existential rehabilitation-input concerning different kinds of movement disability, influencing the general movement quality, for example in walking, sitting and laying (Wade, 2016a,b).

Table 5.1 combines horizontal and vertical views on the movement quality components, as choices for clinical use, and thus, for learning. The horizontal axis presents the relatedness between movement perspectives, dimensions, elements and aspects, a linked or chained relatedness, derived from a particular perspective. This can be followed when reading the table from left to right. The vertical axis presents the relatedness of the four perspectives, of the four dimensions, of the four groups of movement elements and of the four groups of movement aspects. This can be followed when reading the table from top to bottom, row by row. Accordingly, the table presents an overview of the movement quality components and their relatedness. Here, a component can be understood as equivalent to a theme, a subject or a specific focus for the therapist to use in movement awareness learning. This supports the clinical possibilities, generating a differentiation of what theme (component) to use in movement awareness learning, influencing a change in the movement pattern – or a map to follow, according to the need of the patient.

Table 5.1 is an abstraction, but can be a map to follow, both concerning what perspective to guide along, and also differentiating between which element or aspect to bring into therapy. This is important for the therapist as it is for user-involvement. User-involvement is important in developing relevant health-care services (Slomic et al., 2016). This map of learning movement quality components indicates concrete therapeutic steps, for the patient to direct attention to and to become aware of, and use as a guide in the movement awareness learning. This can be possible to transfer to home-training, as an involving rehabilitation strategy (Wade, 2015a,b).

5.2.3 A Movement Vocabulary

Study II data uncovered a vocabulary of health characteristic terms of movement quality. The movement vocabulary of 122 health characteristic terms is organised in five perspective-specific clusters, more specific understood as four perspectives and one. unifying, general and overviewing perspective. Together they provide a movement vocabulary for professional communication. Study II is a follow-up to Study I.

Table 5.1: Movement Quality – Overviewing perspectives, dimensions, elements and aspects, horizontal and vertical, indicating movement quality components as themes / subjects for clinical use and learning.

THEME TO MOVE	**PERSPECTIVE on Human Movement**	**DIMENSION of Human Movement**	**MOVEMENT ELEMENTS**	**MOVEMENT ASPECTS**
THEME A	Biomechanical	Relationship to Space – The Spherical Dimension	Relationship to Planes and Axises; Anatomical / Biomechanical Elements	Relationship to Form and Path as Movement Aspects
THEME B	Physiological	Relationship to Time – The Time Dimension	Relationship to Breathing and Physiological Elements	Relationship to Flow, Elasticity and Rhythm as Movement Aspect
THEME C	Psycho-Socio-Cultural	Relationship to Own Energy – The Effort Dimension	Relationship to Awareness of Psychological, Relational and Cultural Elements	Relationship to Intentional, Emotional, Relational Movement Aspects
THEME D	Existential	Relationship to the Personal and Universal Human Dimension	Relationship to Self-awareness, and Experience of the “I am”	Relationship to the Unique Personal and Unifying Movement Aspects

The WHO underlines the development of health communication within public health (Rimal and Lapinsky, 2009). Given the global health challenges, health scholars and clinicians underline the importance of communication in rehabilitation and health prevention (WHO, 2013). A nuanced communication of human movement, focusing on description of movement quality, specified towards potential health, is important for reaching the challenges in society and patients suffering from musculoskeletal and mental health problems. Physiotherapists strive to describe movement findings observed and presented to the health-team. A movement vocabulary can support the therapist, allowing more precise communication, and also add meaning to the observed movement.

A movement-specific vocabulary also serves as feedback to the patient. Clinicians report a lack of terminology to describe the slightest change in the movement quality, especially when more health-related and functional movements occur. Although physiotherapists appear to have an internal sense for movement quality and its rich nuances, explicit description, communication and structuring findings from observation, have been reported to be difficult. A nuanced movement vocabulary is aimed at preventing frustrating situations, and allowing a choice of descriptive words with greater precision, which is also useful for the receiver of the communication.

Gendlin suggests attending to words or terms as if they are not only logical but also responsive (Gendlin, 1997). This involves the way the learner attends to words, presenting a language that evokes presence and aliveness, words coming directly from contact with the immediate experience of what is being referred to. Bringing sense into language in a vocabulary related to learning movement quality components through movement awareness arises from an embodied learning developed from self-exploration and integration. This process starts with the therapists own level of understanding and integration of movement quality.

According to Jensen and Moström shared language is important for learning (Jensen and Moström, 2012). Movement vocabulary is important when communicating through words. The presented vocabulary in Study II has a multi-perspective view, and presents a broad scope of terms, adding potential meaningful descriptions, that are useful for daily life. For the patient, this can promote specific attention to adjusting their own movement quality. For the health-team, this promotes awareness of daily movements, laying, sitting, standing, walking, and possibility of guidance. This type of vocabulary, verbalising movement-specific potentials, can facilitate therapy for patients suffering from long-lasting musculoskeletal disorders and mental health problems. This carries a potential for turning a vicious circle of pain and dysfunctional movements toward more health-related and functional movements, strengthen the patients own coping abilities. The role of the therapist is to adapt attitude and attune to health promotion (Wade, 2015a,b).

Movement vocabulary provides variations in expressions of movement nuances. Such variations enhance the therapists' ability to reach the patients' understanding of what is meant. However, it is the manner in which the terms are understood and used that adds meaning (Wright et al., 2012). When it comes to implementation of evidence-based practice, studies have shown that physiotherapists report scientific language as a barrier to practice, as they have difficulties in understanding research results and applying and linking them to practice (Holdar et al., 2013; Kamwendo, 2002). The vocabulary in this study, is intended to expand the professional

language with a specific focus on human movement, preparing for a communication that is effective according to the task, inspiring and involving the person to whom the content is transferred and communicated. The intention is to help the patient to become curious and engaged, and experience meaning (Wright et al., 2012).

Movement communication, and a specific movement vocabulary, is needed both as information and as a potential guide. The vocabulary proposes related components, identified as health characteristics in line with salutogenesis (Mittelmark et al., 2017). This makes it possible to differentiate in the movement communication. It can be a powerful and precise way to communicate, using the movement quality vocabulary, differentiating between the descriptive health components. The movement vocabulary needs, however, to be further standardised, in relation to perspectives, elements and aspects of movement quality broadening the scope of mental health physiotherapy.

5.2.4 Choice of Movement Components

The second pillar in the construct of the movement awareness domain – choice of movement components – originates from Study I, then named Movement Awareness Practice Phenomena, and includes two clusters, namely (1) movement position in space and (2) movement description (Skjærven et al., 2018). Against the background of the meta-synthesis this category is now re-named: *Choice of movement components*.

The first cluster, movement position in space, is related to the choice of patients' position in space, wherein the movement is performed, trained and learned. Movement is the centre and arena of physiotherapy and in clinical practice the physiotherapist invites the patients to train in various positions (WCPT, 2017). According to findings in our study, the informants referred to positions, inviting the patients to relate to gravity, in different positions in space (see Figure 5.1). The findings showed informants arguing over choosing movement positions the patient could easily fit to their lifestyle, varying between laying, sitting, standing and walking, at home, at work and in life, in general. Such movements are described and valued as universal, daily movements (Brooks, 1976; Jones, 1976).

The therapists' choice of movement positions in space, laying, sitting, standing, walking, can be seen as everyday events. In the study, the therapist were creating situations of exploring movements in different spacial positions, providing a sense of space and the handling of it. Such everyday movements may be interpreted as ordinary and nothing special, hardly being reflected upon. On the other hand, such events may be precious for movement awareness learning, as it unfolds a variety of experiential qualities, if carefully listened to and understood the meaning of. Being exposed to specific movement awareness situations, exploring simple daily movements, can provide moments where it is possible for the patient to become more conscious about how the movement is performed, and the experience that comes from it and learn to adapt to it. This can add meaning and insight, leading to integration of more functional movements, when repeated.

Working as a physiotherapist in the field of mental health and psychiatry, it is well-known that all patients cannot lie down on a plinth, can undress in front of the therapist, can be touched and be in such a close contact and relationship with one-self, even for a shorter time. Not all

Figure 5.1: Choice of movement components – examples on learning situations, in individual and in group-therapeutic settings. *Examples on individual therapeutic settings, organising the movement arena*: (**A**) Laying: The therapist sits on the floor, guiding the patient to relate to gravity, make contact with the whole from head to toe, to trust the floor, inviting the breathing to find its own way, adapting to the situation; (**B**) Sitting: The standing therapist guides the patient to make contact with and relate to the whole, integrating a firm, free and unified sitting balance; (**C**) Sideways movement: The therapist guides the patient in the movements shifting weight between left and right, integrating a firm, free and unified stability in the movement sequences; (**D**) Relational movement: The therapist (left), guides the patient (right) to move together back and fro, relating to own movements, at the same time adapting to the other persons movement; (**E**) Walking: The patient is walking in a small circle, integrating a stable, free and unified walking. *Examples on group therapeutic settings, organising the movement arena*: (**F**) Laying: The patients are laying on the floor, invited by the therapist to explore small, simple and safe movements; (**G**) Sitting: The patients are sitting in a circle, included the therapist, all training a stable, free and unified sitting balance. (**H**) Standing Sideways Movements: The therapist is standing in front, so that the patients can follow the therapists‘ movements.The therapist guides the group in shifting weight between left and right - like finding a rhythm, integrating a firm, free and unified stability throughout the movement sequence; (**I**) Arm-movements: The therapist guides patients, inviting the arm coordination into an elliptical form, while the patient, at the same time, is moving up an down the vertical axis, aiming to integrate upper and lower body. For the learning, the therapist can shift positions between being in front of the group, or guiding individual during the arm-movements; (**J**) Massage: The group can be organised as laying in a circle as seen in the photo. (Photo: Skjærven. Pictures: Students at the International study program of Basic Body Awareness Methodology (BBAM), Western Norway University of Applied Sciences, Bergen, Norway).

have words, are used to or find it proper or possible to share with others and to describe sensations, the intimacy of emotions and reflections. The therapist in mental health physiotherapy is aware of this and are trained to act in relation to this. The body remembers, and memories related to traumatic situations may easily arise in therapeutic situations (Rothschild, 2000). The therapist's own movement awareness is found to be clinical important to recognise patients' lack of contact with their body as well as emotional reactions, through observation of the movement quality (Skjærven et al., 2010). The therapist's own movement awareness is an important element in the decision making process, recognising when to stop, wait and listen for the patient'capacity and resources, and to consider when and how to progress. This may help patients to learn and acquire health-promoting coping strategies (Greenfield and Jensen, 2010). The therapist needs to be educated and trained to be knowledgable as well as sensitive to capture when a "golden moments of health" is expressed in the movements, learning to adapt to a diversity of situations that emerges and to have tools to professionally evaluate and help the patient in the progress.

The second cluster in the choice of movements components, is named the movement descriptions, and, in this context, presents identifications of health terms of movement quality: simple, economic, effortless, efficient, grounded, functional and mindful movements (see Study I). This bring our attention to movement polarities such as simple, organic movement as opposed to mechanical movements; everyday as opposed to artistic movements; economic as opposed to energy consuming movements; effective as opposed to ineffective movements (relative the task); grounded as opposed to uprooted-; soft as opposed to stiff-; functional as opposed to dysfunctional-; basic as opposed to complex-; slow as opposed to quick- and mindful as opposed to mindless movements. We see here sets of movement polarities. In this context a polarity in the movements can be understood as attributes with two possible different "values" (extremes), with a relationship between, with the first mentioned pointing towards the pole of health and the second pointing towards the pole of pathology (Antonovsky, 1987; Mittelmark et al., 2017).

Simple movements are powerful in themselves, as underlined by informants in Study I. In BBAT the movements often are described as simple, small, soft, slow, safe, free and stabilising. These movements are learned to make contact with and integrate more economic, grounded, effective and functional movements. The effect of a sense of lightness implemented in everyday movements is difficult to describe, because it refers to movement sensation (Jones, 1976). It is the use of effort or amount of energy invested into movement, that can provide a sense of a lightness into simple daily movements (Laban, 1960, 1974; Laban and Lawrence, 1965). During everyday movements, like walking with ease and lightness, a sensation of pleasure and well-being often follows, when effort or the amount of energy used is relative to the needed task, with the key of "making a habitual movement without habitual effort" (Jones, 1976, p. 7).

As seen in the Movement Quality Model (Appendix A) the components of space, time and energy can all be brought into movement awareness learning, depending on the need and experience of the patient (Skjaerven et all 2008). As also seen in the movement awareness learning components (Skjaerven et al 2010), the therapeutic factors aims towards guiding the person/patient to relate both to an internal and external sense of space and time as well as to the sense of the use of energy (Dropsy 1973). Figure 5.1 provides examples on how therapeutic situations can be organised in space, providing situation for the patient to acquire functional

movement quality, aiming towards integration into daily life. Some choices of movements are exemplified through the photos of individual therapeutic settings (Figure 5.1 A-E) as well as of a group therapeutic setting (Figure 5.1 F-J).

Among the very many practical choices of creating a movement awareness learning environment, directing attention to a movement quality component, are the therapist choice of guiding the patients‘ attention. Roughly speaking, the choice can be either directing the patients‘ focus internally, moving in relation to the vertical axis and breathing or directing the focus more externally, to the sphere and space around.How this can be done, is exemplified in Figure 5.1. For example a shared attention, as in walking, “one eye in and one eye out” is needed, relating both to own walking-coordination and at the same time relating to the surrounding environment (Dropsy 1983). The clinical, practical choice is how to balance between internal and external direction of attention, and therapeutically to strengthen health promotion, related to the specific need of the patient. Little is reported, described and studied of the complexities of the choice of movements for therapeutic use. Further and more in-depth studies are needed in relation to the choice of movements for movement awareness learning.

5.2.5 Movement Awareness Strategy Components

The third pillar in the construct of this domain is the movement awareness strategy components, including two closely intertwined sets of components, namely therapeutic factors (component) and movement pedagogy.

5.2.5.1 Therapeutic factors

Physiotherapists meet therapeutic challenges when promoting movement quality through movement awareness learning as careful physiotherapy evaluation and ethical procedures are to be followed (Greenfield and Jensen, 2010; Skatteboe, 2005). Aspects related to therapeutic factors include consideration of what factors or components to bring in and which therapeutic strategy to follow. A factor is synonym to component or ingredient, referring to one part of a complex whole. As seen, therapeutic factors are identified as useful and important for the outcome of therapy (Yalom, 1995). Therapeutic factors, their vocabulary and terminology, and their strategies, provide a structural frame, and are intended to facilitate outcome and make such actions possible to evaluate as a result of the therapist’s intended actions (Skjærven et al., 2019). Strategy is a certain path or plan to follow during a treatment process for the learning outcome. Therapeutic components (what) and strategy (how) for promoting movement quality through movement awareness are important within this domain.

A variety of therapeutic approaches are reported to enhance body awareness, such as yoga, t‘ai chi, body-oriented psychotherapy, Feldenkrais, Alexander Method, as well as mental training for athletes (Mehling et al., 2011). In these approaches body awareness may not be the main outcome, but a key element or a mechanism. According to Mehling, body awareness involves a focus on, and awareness of, internal body sensation (Mehling et al., 2011). Each of the named approaches include different content and strategies, but are not defined as physiotherapy.

In physiotherapy in Scandinavia, Belgium, the Netherlands and the UK, there exist a diversity of body and movement awareness strategies, drawing on elements and aspects derived from

different influencing traditions. This represents a development within the field of physiotherapy in mental health, reflected in clinical practice as well as in research (Probst and Skjaerven, 2018).

Study III provides three sets of components in the therapeutic component model as seen in Appendix B, first, the therapist's own movement awareness, second, creating a platform as a base for therapy and third, a set of action strategies. Professionally, it has been necessary to clarify therapeutic components being used in clinical physiotherapy, especially within the field of mental health physiotherapy. When such components are identified, related and developed into a structured strategy, this opens for a possibility to study the effect or outcome of implementing them.

The development of physiotherapists' own sensitivity and embodied skills, to be sensitive to changes in the own movement has shown to be important for promoting movement quality in others (Ahola et al., 2016; Skjærven et al., 2010, 2018). Physiotherapists' own sensitivity, seeing and perceiving movement itself, and differentiating between how movements are performed, are, for some, inborn; however, for others, it needs to be learned (Nilsen, 2017). The art of seeing movement, not merely looking, reminds us that seeing develops before words, reflecting the fact that small children are able to see and sense before words are expressed (Berger, 1973). Movement, the being *in* motion, is described as the strongest visual appeal to human attention (Arnheim, 1997).

Physiotherapists' own sensitivity, relating to the patient, is reported to be especially important at the start of therapy, promoting trust and acceptance (Rogers and Freiberg, 1994). Patients are carriers of a diversity of painful memories, remaining in the body from childhood or from later life situations (Hedlund and Gyllensten, 2013; Madsen et al., 2015; Mattsson et al., 1997, 1998, 2000).

The patients' emotions are easily affected by the treatment climate created by the therapist in the treatment situation and need to be considered by the therapist (Gard and Gyllensten, 2004; Gyllensten et al., 2000; Hedlund and Gyllensten, 2013). If the therapist is not sensitive to the patients' emotional reaction, this may lead to a withdrawal or related reactions. The feedback strategies used by the physiotherapy experts included various therapeutic factors. Revealed in the findings, and as described in the literature of movement awareness approaches, careful, gradual and structured movement guidance is suggested in the movement awareness learning process (Johnson, 1983). The literature as well as findings suggest less use of correction, underlining what is right-wrong in the communication with the patient, and rather using movement guidance. This requires a shift in therapeutic attitude, including to provide trust and acceptance to the patient and the process of movement awareness learning.

Metaphors have been identified as being useful in movement guidance. What potential can there be in animating movement awareness learning by using metaphors, therapeutically? Metaphors are well-known, in daily life and as stimuli to becoming aware, used to support understanding and create meaning (Skjærven, 1999). In the text-material in the meta-synthesis it was revealed descriptions of how an informant wondered about the effect of metaphors in movement guidance. To animate theory is to make movement elements and aspects more concrete by use of metaphors, making abstract knowledge meaningful, bridging a gap between abstract concepts and living phenomena.

5.2.5.2 Movement Pedagogy

The results of Study III uncovered findings related to movement pedagogy. Pedagogy can be described as the art or science of teaching - with consequence for the quality of learning, and is a term used in human movement studies as well as within the movement awareness traditions (Dropsy, 1984; Johnson, 1983; Jones, 1976; Tinning, 2010). The focus in this section is the therapist intention to increase patients‘ learning through a specific movement pedagogy, promoting movement quality through movement awareness learning. How patients learn to integrate movement aspects and how therapists teach/guide movement are complicated processes, difficult to understand and to master.

Scientists, psychologists, teachers and physiotherapists develop models for learning. Bloom described learning steps within a psychomotor domain as stages in the learning of acquiring motor skills (Bloom et al., 1956; Jensen and Moström, 2012). Learning has traditionally been categorised in theoretical/ intellectual knowledge and in practical/ embodied or integrated knowledge, complementing each other. Skill-learning, as presented in literature, can have an external form, a physical approach, directed towards muscle training and an internal form, directed towards movements developing from inside, through awareness (Dewey, 1934b; Dropsy, 1973, 1984; Duesund, 1995; Eisner, 1991; Kolb, 1984).

Movement can be learned in various ways, and literature presents assumptions about pedagogical systems, according to what and how to learn (Jensen and Moström, 2012; Shumway-Cook and Wollacott, 2017; Tinning, 2010). Motor learning, in physiotherapy, like motor control, is the study of the nature and control of movement, referring to the acquisition of a skill (Shumway-Cook and Wollacott, 2017, p. 22). This has expanded to encompass many aspects not traditionally considered part of motor learning, as including new learning strategies of sensing and moving. This learning incorporate a perception/cognition/action processes (Shumway-Cook and Wollacott, 2017).

In this PhD-thesis a movement pedagogy of a practical, embodied learning is identified in the meta-synthesis, specifying the implementation of movement awareness learning and its components and strategy for such learning. Embodied learning is found to strengthen the persons‘ identity (Gyllensten et al., 2010; Skjærven et al., 2010).

Three forms of movement learning have been identified and earlier described (Skjærven et al., 2010): learning about movement, learning through movement and learning while being in movement (Arnold, 1973, 1979). Learning about movement is accomplished by teaching movement as an academic subject. Learning through movement is accomplished by teaching physical activities to stimulate specific achievements. In learning while being in movement, the emphasis is on movement developed as a process to be experienced by and integrated in the person. This learning-form is valuable for changing movement habits and improving self-image and self-awareness (Dropsy, 1984; Laban, 1960).

Recently, there has been a new interest of Arnolds’ education on being in movement, drawing on phenomenology (Brown, 2013). This suggests future research on the outcome of such movement awareness learning. This PhD-thesis presents clinical experts’ ability to be present with the patient, listening, giving the patient time to explore, waiting, resting and at the same time progressing in therapy, through a movement awareness learning process. The findings point to the importance of the therapists’ own familiarity with the movements provided and with the

movement pedagogy. Such pedagogy is identified within learning theory on experience (Dewey, 1934b; Dropsy, 1973, 1984, 1998b,a; Kolb, 1984). Arguments are provided for implementing the learning form of being in movement, to develop sensitivity for movement quality components in the bachelor programme in physiotherapy (Ahola et al., 2016). The pedagogy for the movement awareness learning is found to be valuable for changing movement habits and improving self-awareness. Such learning makes the therapist skilled to make the movements together with the patient, mirroring health aspects in the movement to the patient. Such learning provides the patient with an internal image, familiarity and insight of the specific quality in the movement.

The movement pedagogy by Arnold, as described by movement awareness traditions as of Dropsy, is shown to enable patients to be involved and personally participate, being present in the learning, accumulating movement experiences. Such an involvement and strategy is described in the Movement Awareness Learning Cycle (Skjærven et al., 2010). This seven-steps movement awareness learning cycle of making contact, exploring, experiencing, integrating, mastering, familiarising and conceptualising and reflecting is a concrete and involving form of learning. The cycle can facilitate the process of turning a vicious circle into a positive circle. Such a cycle is helping the patient to develop more functional movements, a sense of health and well-being, in line with described requirements in rehabilitation (Wade, 2015a,b, 2016a,b).

Implementing such movement pedagogy, is described to promote a continuity of movement experiences. This is important for understanding, integration and embodiment of learning (Brown, 2013). New insight and new movement patterns are developed from the particular movement experience evoked from the shifting positions, being in the movement followed by immediate conceptualising and reflecting upon the experiences, as a part of the movement pedagogy (Dropsy, 1984).

As seen, movement experiences regarding movement quality, as content in the learning, plays a central role in the pedagogy (Dewey, 1934b; Kolb, 1984). Learning is described as a process of human adaptation, also known as“experiential learning” (Kolb, 1984). Literature points to similarities in the learning models suggested by Dewey, Levin and Piaget (Dewey, 1934b; Flavel and Piaget, 1963; Levin, 1997). One important element is the here and now experience and the immediate experience that develops (Kabat-Zinn, 1991). Such learning fosters “subjective, personal meaning”, underlining that when human beings experiences are followed by conceptualisation of the specific experience, it can be shared fully and concretely (Kolb, 1984, p. 20). Kolb offers a description of this learning presented as “the process whereby knowledge is created through the transformation of experience” (Kolb, 1984, p. 38). Consequently, learning is seen as a continuous process, created and recreated, described as a pedagogy that tranforms (Kolb, 1984, p. 38).

Learning for practice needs a learning that transforms (Jensen, 2011). The movement pedagogy identified in this study presents awareness as the gate to movement learning, describing presence as the hidden agent of help in all forms of therapy (Yalom, 1995). Movement that takes place without listening to the way a movement is being carried out – being aware – is perceived and observed as mechanical (Alon, 1990).

When new movement skills are integrated and learned, this provides an embodied understanding. This kind of awareness learning evokes understanding, insight and meaning (Todres, 2007). This can be differentiated from a disembodied knowledge that creates more abstractions

or explanations, and is less easily brought to practice. An embodied understanding facilitates coping strategies for handling feelings and behaviour change, broadening insight and understanding (Gard and Gyllensten, 2004).

Van Manen presents a phenomenological pedagogy to learning (van Manen, 1991, 2014), describing learning as a most profound relationship to the learner. He underlines the need for the teacher to include critical self-reflection concerning what it means to teach and learn, and acquire a sense for what is going on in the learning process, especially related to how it can be transferred to another person. Without such a reflection, the pedagogue may become a mere instructor (van Manen, 1991). He present the teacher acting more as a guide, as a continuous relation-process between learner (patient) and teacher (therapist), seeing teaching and learning not merely as a technical process (van Manen, 1991).

This thesis brings a lived and experienced dimension of human movement as assumption for movement pedagogy, adapted for physiotherapy. Learning from being *in* movement, practicing, sensing and gaining a know-how related to *how to move*, is an acquisition of what is incorporated in the literature. In text-books the concepts are presented as abstracts, which first become concrete when applied into practice. This study suggests bringing personal experiencers (as of movement quality components) integrated into the education programme. This leads the learner towards getting a more intimate contact with what is taught. When the abstract concept is brought into application, this provides a familiarity with the movement, its elements and aspects. This learning depends upon the quality of the experience, what the learner can gain from it, related to the quality provided by the teacher (Dewey, 1934b). The quality of an experience has two aspects, first, the immediate effect, the aspect of agreeableness or disagreeableness, and the second, the influence on later experiences. The first is the teachers‘ (therapists‘) challenge: to develop the learning content and atmosphere, providing the kind of experience that the learner (patient) can receive according to the need. When it comes to the second, the influence on later experiences, this is to be found in the principle of continuity of experience, as called the experiential continuum. By this is meant that every (movement) experience takes up something from earlier (movement) experiences and modifies the quality of those that comes later, and accumulate experiences of health and well-being, through movement. When the experiences arouse curiosity and strengthen initiative, this is described as an important therapeutic factor.

It is considered that a well elaborated therapeutic strategy, how to develop such a movement awareness learning and creating the movement environment, is needed. An example of such a movement pedagogy is provided through BBAT. However, movement quality components together with movement awareness strategies needs to be further studied, practiced and reflected upon. Both theory, skill-training and self-experience in how to promote movement quality through movement awareness learning is considered to improve the physiotherapist qualification, being implemented in the educational programme, the curriculum and the learning environment. According to this study, it shows important to present a theory of experience, interweaved with components and structures for promoting movement quality through movement awareness learning for physiotherapy in mental health.

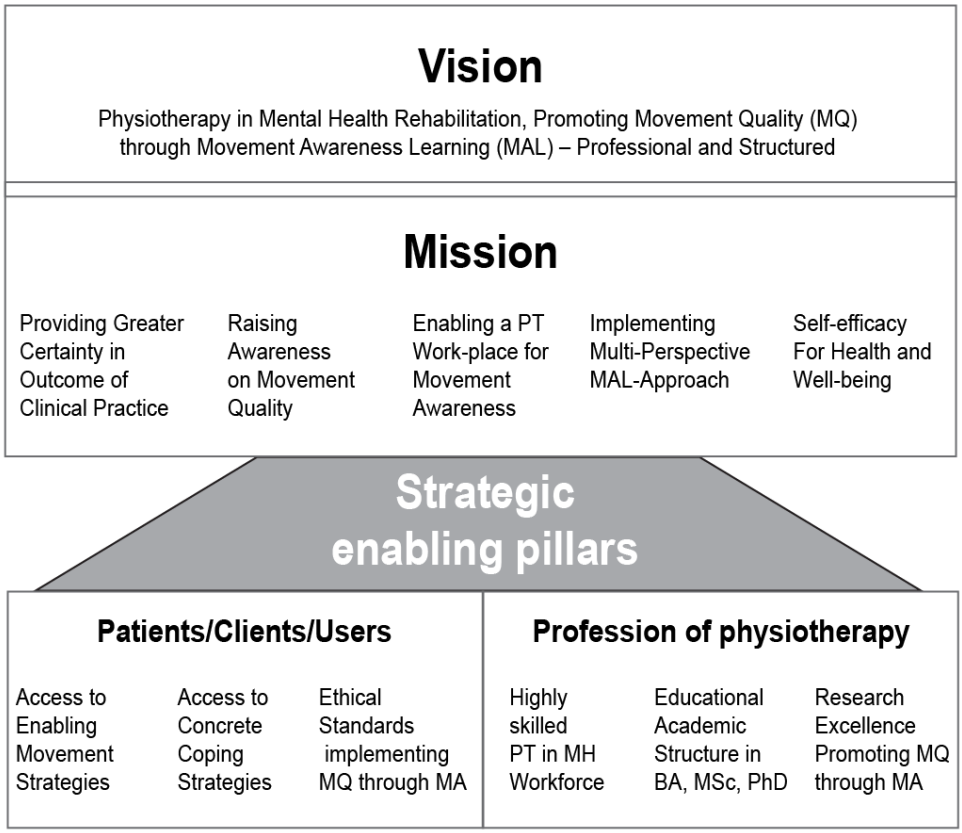

Figure 5.2: Vision, Mission and Enabling Pillars of a Movement Awareness Domain in Physiotherapy in Mental Health.

5.2.6 Future Vision and Mission

The thesis aims towards a vision for a clearer and more differentiated description of the phenomena of movement quality and movement awareness, of its related phenomena rooted in clinical practice and the unity of physical, mental, environmental health-related components. Based on the assumptions in this thesis, movement quality and movement awareness has shown to be carriers of important content and strategies for the future physiotherapists to consider.

Patient satisfaction is important in clinical physiotherapy, as shown in physiotherapy research (Hills and Kitchen, 2007). Several studies reveal that satisfied patients are more likely to benefit from health care (Hills and Kitchen, 2007). This depends on satisfaction and the patients' ability to experience satisfaction and meaning-making of the therapy provided. Questions on the future existence of the physiotherapy profession are arising (Nicholls, 2018) and requests for renewal of professional health education have been reported (Frenk et al., 2010). Visions and missions in physiotherapy are important for patient satisfaction, for the physiotherapist as for the

profession. Physiotherapists in mental health need to be qualified also in relation to movement awareness learning to fulfil the practical and clinical tasks of the future.

Towards the end of the meta-synthesis in Study III, parallel with the end of this thesis, a new figure, as a map, was developed, providing a vision and a mission, and enabling pillars, for future physiotherapy in mental health (see Figure 5.2). These are organisational pillars, indicating a future potential development within the domain. This is important for the strategic direction of physiotherapy in mental health and this specific domain, because it defines the domain and indicates a future road to follow. By vision is meant what is intended to be accomplished; by mission is meant a general statement on how to achieve this vision.

The figure propose future subjects for planning. The upper layer in the figure includes five boxes, directing attention towards (i) greater certainty in outcome of physiotherapy in mental health, (ii) increased consciousness of movement quality components, (iii) choice to create a workplace that facilitates movement awareness learning, (iv) including a multi-perspective vocabulary and movement awareness-components and (v) fostering self-efficacy for patients' better experience of health and well-being.

The figure also propose, in the lower layer, six boxes as enabling pillars, to the left, three boxes directed towards the patients/clients/users and to the right, three boxes, directed towards the profession, workplace, academic structure and research.

5.3 Strength and Limitations of the PhD Thesis

This thesis aims to deepen understanding of the phenomena of movement quality and movement awareness and its related phenomena identified in clinical physiotherapy. It has, in the thesis, been formulated both definitions and descriptions of phenomena, and an intention to present definitions have been expressed. However, a definition is expected to be exact, correct and present the exact nature, scope or meaning of a phenomenon. A description, on the other hand, intends to give a detailed account and report details about a phenomenon. The term description is originating from latin, and means to write down (Mirriam-Webster 2017). Accordingly, descriptions of phenomena is most used in the thesis because it is considered open for more nuances and further clarifications related to the subject.

The thesis is influenced by Basic Body Awareness Therapy, its theory and practice, but resting well in the roots of traditionally physiotherapy. The need to study phenomena in BBAT has been important because of its increasing evidence-base and wide clinical use, internationally, but most important is its specific focus on human movement and clarification of a movement terminology and its strategy to promote functional movement quality and a sense of wellbeing and health.

It is a strength that research in BBAT has developed from the first PhD thesis in 1985, generating a rich diversity of clinical studies as well as studies on the phenomenon of movement quality. Together they reflect a span in research design and methods in addition to providing information on findings related to physiotherapy for persons suffering from long-lasting musculoskeletal pain and mental health and psychiatric problems. This research has contributed to present and critically view BBAT, and also to clarify the phenomena and communication in BBAT.

It is considered a strength that an extensive growth of post-graduate courses in BBAT has developed from the late 1970s, in Scandinavia, adapting to the professional development of physiotherapy. Furthermore, the academic, international, post-graduate education of Basic Body Awareness Methodology (BBAM) (60 ECTS) for English speaking physiotherapists, developed in the early 2000s, brought this development further. Such an academic perspective on clinical approaches challenges the structure of the education, its curriculum and elevating its content, theory, clinical practice and projects. In addition, the pressure to adapt to the official requirements given by HVL, based on governmental regulations, has influenced both content and form of the education. The specific educational arena of BBAM, provided very many critical discourses. The penetrating questions from the international physiotherapy students, as well as national and international scholars - as visiting professors and educational leaders - have contributed to stretch BBAT towards clarifying its theory and practice.

The influences from BBAT and BBAM can, however, be a limitation and hindrance to this study of the two phenomenon of movement quality and movement awareness. It is evident that if other theories and clinical approaches had been studied, the outcome would have been different. Accordingly, the three studies included in the PhD-thesis may be considered one-sided. It can seem as if enthusiasm for BBAT has blurred the main author. This can also be a hindrance for BBAT, the approach itself, and its further development.

The study on movement quality, in this thesis, did not originate from BBAT, but from phys-

iotherapy itself. Movement, as a phenomenon, was experienced as a missing focus during education. In addition, movement quality, has been a phenomenon used but not professionally clarified. The two terms, namely "movement" and "exercise" has always triggered personal curiosity, their definitions and inter-relationship. Exercise is the most common term in physiotherapy. The phenomenon of movement, itself, led to this study of movement quality, relating to experiences, understanding, in a search for sense-making.

The studies of the phenomena of movement quality and movement awareness has been in focus for several years, initiated from personal learning by the French psychotherapist and movement educator Jacques Dropsy. The professional clarity and structure in his teaching movement quality was inviting to colleagues in the Scandinavian countries working in mental health and in need for tools. The author has studied movement quality through clinical practice, literature, self-experience, teaching and participating in academic discourses in various professional international settings over many years. This depth is considered to strengthen the quality of the interviews as well as the data presentation. This may also represent a bias, hindering a critical distance to the field. However, stringent analytic processes, with co-authors, co-workers and students at different educational levels in physiotherapy, led to bracketing content to maintain distance and a critical view.

The PhD-thesis has intended to follow recommended steps throughout the whole process, namely data-collection, data-analysis, coding strategies and the development of coding-lists, colouring and numbering, back and forth, using a code book and overviewing lists. All transcripts have been read throughout the analytic process, sensing the material, transcribing significant phrases related to lived experience, extracting terms, formulating meanings, clustering into themes and categories for verification (Creshwell and Poth, 2018). As part of the interpretative process, main author returned to informants, for dialogue and feedback on the interpretation of data. The results have been presented to a a variety of professionals, obtaining feedback through teaching situations, including meaningfulness and usefulness in physiotherapy.

In Study I, core phenomena are directly asked for, while in Study II, data was collected from the therapist's dialogue with the patient, however, reported by the therapist, the patient was not included in the study, as first-hand informant. It is a limitation in the thesis that no concrete and immediate observation of movement guidance, no recording of movement guidance in a concrete treatment situation and no interviews with patients were performed. This would have enriched the study, but was not chosen. It is considered important for future research derived from this thesis.

In Study II, as in study I, the data are presented as terms, not sentences used as quotes, but the phenomenon itself is presented as a quote. This was a challenge, when it came to publication, to argue for such a focus on phenomena. It is the authors' view that movement, as phenomenon, can be understood in greater depth within the profession, with such a clarification. All about promoting movement quality through this particular movement awareness approach is not told in this thesis.

It is a limitation that Study III has only three included publications, and Study I, in the thesis, is Study 3 in the meta-synthesis, which is a closed circle. However, the three studies (2008, 2010, 2018) have 10 years between them and thus 10 years of development for understanding and professional development. In addition, there is a different population and different methodology.

Visualisation of data is expressed in different ways throughout the thesis, either as tables or figures. Thus, the development of themes and categories is illustrated in layers (Creshwell and Poth). For this visualisation of mapping or modelling, this is used to unfold processes and to clarify the relatedness between phenomena. Creating a visual image of the information has been important, as for example the content of the movement quality components is visualised in two different ways, as a flower-figure, in Appendix A and as table, in Table 5.1. This also functioned as a cross-checking of data. When establishing another pattern of the same data, a new level of abstractions was revealed, as for example in Table 5.1 (Creshwell and Poth, 2018). It can be difficult to choose visualisation form, from among the variety of forms available for presentation, and a challenge to decide which will work best in relation to the specific data. For example the flower-model of the phenomenon of movement quality, in Appendix A, and the movement awareness learning cycle, in Appendix C, are reported as being useful clinical models. The intention of this thesis is that the small-scale (as Figure 4.1) and large-scale map (Table 4.6) can have a similar imprint on clinical practice.

It is apparent that this study, of the two phenomena of movement quality and movement awareness, could have profited from directing attention toward etymology and/or undergone semantic analysis. This can be considered in future research derived from this thesis.

5.4 Future Research

Research originating from this thesis is directed towards clinical practice, education and research on physiotherapy, to communication and learning of health characteristics terms of movement quality and movement awareness:

- Phenomenological studies on human movement and core phenomena, within mental health physiotherapy, extended also to other physiotherapy fields
- Phenomenological studies on movement terminology and health characteristic terms within physiotherapy and mental health
- Phenomenological studies on therapeutic and learning components used in movement guidance within physiotherapy in mental health
- Studies on transferring movement quality through movement awareness learning from skilled teacher to bachelor physiotherapy students, from skilled expert physiotherapists to novice physiotherapists, and from skilled physiotherapists to patients.
- Qualitative studies on promoting movement quality through small, simple, slow, soft, and stabilising movements, for use in everyday life.

Chapter 6

Conclusions

1. A total of 138 core phenomena were identified within BBAT, and clustered in three categories, clinical core-, historical roots- and research and evaluation phenomena. The clinical core phenomena, were 106 phenomena clustered in three categories: Movement quality phenomena, Movement awareness practice phenomena and Movement awareness therapy and pedagogy phenomena. 16 statements were identified as most favourable in describing BBAT, ranked as important for communication with patients, health professionals and society.

2. A multi-perspective movement vocabulary of 122 health characteristic terms of movement quality were identified for professional communication. A movement vocabulary is considered to be valuable within mental health rehabilitation as shared vocabulary for communication.

3. A construct of a movement awareness domain of physiotherapy in mental health were identified and visualised through a small- and a large-scale map, including three pillars, Movement quality components, Choice of movement components and Movement awareness strategy components including descriptions of learning forms. The domain provides person-centred and coping strategies for rehabilitation purposes in mental health physiotherapy.

Chapter 7

Resumen en español

Los fenómenos de la Calidad del Movimiento y Conciencia del Movimiento – Constructo Teórico y Comunicación en Fisioterapia en Salud Mental

7.1 Introducción

La fisioterapia en salud mental y psiquiatría es una especialidad con un creciente interés mundial, que requiere profundizar en los fenómenos de la calidad del movimiento y la conciencia del movimiento, abordando la intervención clínica, la rehabilitación, la atención preventiva y la promoción de la salud. Esta tesis se enfoca hacia estos dos fenómenos de calidad de movimiento y conciencia de movimiento, y tiene el objetivo de justificar y avanzar en clarificar la terminología a través de la investigación cualitativa, mediante datos provenientes de la práctica clínica.

Se sigue un enfoque fenomenológico como la perspectiva general para investigar las experiencias vividas y revelar las características, diferencias y relaciones entre los fenómenos (van Manen, 1997). Este enfoque es útil cuando se investiga el desarrollo del conocimiento y para profundizar en la comprensión de los procesos clínicos (Malterud, 2001b,a).

La OMS promueve estrategias que permiten mejorar la salud de las personas (WHO, 2013). La Salutogenesis dirige la atención hacia la salud y los activos para la salud, describiendo estrategias exitosas de afrontamiento y mejora de la salud (Langeland et al., 2016; Mittelmark et al., 2017). Se pretende que los fisioterapeutas se acerquen al reconocimiento de las señales saludables y promoverlas a través de la calidad del movimiento en los pacientes.

La tesis se inspira en la metodología fisioterapéutica en general, de la fisioterapia en salud mental y de la Terapia de la Conciencia Corporal Basal (BBAT, según sus siglas en inglés), desarrollada y practicada por fisioterapeutas durante más de 40 años. La tesis se encuadra en BBAT porque su terminología es bien conocida, además de su estructura y práctica con respecto a la calidad del movimiento a través de la conciencia del movimiento, gracias a sus componentes terapéuticos y la pedagogía del movimiento. Sin embargo, se requiere una aclaración profunda de los fenómenos y componentes terapéuticos.

7.2 Objetivo

El objetivo de esta tesis es estudiar los fenómenos clínicos principales, un vocabulario de movimientos para facilitar la comunicación profesional así como realizar una meta-síntesis de tres publicaciones anteriores sobre la calidad del movimiento y la conciencia del movimiento, para profundizar en la comprensión y desarrollar el dominio de la conciencia del movimiento, para la comunicación en fisioterapia en salud mental. Se pretende responder a las necesidades de los profesionales de la salud que plantean dificultades para describir la calidad del movimiento, para diferenciar entre la calidad del movimiento y la conciencia del movimiento, y también para comunicar, estructurar y promover el aprendizaje de la conciencia del movimiento, en diálogo con los pacientes, colegas, equipos de salud y la sociedad en general.

El objetivo del 'Estudio I, Parte 1' es identificar y describir los fenómenos y declaraciones en BBAT. El objetivo del 'Estudio I, Parte 2' es identificar las descripciones más relevantes sobre BBAT. El objetivo del 'Estudio II' es identificar un vocabulario de términos sobre movimiento desde el enfoque de la salud con respecto a la calidad del movimiento bajo la perspectiva de la comunicación profesional. El objetivo del 'Estudio III' es desarrollar una meta-síntesis de tres publicaciones cualitativas anteriores, publicadas en el período 2008-2018, para profundizar aún más en la comprensión de los estudios anteriores.

7.3 Diseño de investigación y Metodología

Se sigue un diseño fenomenológico para identificar descripciones simples de una esencia universal, y está dirigido hacia componentes de los cuales los informantes pueden no ser conscientes (van Manen, 1997). El enfoque pertenece al mundo cotidiano en el que los fisioterapeutas trabajan con los fenómenos de la calidad del movimiento y la conciencia del movimiento.

En 'Estudio I', la técnica del grupo nominal (NGT, según sus siglas en inglés) es elegida para llevar a cabo un proceso de consenso, identificando los fenómenos principales y las descripciones sobre BBAT a través de un seminario, con una cohorte de 21 fisioterapeutas provenientes de 10 países europeos. La NGT fue elegida debido a su enfoque participativo, alentando a los participantes a contribuir de manera igualitaria y democrática. Se ha señalado que la NGT es rentable, eficaz y fácil de implementar entre los profesionales de la salud, y es relevante para la investigación en entornos clínicos. La adhesión al protocolo NGT aseguró que los investigadores recolectaran información válida.

En el 'Estudio II', se elige un diseño fenomenológico para identificar y describir los fenómenos clínicos a partir de la comunicación de movimientos realizada por expertos al guiar a pacientes hacia movimientos más funcionales, analizando los términos característicos de la calidad de movimiento desde la perspectiva de la salud. La fenomenología es útil cuando se pretende transformar experiencias vividas en expresiones textuales. Se reclutó una cohorte de 15 fisioterapeutas provenientes de las especialidades clínicas de neurología, atención primaria de salud y psiquiatría. Se realizaron entrevistas en profundidad de carácter cualitativo e individuales como recogida de información.

El 'Estudio III' es una meta-síntesis de tres publicaciones anteriores, de 2008, 2010 y 2018 (Skjaerven et al., 2008; Skjærven et al., 2010; Skjærven and Gard, 2018), centradas en

los fenómenos de la calidad del movimiento y la conciencia del movimiento, desarrolladas para revisar datos cualitativos publicados, material de texto y modelos. Un meta-síntesis es una estrategia para realizar un análisis cualitativo secundario de los hallazgos primarios publicados, con el objetivo de profundizar la comprensión de la calidad del movimiento y la conciencia del movimiento, y así crear una presentación única y más profunda en el campo de conocimiento (Grant and Booth, 2009). El análisis de contenido fue usado para analizar el material (Graneheim et al., 2017; Graneheim and Lundman, 2004).

7.4 Análisis de los datos

En el 'Estudio I, Parte 1', los participantes elaboraron un consenso de fenómenos principales, a través de la estrategia de consenso formada por seis fases, según lo recomendado por la NGT. Cuando los informantes completaron el proceso de consenso, los datos fueron recopilados por el equipo de investigadores y se utilizó un análisis de contenido de cuatro fases en el análisis de los fenómenos centrales en BBAT (Graneheim and Lundman, 2004). En la 'Parte 2', los participantes priorizaron la descripción útil clínica más relevante sobre BBAT y se llevó a cabo el cálculo y análisis de los datos.

En el 'Estudio II', las entrevistas individuales fueron grabadas, transcritas y enviadas a los informantes para su validación. Para identificar temas, categorías y subcategorías, el diseño analítico de la condensación de texto de Giorgis, adaptado por Malterud, se utilizó para el análisis de datos (Malterud, 2012).

En el 'Estudio III' se realizó un análisis de contenido para analizar los datos, centrándose en los fenómenos sobre la calidad del movimiento y la conciencia del movimiento (Graneheim et al., 2017; Graneheim and Lundman, 2004). El primer paso fue una re-contextualización y re-familiarización con todo el material incluyendo cuatro modelos teóricos. El segundo y tercer paso consistió en un análisis en profundidad donde se ofrece una perspectiva de aprendizaje sobre este ámbito del conocimiento y se proporciona una síntesis descriptiva de los cuatro modelos publicados. En el cuarto paso, el material y los modelos se condensaron a través de un proceso de síntesis.

7.5 Resultados

En el 'Estudio I, Parte 1', el resultado muestra un consenso sobre 138 fenómenos principales, de los cuales 106 correspondían a fenómenos clínicos, en tres categorías: calidad del movimiento, práctica del movimiento, así como estrategias y fenómenos de la conciencia del movimiento. En la 'Parte 2' los participantes alcanzaron el 100% de consenso en 16 de las 30 declaraciones que describen a BBAT. El estudio actual se considera una primera identificación de un dominio de la conciencia del movimiento en fisioterapia. Puede ayudar a fisioterapeutas y educadores a diseñar estrategias y entornos de aprendizaje, además de mejorar el desarrollo profesional en el campo de la salud mental.

En el 'Estudio II', el resultado muestra un vocabulario sobre movimiento desde múltiples perspectivas incluyendo 122 términos desde un enfoque de salud, desarrollado para facilitar la

comunicación del movimiento dentro del amplio ámbito de la rehabilitación. Un vocabulario que describe la calidad del movimiento desde la salud es de utilidad dentro en rehabilitación porque facilita una comunicación más efectiva y específica dirigida a la salud. Se considera que la terminología específica del movimiento desde la salud tiene un impacto en las intervenciones y facilita una rehabilitación centrada en la persona, basada en objetivos.

En el 'Estudio III', el resultado muestra un constructo en un mapa a gran y pequeña escala sobre el ámbito de la conciencia del movimiento que consta de tres pilares: (i) Componentes de la Calidad del Movimiento, (ii) Elección de Componentes del Movimiento, (iii) Componentes de la estrategia de la concienciación del movimiento, junto con tres formas de aprendizaje: *aprender sobre, a través y estando en* movimiento. Las estrategias de aprendizaje relacionadas con la salud, siendo conscientes de los movimientos de la vida diaria, son agentes importantes en el aprendizaje de la conciencia de movimiento.

7.6 Discusión

El aprendizaje de la conciencia del movimiento puede resultar de gran interés en la rehabilitación de la salud mental, así como en la atención sanitaria preventiva y en la promoción de la salud, ya que aporta estrategias para mejorar un movimiento alterado y el dolor relacionado con el movimiento que a menudo son síntomas presentados por los pacientes.

El objetivo de la tesis fue estudiar cómo las cohortes estudiadas de fisioterapeutas describieron los fenómenos principales y cómo promocionaron de la calidad del movimiento a través del aprendizaje de la conciencia del movimiento. En los últimos años, se ha prestado más atención a este ámbito del conocimiento, y por ello es necesario aclarar los componentes y las estrategias implementadas en dichos entornos. Los estudios muestran un papel dominante en cómo los fisioterapeutas perciben, usan y transfieren aspectos de la calidad de movimiento en su comunicación sobre el movimiento con los pacientes.

Un enfoque fenomenológico se siguió para identificar descripciones simples y universales dirigidas a los aspectos del movimiento de los que los informantes pueden no ser conscientes. Se eligió la fenomenología para recopilar y analizar datos del mundo cotidiano de la fisioterapia. Por lo tanto, la recopilación de datos cualitativos se basó en la percepción de los profesionales sanitarios de la guía del movimiento, a través de la descripción narrativa. Se aplicó la técnica de grupo nominal, un estudio fenomenológico, y una meta-síntesis de datos cualitativos publicados previamente para profundizar en las descripciones de los dos fenómenos principales.

El proceso de reclutamiento fue diseñado para incluir diferentes cohortes de fisioterapeutas, en relación a un criterio de inclusión. Ninguno de los investigadores estuvo involucrado en los procesos de reclutamiento. El 'Estudio I' incluyó a 21 expertos del movimiento BBAT de 10 países europeos. El 'Estudio II' incluyó a 15 expertos en movimiento provenientes del ámbito de la neurología, atención primaria de salud y psiquiatría. El 'Estudio III' incluyó una cohorte de 30 expertos, 15 de cada ámbito de neurología, atención primaria de salud y psiquiatría. El número limitado de expertos en movimiento y publicaciones en la meta-síntesis representan un sesgo en los estudios. Sin embargo, los expertos representan una cultura amplia, desde diferentes ámbitos de la fisioterapia y diferentes países.

En el 'Estudio III' se presenta una lista de fenómenos principales, como descripción de per-

spectiva, dominio, elemento y aspecto. Estos términos son importantes porque nos permiten realizar diferenciación teórica en este ámbito del conocimiento (Nutbeam et al., 2010). Además, es importante diferenciar en la terminología sobre conciencia, entre conciencia, conciencia corporal (Ginzburg et al., 2014; Mehling et al., 2011) y conciencia del movimiento. En relación a esto, una definición sobre conciencia del movimiento se ofrece en la tesis.

La OMS subraya la necesidad de desarrollar la comunicación en salud en la sociedad (WHO, 2013). Una comunicación centrada en el movimiento humano, y en los componentes de la calidad del movimiento, se considera esencial para abordar los pacientes que sufren problemas musculoesqueléticos y de salud mental. Un vocabulario que describe los términos de salud de la calidad del movimiento es útil dentro de la rehabilitación, ya que permite una comunicación más efectiva y específica del movimiento. Esto es necesario para comunicarse con los pacientes, fisioterapeutas, proveedores de atención clínica y cuidadores para mantener una práctica basada en la evidencia. Además, los movimientos simples, aprendidos y entrenados en el ámbito de la vida diaria, involucran a la persona en el movimiento. Promover la calidad del movimiento a través de estrategias de concienciación del movimiento es un aprendizaje que hace que el paciente sea activo y que el enfoque de la rehabilitación se dirija a objetivos.

Algunos de estos fenómenos están íntimamente inter-relacionados, y representan diferenciaciones en experiencias, sensaciones, percepciones y sentimientos. Las experiencias ocurren continuamente a través de la interacción entre el ser humano vivo y las condiciones ambientales, ya que ambos están involucrados en el proceso vital (Dewey, 1934a; Dropsy, 1973, 1984). Esta tesis se dirige hacia experiencias de movimiento específicas relacionadas con la promoción de la calidad del movimiento a través de la conciencia del movimiento, descritas desde diferentes puntos de vista de expertos de movimiento. La conciencia corporal se usa con mayor frecuencia en Fisioterapia. Sin embargo, la conciencia del movimiento se usa con menos frecuencia como un término, incluso si el movimiento humano se presenta como la base de la Fisioterapia.

Los hallazgos de los estudios ilustran el fenómeno de la calidad del movimiento y las dos capas, una general, término paraguas de calidad de movimiento, y una diferenciación de calidades del movimiento, de elementos y aspectos. Esto proporciona una excelente información para la práctica clínica. El fenómeno de la calidad del movimiento es amplio y complejo, e incluye componentes anatómicos, fisiológicos, psico-socioculturales esenciales, relacionados con los potenciales de movimiento y la capacidad de una persona para percibir sensaciones relacionadas con la forma de moverse. Se han planteado críticas sobre el uso del fenómeno de la calidad del movimiento, asociándolo con el entrenamiento desde una perspectiva neuro-fisiológica, enfatizando la normalidad y la perfección (Ketelaar et al., 2001). Dicha perspectiva asocia la calidad del movimiento con una visión pasiva del aprendizaje motor (Ketelaar et al., 2001).

Los estudios nos conducen a la pedagogía del movimiento del aprendizaje del movimiento humano. En los últimos años, ha aumentado el interés en el aprendizaje de la conciencia de movimiento, con la búsqueda de componentes terapéuticos clave. La mayoría de los fisioterapeutas están formados en el entrenamiento físico y la actividad física, y la identidad está firmemente arraigada en este ámbito y en el aprendizaje desde estando en, experimentando los elementos y aspectos del movimiento, es menos descrito en investigación, incluyendo una forma de aprendizaje que convierte el conocimiento tácito de la conciencia del movimiento y la calidad del movimiento en conocimiento y habilidad explícitos. El conocimiento se ha separado

tradicionalmente en dos categorías, el conocimiento teórico/intelectual y el conocimiento práctico/incorporado, ambos conectados a través del cuerpo.

Hacia el final del estudio III, se desarrolló un mapa que proporciona una visión y misión para el futuro de la fisioterapia en salud mental.

7.7 Fortalezas y limitaciones

El primer doctorado sobre BBAT fue defendido en 1985, generando una línea de investigación rica y diversa. El aumento de los cursos de posgrado en BBAT se había desarrollado desde principios de los años 80, incluido el desarrollo de la educación académica de BBAM, a nivel de postgrado universitario o máster, ha existido durante casi 18 años. Las exigencias a diferentes niveles académicos en fisioterapia, así como los numerosos proyectos clínicos, han impulsado la terminología y las estrategias en este ámbito del conocimiento.

Esta estrecha relación con BBAT también puede ser una limitación y un obstáculo para este estudio de los fenómenos. Es evidente que si se hubieran estudiado otras teorías y enfoques clínicos, el resultado habría sido diferente. Un entusiasmo por un campo en particular, como BBAT, puede resultar ser un obstáculo, limitando la investigación en otros ámbitos.

Otra limitación es que no se realiza una observación concreta de la guía de movimiento, no se registra la guía de movimiento en una situación de tratamiento concreta y no se realiza ninguna entrevista a los pacientes. Esto habría enriquecido y matizado la tesis y es importante para futuras investigaciones. Además, es evidente que este estudio se habría beneficiado de dirigir la atención hacia la etimología y / o el análisis semántico.

7.8 Futuras investigaciones

Se sugieren investigaciones futuras: a) estudios fenomenológicos sobre el movimiento humano y los fenómenos principales, como en un vocabulario característico del movimiento de la salud, dentro de la fisioterapia de salud mental; b) estudios fenomenológicos sobre componentes terapéuticos utilizados en la guía del movimiento; c) los estudios sobre la transferencia de la calidad del movimiento a través de la conciencia del movimiento de profesores capacitados a estudiantes de fisioterapia, de fisioterapeutas expertos a fisioterapeutas novatos y de fisioterapeutas expertos a pacientes; d) estudios cualitativos sobre la promoción de la calidad del movimiento a través de movimientos pequeños, simples, lentos, suaves y estabilizadores, para su uso en la vida cotidiana.

7.9 Conclusión

Se identificaron un total de 138 fenómenos principales dentro de BBAT, de los cuales 106 eran fenómenos clínicos, agrupados en: fenómenos de calidad de movimiento, fenómenos de práctica de conciencia de movimiento y terapia de conciencia de movimiento, y fenómenos de pedagogía. Se identificaron 16 declaraciones como las más favorables al describir BBAT.

Se identificó un vocabulario del movimiento con múltiples perspectivas compuesto por 122 términos de salud sobre calidad de movimiento y que facilitará la comunicación profesional. Esto se considera valioso dentro de la rehabilitación en salud mental para permitir un vocabulario común en la comunicación.

Un constructo de un dominio de la conciencia del movimiento en la fisioterapia de salud mental se identifica y visualiza a través de un mapa a pequeña y gran escala, que incluye tres pilares, componentes de calidad del movimiento, componentes de elección de movimiento y componentes de estrategia de conciencia del movimiento, presentados junto a tres formas de aprendizaje.

La tesis proporciona una visión y misión para el futuro sobre el dominio de conciencia del movimiento en fisioterapia de salud mental.

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Study I

Consensus on core phenomena and statements describing Basic Body Awareness Therapy within the movement awareness domain in physiotherapy

Skjærven LH, Mattsson M, Catalan-Matamoros D, Parker A, Gard G, Gyllensten AL.
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Abstract

Physiotherapists are facing complex health challenges in the treatment of persons suffering from long-lasting musculoskeletal disorders and mental health problems. Basic Body Awareness Therapy (BBAT) is a physiotherapy approach within the movement awareness domain developed to bridge physical, mental, and relational health challenges. The purpose of this study was to reach a consensus on core phenomena and statements describing BBAT. A consensus-building process was conducted using the nominal group technique (NGT). Twenty-one BBAT experts from 10 European countries participated in a concentrated weekend workshop of 20 hours. All participants signed informed consent. Participants reached a consensus on 138 core phenomena, clustered in three overarching categories: clinical core, historical roots, and research and evaluation phenomena. Of the 106 clinical core phenomena, the participants agreed on three categories of phenomena: movement quality, movement awareness practice, and movement awareness therapy and pedagogy. Furthermore, the participants reached 100 percent consensus on 16 of 30 statements describing BBAT. This study provides a consensus on core phenomena and statements describing BBAT. The data reveal phenomena implemented when promoting movement quality through movement awareness. Data provide clarity in some aspects of the vocabulary as fundamental theory. Further reearch will be developed.

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REPORT

Consensus on core phenomena and statements describing Basic Body Awareness Therapy within the movement awareness domain in physiotherapy

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ABSTRACT

Physiotherapists are facing complex health challenges in the treatment of persons suffering from long-lasting musculoskeletal disorders and mental health problems. Basic Body Awareness Therapy (BBAT) is a physiotherapy approach within the movement awareness domain developed to bridge physical, mental, and relational health challenges. The purpose of this study was to reach a consensus on core phenomena and statements describing BBAT. A consensus-building process was conducted using the nominal group technique (NGT). Twenty-one BBAT experts from 10 European countries participated in a concentrated weekend workshop of 20 hours. All participants signed informed consent. Participants reached a consensus on 138 core phenomena, clustered in three overarching categories: clinical core, historical roots, and research and evaluation phenomena. Of the 106 clinical core phenomena, the participants agreed on three categories of phenomena: movement quality, movement awareness practice, and movement awareness therapy and pedagogy. Furthermore, the participants reached 100 percent consensus on 16 of 30 statements describing BBAT. This study provides a consensus on core phenomena and statements describing BBAT. The data reveal phenomena implemented when promoting movement quality through movement awareness. Data provide clarity in some aspects of the vocabulary as fundamental theory. Further reearch will be developed.

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Movement quality; movement awareness; movement awareness therapy; movement awareness learning

Introduction

Physiotherapists are facing complex health challenges in the treatment of persons suffering from long-lasting musculoskeletal disorders, chronic pain, psychosomatic, and mental health problems (Higgs, Richardson, and Dahlgren, 2004). Basic Body Awareness Therapy (BBAT) is an established physiotherapy method within mental health, especially in Northern European countries. This movement awareness therapy is developed for such resource-consuming conditions bridging physical, mental, and relational health challenges. This study focuses on development of core phenomena and statements relevant in research, education, and practice. By core phenomena is meant the most important fundamental aspects recognized in BBAT, aiming to provide clarity in some aspects of the vocabulary describing fundamental theory, forwarded by an expert group for whom the communication of promoting movement quality through movement awareness learning has become a major topic.

There has been little theoretical interest in core phenomena within physiotherapy. A phenomenon is a fact that is observable and perceptible by the senses. A theoretical framework is an important indicator of an evolving clinical science, and arguments put forward for the need for a theory are relevant (Cott and Finch, 2007). The first step in theory development is to identify and define basic concepts (Wikström-Grotell and Eriksson, 2012).

Human movement and function are key concepts in physiotherapy (World Confederation for Physical Therapy, 2011, 2015). A description of knowledge has been on the international agenda since 1970 (Hislop, 1975; Tyni-Lennè, 1989). A systematic literature review on the concept of movement was done confirming seven studies, revealing that the concept of movement had seldom been explored from a psycho-socio-existential perspective (Wikström-Grotell and Eriksson, 2012). Among these studies, only one had the phenomena of

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movement quality and movement awareness as its focus (Skjaerven, Kristoffersen, and Gard, 2008). The literature is thus sparse on the subject addressed in this paper.

Physiotherapists are implementing awareness, body awareness, and movement awareness. Awareness is derived from human consciousness (Brown and Ryan, 2003) and can be defined as an attentive, relaxed, and alert presence, not analogous with concentration. Being aware means continually monitoring internal sensations and the external environment, providing heightened sensitivity to experiences (Brown and Ryan, 2003). Body awareness is a frequently used term (Ginzburg, Tsur, Barak-Nahum, and Defrin, 2014; Gyllensten, Skär, Miller, and Gard, 2010; Mattsson, 1998; Mehling et al., 2011), described as the sensitivity to bodily signals, to be aware of bodily states and to identify subtle bodily reactions to internal and environmental conditions (Ginzburg, Tsur, Barak-Nahum, and Defrin, 2014).

BBAT is based on the hypothesis of the person's lack of contact with and awareness of the body concerning physical, mental, and relational factors (Dropsy, 1973). The contact deficiency may lead to dysfunctional movement quality, pain, and reduced function. BBAT focuses on movement quality and how the movements are performed and experienced in relation to space, time, and energy (Skjaerven, Kristoffersen, and Gard, 2008). To gain more functional movement quality, you need to be present in to become aware *of* how you move, directing attention to healthy movement potentials. Movement awareness can be described as sensitivity to a fourfold spectrum of movement nuances, identifying movement reactions in relation to internal, environmental, and relational conditions. BBAT provides a broad spectrum of training situations, including simple movement coordinations (Dropsy, 1984; Skjaerven, Gard, Sundal, and Strand, 2015).

BBAT is rooted in a "know how" tradition, focusing on movement experiences (Dewey, 1934; Duesund, 1995; Kolb, 1984). Patients suffering from musculoskeletal problems are lacking sensory-motor awareness, reflected in dysfunctional movement coordinations, coping strategies and habits in daily life. Heightened sensory-motor awareness is closely associated with the experiences of well-being, reflecting a state of general health and self-efficacy (Dropsy, 1984). In BBAT, the physiotherapist monitors the phenomena of awareness, body awareness, and movement awareness when promoting movement quality.

A preliminary literature review performed in the stages of this project resulted in BBAT showing clinical experiences or significant effects in areas such as stroke (Lindvall, Anderzén, Carlsson, and Forsberg, 2016), rheumatic diseases (Olsen and Skjaerven, 2016), traumatized refugees (Madsen, Carlsson, Nordbrandt, and Jensen, 2016; Stade, Skammeritz, Hjortkaer, and Carlsson, 2015), major depression (Danielsson and Rosberg, 2015), chronic whiplash associated disorders (Seferiadis, Ohlin, Billhult, and Gunnarsson, 2016), eating disorders (Catalan-Matamoros, 2007; Catalan-Matamoros et al., 2011; Thörnborg and Mattsson, 2010), fibromyalgia and chronic pain (Gard, 2005; Mannerkorpi and Gard, 2003), psychiatric care (Gyllensten, Ekdahl, and Hansson, 2009; Gyllensten, Hansson, and Ekdahl, 2003; Hedlund, 2014; Hedlund and Gyllensten, 2013; Johnsen and Råheim, 2010; Mattsson, Egberg, Armelius, and Mattsson, 1995; Roxendal, 1985), borderline personality disorders (Skatteboe, Friis, Hope, and Vaglum, 1989), chronic pelvic pain (Mattsson, Wikman, Dahlgren, and Mattsson, 2000; Mattsson et al., 1997, 1998; Olsen et al., 2017), long-lasting chronic pain (Bergström, Ejelöva, Mattsson, and Stålnacke, 2014), and group physiotherapy (Klingberg-Olsson, Lundgren, and Lindström, 2000; Leirvåg, Pedersen, and Karterud, 2010; Skatteboe, Friis, Hope, and Vaglum, 1989). Furthermore, studies have been conducted on the following: motivational factors (Fjellman-Wiklund, Grip, Karlsson, and Sundelin, 2004; Grahn, Ekdahl, and Borgquist, 2000; Mannerkorpi and Gard, 2003) embodied identity (Hedlund and Gyllensten, 2010, 2013);, and hip arthrosis (Strand et al., 2016). Also, studies on reliability and validity of evaluation tools in BBAT have been performed (Gyllensten, 2001; Gyllensten, Ekdahl, and Hansson, 1999; Hedlund, Gyllensten, Waldegren, and Hansson, 2016; Roxendal, 1987; Skatteboe, 2000; Skjaerven, Gard, Sundal, and Strand, 2015).

The need to study phenomena in BBAT is important because of its increasing evidence base and wide clinical use. The aim was to address a first step in theory development by a consensus-building process with BBAT experts to reach consensus on core phenomena in BBAT. It is also considered important to study statements describing BBAT because clinicians and researchers have reported it to be a challenge, how and what to describe professionally, in an introductory presentation of BBAT. Such statements are crucial for an understanding of BBAT, to make it accessible for patients, students, colleagues and society and for providing a common basis of understanding of BBAT. The two research questions that drove this study were as follows: RQ1: What are the most important core phenomena in BBAT; and RQ2: What are the most important statements describing BBAT?

Methods

The NGT was chosen to conduct the consensus-building process and prioritize information from participants (Potter, Gordon, and Hamer, 2004). The NGT method is an inclusive process designed to encourage

all participants to contribute equally and democratically. It has been used successfully in a range of other consensus-building exercises within both the academic and health environments (Bamford and Warder, 2001; Edwards et al., 2004; Vella, 2002). The NGT can provide both qualitative and quantitative information and as such is a mixed methods approach. Among the strengths of NGT are that it is cost effective and time efficient, making it particularly attractive for health research (Potter, Gordon, and Hamer, 2004).

To generate data, a consensus workshop was organized as a platform made for the participants to engage in face to face debate through a focused discussion. The workshop was conducted over three days, in total 20 hours. Following the research questions, it was organized around two main sessions. The consensus-building process was based on the principles of the NGT protocol (Potter, Gordon, and Hamer, 2004): (1) introduction and explanation, (2) silent generation of ideas, (3) sharing ideas, (4) group discussion, and (5) voting and ranking.

Participants were recruited from the International Association of Teachers in Basic Body Awareness Therapy (IATBBAT), composed of 35 members. Six months prior to the workshop, a written invitation to participate in the study was sent to all the members, of whom 21 volunteered to participate as experts. The participants came from 10 European countries (one from Austria; two from Denmark; three from Finland; two from Iceland; one from the Netherlands; four from Norway; one from Spain; four from Sweden; two from Switzerland; and one from the UK). The majority of participants were women (n = 17) with a mean age of 53 (SD = 11.2, range 30–70); three held a Master's degree and one a PhD degree in physiotherapy. The experts worked within clinical (n = 16) and faculty (n = 5) settings.

Six months prior to the workshop, the program, purpose and definition of consensus were provided. Four months before, participants were invited to initiate discussions with colleagues on what they considered the core phenomena in BBAT.

A research team of five members was established, one from Norway, two from Sweden, one from Spain and one from the UK, including an external researcher. The external researcher was a professor in physiotherapy, qualified as a psychologist, employed at a Swedish university, neither a member of the IATBBAT nor trained as BBAT teacher, but with a documented interest in the field. She did not know the participants. The task was to secure the research methodology and a stringent process of data collection. During the workshop, the researchers had the role of facilitators. The external researcher participated and critically reviewed the research process. According to Dickson and Green (2001), an external researcher is an active participant, bringing her own philosophy, experience and understanding to the research.

A list of 30 statements describing BBAT was agreed by the researchers before the workshop. The statements were a product of postgraduate students' work, developed over a period of six years by three different groups, each of 18 students. The statement list was the students' extraction of descriptions of BBAT from international research papers included as obligatory references at an academic international study program (60 ECTS) in physiotherapy, Basic Body Awareness Methodology (BBAM) at Western Norway University of Applied Sciences, Norway. The statements were reported as being useful by the students communicating clinically and in the multi-professional team.

Researchers organized the participants into three groups according to the criteria of country of residence, gender, and not being too familiar with one another. The participants knew each other as members of the IATBBAT, but none of them had worked together. The research team drew lots for the four from Sweden and Norway, spreading them among the groups.

Continuous evaluation of the discussion atmosphere was conducted during the workshop, revealing active engagement of all participants, underlining the outcomes of NGT not being subject to the influence of the facilitators and to give all participants equal possibility to be heard. An important benefit of the generating process for this study was that it allowed for a consensus on the day of the NGT rather than taking extra time for analysis (Edwards et al., 2004). Given the diverse nature of the participants, the NGT process also supported relationships among participants when discussing the core phenomena and statements in a wide variety of contexts.

In order to conduct discussions in an environment conducive to consensus, the facilitators organized an introductory session on research methodology, group dynamics and interpersonal relationships, preparing for the consensus-building process. Data were then generated by the participants through the steps shown in Table 1 according to the NGT protocol (Potter, Gordon, and Hamer, 2004). In total, two data collections were made for RQ1 and RQ2, respectively. During data collection, participants received guidelines from the facilitators. The participants alternated between individual work, small group work, and large group work. Facilitators followed the entire process and ensured that all participants were equally involved and their voices taken into account in the consensus-building process. The facilitators did not intervene in the process.

Voting and ranking of phenomena were performed by all participants individually. This involved prioritizing the inputs in relation to the research questions.

Table 1. Steps in the consensus building process

RQ1. *What are the core phenomena in BBAT and what are the most important phenomena?* Total time: 10 hours	RQ2. *What are the statements describing BBAT?* Total time: 10 hours
Step 1. Introduction and explanation	
• Present the research question to participants and provide guidelines for the consensus-building process (20 min) • Researchers make presentations focused on methodological questions (40 min)	• Present the research question to participants and provide guidelines for the consensus-building process (20 min) • Researchers make presentations focused on methodological questions (40 min)
Step 2. Silent generation of ideas	
Individually 50 min • Brainstorm, reflect and write core phenomena on post-its • No restriction on input on phenomena	Individually 120 min • Read list of statements • Brainstorm, reflect and write on post-its
Step 3. Sharing ideas	
Small group 120 min • Read each post-it aloud • Group them in themes, categories and phenomena • Everyone agrees • Glue the post-it on a wall-paper as a chart • Each group places its own chart in the large group room Large group 60 min • Each participant studies the other small groups' charts in the large group room • Discuss missing phenomena • Present core phenomena in the draft chart	Small group 120 min • Read statements and post-its aloud • Discuss, add and subtract statements • Group them in themes • Everyone agrees • Glue sorted themes on a wall-paper as a chart • Each group places its own chart in the large group room Large group 80 min • Each participant studies the other small groups' charts in the large group room • Present and critically discuss statements in the draft chart
Step 4. Group discussion	
Small group 80 min • Add/subtract phenomena in own chart • Draft a joint chart • One from each small group presents own chart to large group Large group 70 min • Participants build a joint chart • A consensus on the joint chart is made (Tables 2, 3, 4) • Evaluate the consensus-building process • Facilitators record the material of the discussion	Small group 60 min • Add/subtract statements in own chart • One from each small group presents own chart to large group Large group 60 min • A consensus on the three charts is made • Evaluate the consensus-building process • Facilitators record the material of the discussion
Step 5. Voting and ranking	
Individually 80 min • Vote and ranking important phenomena • Facilitator collects data and puts into envelopes Large group 80 min • Evaluate the consensus-building process • Facilitators record the material of the discussion	Individually 40 min • Rank statements according to themes • Participants glue them on the chart Large group 40 min • Evaluate the consensus-building process • Facilitators record the material of the discussion

Finally, immediate results were available to all participants. The facilitators engaged participants in critically reflecting on the consensus-building process. When an argument about the importance of a phenomenon appeared, the disagreement was included in the process. The acquired consensus of core phenomena is shown in the results section.

During the workshop, the data analysis from the NGT and the reporting of results were carried out using qualitative and quantitative methods. Content analysis of data enabled verification of the information collected in the process. Participants grouped the inputs in over-arching categories, categories and subcategories on charts. From this qualitative analysis, participants extracted inputs from the transcripts to help explain both individual and group work, providing clarity and depth in the explanation of results. The quantitative analysis of results from the voting and ranking process was used to conclude and identify group priorities. This process implied that the question being addressed and the inputs generated were understood and agreed by all participants, making it possible to reach a consensus.

The researchers recorded the material using photographs and field-notes, storing the participants' charts according to the protocol. This was helpful for later data analysis so that individual participants' comments could be identified for cross-checking against small and large groups and identifying all steps. Immediately after the consensus workshop, the research team came together to check the data. The team met on several occasions to examine, elaborate and structure all material into the

tables and figure shown in this paper. The process went back and forth between parts and the whole to eliminate inconsistencies, constantly returning to the original texts. Content analysis was performed during the analysis process in order to interpret the findings (Graneheim and Lundman, 2004). A frequency analysis from data in voting and ranking was performed as part of RQ1. Finally, the research team met and had a critical discussion.

Ethical principles were followed according to the Helsinki Declaration. All participants were informed about the study and written informed consent was signed. Data were collected by the external researcher and confidentially stored. All material will be deleted at the end of the project according to the research protocol.

Results

RQ1: Core Phenomena Identified in BBAT

During the consensus-building process, the participants searching for the most important phenomena in BBAT, recognized 138 phenomena. Through their data analysis, three overarching categories were identified: (1) *clinical core phenomena*, (2) *historical roots phenomena*, and (3) *research and evaluation phenomena*, further clustered in categories and subcategories. The data are seen as "thick" descriptions, presented as citations in line with qualitative research (Table 2–4). The citations are presented in cursive in the text.

Clinical core phenomena

The first overarching category includes 106 clinical core phenomena, clustered in three categories: (1) *movement quality*, (2) *movement awareness practice*, and (3) *movement awareness therapy and pedagogy*, each grouped in subcategories (Table 2).

Category 1. Movement quality phenomena

The first category includes a cluster of 44 phenomena related to movement quality, further grouped in five subcategories: (1) *movement perspectives*, (2) *movement elements*, (3) *movement aspects*, (4) *movement processes, and* (5) *experience of I am.*

The first subcategory, *movement perspectives*, represents the incorporation of a multi-perspective view in physiotherapy, pointing to the differentia-

Table 2. Clinical core phenomena

Categories	Sub-categories	Phenomena
Movement quality phenomena 5 sub-categories 44 phenomena	Movement perspectives →	*Physical; physiological; psychological; social, cultural; existential; threefold contact problem*
	Movement elements →	*Grounding; space–time–energy; balance; movement centre; vertical axis; breathing; awareness; functional core stability; alignment; muscle tension*
	Movement aspects →	*Form; flow; rhythm; elasticity; energy; lightness; vitality; creativity; intention; unity*
	Movement process →	*Meeting in interaction; subject-subject; to become alive in the body; identity; self-development; integration of breathing and movement; curiosity; frames and borders; experiencing the MQ; describing MQ; motivation; process; respect: relationships–family, work, society*
	Experience of 'I am' →	*Identity; meaning; presence; the 'I am'*
Movement awareness practice phenomena 2 sub-categories 18 phenomena	Movement positions in space →	*Lying; sitting; standing; walking; basic coordination; relational movements; use of voice; massage*
	Movement description →	*Simple movements; daily life movements; economic; effortless; efficient; grounded; functional movements; basic functions; tai chi slow movements; mindful movements*
Movement awareness therapy and pedagogy phenomena 4 sub-categories 44 phenomena	Therapeutic factors →	*Group therapeutic factors; individual therapeutic factors; one eye in and one eye out; verbal reflections on movement experiences; experiencing the here and now*
	Therapeutic process →	*Platform for promoting MQ; action strategies for promoting MQ; communication; person-centred; support and challenge; the role of father and mother; respecting the body ego; level of motivation; curiosity; therapeutic process; therapeutic relationship; acceptance; relating; experienced-based learning; explore; embodied*
	Movement pedagogy →	*Movement pedagogy; movement learning; exploring movement; experienced way of teaching/learning; repetition-without repetition; the Movement Awareness Learning Cycle; imitation as a way of movement learning; structured teaching/learning system; metaphors; movement guidance vs correction*
	PT`s self-experience →	*Presence; power to decide for oneself; being and having a body; acting and being aware; trust oneself and life; self-knowledge; lived experience; to be seen; being, doing and relating; trust; free to BE; first meeting; positive feelings*

Table 3. Historical roots phenomena

Category	Sub-categories	Phenomena
Historical roots phenomena 5 sub-categories 23 phenomena	Foundation →	*Psychotonie; Dropsy; Roxendal; International Association of Teacher in BBAT (IATBBAT)*
	Movement traditions →	*Western movement traditions; Eastern movement traditions; modern dance; actors training*
	Background →	*Physiotherapy; natural science, physiology, neurobiology, biomechanical; psychology; Eastern and Western philosophy; body-oriented psychology*
	Health promotion →	*Empowerment; salutogenesis; health perspective; health promotion; Antonowsky; acceptance; resource oriented*
	Human view →	*Existential philosophy. relationship, motivation; BBAT: addressing the whole person vs local symptoms*

Table 4. Research and evaluation phenomena

Category	Sub-categories	Phenomena
Research and evaluation phenomena 3 sub-categories 9 phenomena	MQ models →	*The Movement Quality Model; overview of therapeutic factors; the Movement Awareness Learning Cycle*
	Experienced-Based Practice →	*Experienced-based teaching/learning pedagogy; learning about, through and being in movement*
	Evaluation tools →	*BAS-MQE; BARS-MQE; BAS-I; movement observation, description, analysis, clinical reasoning*

tion of perspective in relation to clinical needs. The threefold contact problem is a working hypothesis, referring to a person`s lack of contact with the physical body, the internal life and the relation to the external environment and other persons.

The second subcategory, *movement elements*, direct attention to specific components used by the therapist when promoting movement quality, inviting the patient to take contact with the ground, vertical axis, balance, movement center, breathing and the self, while integrating these elements into the movement awareness learning.

The third subcategory, *movement aspects*, represents characteristics or qualities expressed in movements, like form in the movement, rhythm, flow, elasticity, energy, vitality and intention. The first mentioned aspect, form, directs attention to how the movement is performed according to the anatomical structure. The last mentioned aspect, *unity*, refers to the synchronicity of the movement coordination between the upper and lower body.

The fourth subcategory, *movement processes*, concerns various points emerging that the physiotherapist will emphasize during the process of promoting movement quality. By process is meant a series of (physical and/or mental) actions to take care of such as to empower self-identity, to setting limits and stimulating respectful relationship with family, at work and in society.

The fifth subcategory, *experiences of I am*, is related to being attentive and present during movement awareness learning. The experience of "I," the person's essential being, distinguishing oneself from others, is considered a self-observing viewpoint. The "I" is understood as synonymous with person, identity and character.

Category 2. Movement awareness practice phenomena

The second category includes a cluster of 18 phenomena, grouped in two subcategories: (1) *movement position in space* and (2) *movement description*.

The first subcategory, *movement positions in space*, represents the variety of positions used in the movement awareness learning, practicing for direct use in every-day life. Basic co-ordinations refers to three co-ordinations from head to toe: flexion-extension, turning and turning-counterturning. The coordinations are seen as organized around the movement center at the level of the diaphragm, where breathing and awareness are integral elements to free, balanced and functional movements.

The second subcategory, *movement description*, is paying attention to movement polarities such as simple and organic as opposed to mechanical movements; everyday versus artistic movements; economic instead of energy consuming movements; effective movements as opposed to ineffective (relative the task); grounded versus uprooted; functional versus dysfunctional; basic versus complex; slow versus quick; and mindful as opposed to mindless movement.

Category 3. Movement awareness therapy and pedagogy phenomena

The third category includes a cluster of 44 phenomena, grouped in four subcategories: (1) *therapeutic factors*, (2) *therapeutic process*, (3) *movement pedagogy, and* (4) *the physiotherapists` self-experience* of being in movement.

The first subcategory, *therapeutic factors*, reveals individual and group therapeutic factors. One eye in and one eye out are used in guidance, to focus the patient's attention on being in contact with both the internal and the external environment. Here and now points to the state of

being attentive, in the very moment, a prerequisite to enable perception of how emotional life, body, movements and environment are interrelated. The therapist provides the time, for the patient to contact, experience and integrate. This is followed by conceptualizing, reflecting and finding meaning in own experiences, which is important for the patient's learning and the outcome of physiotherapy.

The second subcategory, *therapeutic process*, refers to the process of change in movement quality during movement awareness learning. By platform is meant the therapist's responsibility for creating the best atmosphere for fostering movement experiences and functional movements. This includes the physiotherapist's role of being both empathetic and professional, respecting the patient's needs as well as elevating motivating for treatment. Movement awareness learning includes both verbal and non-verbal communication, and the therapist's respect for the body ego in the therapy.

The third subcategory, *movement pedagogy*, reflects the physiotherapist's method of conveying a perception of more functional movement quality. Repetition is employing a pedagogy that aims at fostering a sense of familiarity with, mastering, and finding meaning, by *being in* the movement. The therapist guides the patient, by using own movements. Initially, the patients may imitate the therapist. However, the patient gradually learns how to explore, recognize and develop healthier movement habits and a sense of wellbeing. Guidance versus correction reveals a differentiation between being told what to feel externally versus finding out internally for oneself: the therapist suggests a direction and the patient explores how to find the optimal movement.

The fourth subcategory, *the physiotherapist`s self-experience*, reflects the physiotherapist's personal know-how, rooted in own movement experiences while learning and integrating the BBAT movements. Presence, described as a state of being, indicates a difference between being present in and becoming aware of. Presence is a gate to the experience and thus, a key to movement awareness learning.

Summing up clinical core phenomena

Figure 1 provides an overview and relationship among the categorized data, presenting three layers of the clinical core phenomena identified in BBAT: (1) an over-arching category, (2) its three categories, and (3) their subcategories.

The overview is suggesting a map of the participants` specific organization of the phenomena, representing both a simplification and synthetization of the data.

Historical roots phenomena

The second overarching category includes 23 historical roots phenomena, all clustered in one category with identical name, further grouped in five subcategories: (1) *foundation*, (2) *movement traditions*, (3) *background*, (4) *health promotion*, and (5) *human view*, as presented in Table 3.

The first subcategory, *foundation*, directs attention to historical roots of BBAT, the French originator, Jacques Dropsy, the Swedish physiotherapist Gertrud Roxendal bringing the methodology into physiotherapy and the International Association of Teachers in BBAT (IATBBAT), developing theory and practice along with the development in physiotherapy.

The second, *movement traditions*, and third subcategory, *background*, reveals a variety of influences from Western and Eastern movement traditions, modern dance, actors training, as well as natural science, physiology, neurobiology, biomechanical, philosophy, body-oriented psychology, revealing movement aspects implemented into physiotherapy.

The fourth, *health promotion*, and fifth subcategory, *human view*, reveals phenomena implemented when strengthening the person`s health, empowering, accepting, confirming and motivating.

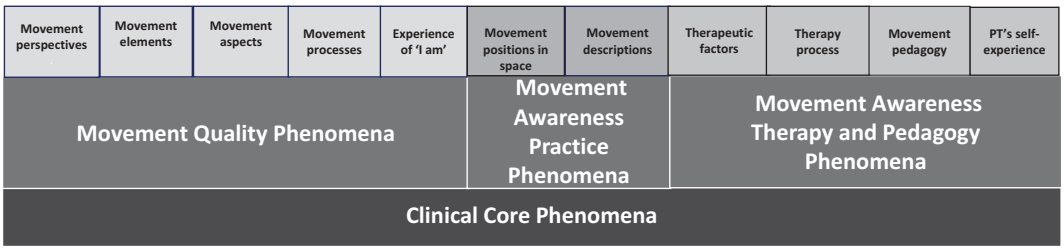

Figure 1. Clinical core phenomena providing overview and relationships among the data identified within BBAT.

Research and evaluation phenomena

The third overarching category includes nine research and evaluation phenomena, all clustered in one category with identical name, further grouped in three subcategories: (1) *movement quality models*, (2) *experienced-based practice*, and (3) *evaluation tools*, presented in Table 4.

The first subcategory, *Movement Quality Model*, provides an overview of perspectives, elements and aspects included in the phenomenon, and the *Movement Awareness Learning Cycle* provides the stepwise cyclic learning process.

The second subcategory, *experienced-based practice*, represents phenomena already presented in clinical core phenomena. Furthermore, it directs attention to a differentiation of three ways of movement awareness learning.

The third subcategory, *evaluation tool*, points to existing tools within BBAT, the Swedish Body Awareness Scale (BAS-MQ-E), the Body Awareness Scale-Interview (BAS-I) and the Norwegian, Body Awareness Rating Scale – Movement Quality (BARS-MQE).

RQ2: Statements Describing BBAT

The study revealed that 16 of the presented 30 statements describing BBAT were agreed by 100 percent of the participants (Table 5). The remaining statements also received recognition from participants. However, they did not reach 100 percent consensus.

The statements represent descriptions of BBAT, ranked as important for communication with patients, health professionals and society. The statements are directed toward historical roots, philosophical ground and perspectives, the movement awareness vocabulary, therapeutic factors, movement pedagogy, and strategies. In addition, the physiotherapist`s own movement awareness learning is considered pre-requisite for being able to guide the patients.

Summing up core phenomena and statements describing BBAT

For RQ1, data of 138 phenomena were synthesized into three overarching categories: (1) *clinical core phenomena*, (2) *historical roots phenomena*, and (3) *research and evaluation phenomena*. For RQ2, 16 statements describing BBAT with 100 percent agreement among

Table 5. Statements describing Basic Body Awareness Therapy, by percentage of consensus, presented in alphabetical order (n=30)

Statements with full consensus (100 per cent of participants)
Answers the threefold contact problem hypothesis
Based on phenomenological and existential philosophy
Brings a person-centred approach, strengthening the 'I am'
Describes movement awareness training for handling life more ably
Equips physiotherapists with therapeutic factors and the movement awareness learning cycle
Includes Western and Eastern movement traditions
Integrates a movement pedagogy
Integrates four perspectives: physical, physiological, psycho-socio-cultural and existential
Presents a movement awareness tradition in physiotherapy with a focus on movement quality
Presents phenomena new to physiotherapy
Promotes health and personal resources
Provides a movement vocabulary
Provides a strategy for integrating unity in balance, free breathing and awareness into daily life movements and functions
Provides a structured strategy for promoting movement quality
Requires personal training by the physiotherapist in order to be used in clinical and educational settings
1960s: French movement educator and psychotherapist Jacques Dropsy developed a theoretical and practical approach within the movement awareness domain. 1970s: physiotherapist and Dr. Med. Gertrud Roxendal brought this into physiotherapy. Since then: the International Association of Teachers further developed the theory and practice
Statements with intermediate consensus (67 per cent of participants)
Strengthens the embodied identity
Offers training situations: lying, sitting, standing, walking, running, use of voice, relational movements and massage
Offers qualifications in use of group therapeutic factors, group processes and group leadership
Offers a physiotherapeutic modality for individual and group therapy used in clinical physiotherapy in preventive healthcare and health promotion
Based on the movement praxis that was proposed by Dropsy and Roxendal
Based on a theory and model of the phenomenon of movement quality
Statements with low consensus (33 per cent of participants)
A process-oriented therapy
Evidence- and experience-based
Grounding, action (balance) line, centring, flow and awareness are important aspects
Includes reliable and valid assessment tools and a structured and professional strategy for use in physiotherapy
Offers three basic coordinations: flexion-extension, turning and turning-counterturning for therapeutic use
Primarily for people suffering from long-lasting musculoskeletal problems and pain, fibromyalgia, eating disorders, post-traumatic stress disorders, psychiatric disorders, psychosomatic problems, balance disturbances, lack in concentration and for those who wants to develop as physiotherapists, professionally and personally
The meeting and relationship between PT and patient is central
Theory development is connected to other areas of research (development in psychology and neurophysiology)

the participants revealed a consensus on describing BBAT within the movement awareness domain.

Discussion

This is the first time that a consensus on core phenomena and statements describing BBAT has been identified in the theory development of the methodology. It is also, to our knowledge, the first identification of a movement awareness domain in physiotherapy. The participants agreed during the consensus-building process on 138 core phenomena derived from practice, clustered in three overarching categories: clinical core, historical roots, and research and evaluation phenomena. Within clinical core phenomena, the participants highlighted movement quality phenomena, movement awareness practice phenomena, and movement awareness therapy and pedagogy phenomena as categories essential to the core of BBAT. The data constructing categories and subcategories were all derived from practice. Furthermore, the participants agreed 100 percent on 16 out of 30 presented statements, as an introductory description of BBAT.

BBAT encompasses a body of knowledge that requires descriptions of core phenomena as part of theory construction. The study unpacks phenomena implemented in the context of BBAT. The main findings center on phenomena of movement quality, movement awareness and therapeutic process, providing a base for a movement awareness domain in physiotherapy. The body and movement awareness approach brings the person, the lived body and its movements together in the therapeutic process. BBAT is unique because of its multi-perspective approach to movement and its broad scope of daily life movements, lying, sitting, standing, relational and walking, and its relation to health and self-efficacy. The patient's awareness of movement habits is the basis for the physiotherapist`s choice of therapeutic strategies.

During the last decade, physiotherapists have extended their knowledge about human movement and function. Movement science reflects different philosophical views and includes various structural, neural, psychological, social and environmental components (Shumway-Cook and Wollacott, 2012). A key problem is the lack of therapeutic tools and theory when working within a movement awareness domain. However, gradually, this domain is making an entrance, demanding a theory and method within the field. The true strength of theoretical exploration is to provide a conceptual framework for clinical interventions. There is, of course, more than one method of thinking theoretically (Gibson, 2016). Unless models or frameworks that are reflective of current clinical practice are described, misinterpretation may be reinforced.

The phenomenon of movement quality

In the development of scientific knowledge it is necessary to describe observable phenomena. The phenomenon of movement quality is frequently used in physiotherapy; however, describing and grasping the nature of it appears to be difficult. Movement quality is a common phenomenon described in the literature on European movement traditions (Johnson, 1983), within: German expression psychology (Wallbott, 1989); in treatment of children with cerebral palsy (Boyce et al., 1991); of preterm infants (Einspieler and Prechtl, 2005); and of back pain (Hodges et al., 2013). An attempt to describe the phenomenon of movement quality is provided through the movement quality model. This model represents a general, unifying phenomenon, including fourfold perspectives movement elements and aspects aimed at for physiotherapy, directing attention to how a movement is performed and also experienced in relation to space, time and energy (Skjaerven, Gard, and Kristoffersen, 2003, 2004; Skjaerven, Kristoffersen, and Gard, 2008).

Movement awareness

To promote and gain more functional movement quality is to become aware of how the movements are done and adjusted from the inside by the patient him/herself and/or externally through the physiotherapist's guidance (Skjaerven, Kristoffersen, and Gard, 2008, 2010). Sensitivity and attentiveness to internal signals are interrelated (Ginzburg, Tsur, Barak-Nahum, and Defrin, 2014). Attentiveness is described as similar to the construct of mindful observing (Baer et al., 2006, 2008), including a range of experiences of sensations, perceptions and feelings. Observation of the "I" is understood as the ability to be in contact with and seeing oneself from the inside (Deikman, 1986).

Attentiveness to how persons actively scan their bodies, being aware of "what is going on", is described as a search for internal sensation or signals (Ginzburg, Tsur, Barak-Nahum, and Defrin, 2014). The term "sensory monitoring" refers to the demonstration of coping strategies for sensory aspects (Ginzburg, Tsur, Barak-Nahum, and Defrin, 2014). In this study, the monitoring reveals strategies with a specific focus on perspectives, elements, aspects and processes, directing attention to sensory perception of health (Antonowsky, 1987). When implementing awareness

strategies, the therapist need to be conscious of the fact that increased awareness may be associated with a tendency to become too preoccupied with bodily signals and sensations, intensifying them and interpreting them as symptoms (Hansell, Sherman, and Mechanic, 1991; Mehling et al., 2012). This needs to be professionally managed by the physiotherapist.

Therapeutic process: movement awareness learning

The uniqueness of the profession is that the physiotherapist is able to use their own movement to effect change in patients from several perspectives. Physiotherapists provide effective treatment so that the patient becomes personally involved (Skjaerven, Kristoffersen, and Gard, 2010). Expert knowledge is important to produce competent practitioners (Jensen, Gwyer, Hack, and Shepard, 1999). Dewey (1934) has presented a theory of experiences, describing learning as being grounded in personal experience. Arnold (1973) suggests three approaches to movement learning: (1) learning about (theory), (2) learning through (i.e., skill training and activities), and (3) learning by "being in," the last leading to embodying movement components. The first two are well-known methods of learning. A seven-step movement awareness learning cycle provides a model for teaching/(re-) learning the third way, "being in" movement (Skjaerven, Kristoffersen, and Gard, 2010). Movement awareness learning provides a way of transferring movement awareness into the patient's ability to progress.

Clinicians, researchers and educators discuss movement in terms of anatomy, physiology and biomechanics. Despite the growing interest in psychological, social and human aspects, movement remains primarily focused on the bio-mechanical aspects (Gibson, 2016). To better understand the patient's experiences, it is suggested that physiotherapists adopt a phenomenological perspective to better understand the patient's experiences (Greenfield and Jensen, 2010). It is acknowledged that physiotherapists' own movement awareness is decisive for the effectiveness of therapy (Dropsy, 1984; Råsmark, Richt, and Rudebeck, 2014; Skjaerven, Kristoffersen, and Gard, 2010). Personal experience of awareness learning of own movement quality improves understanding of how guidance may change the patients' dysfunctional habits and bodily misconceptions into more functional movements. The physiotherapist's embodied presence is important for this knowledge (Gyllensten, Skär, Miller, and Gard, 2010; Skjaerven, Kristoffersen, and Gard, 2010). Embodied presence is not the same as the knowledge originated in theory that is less easily brought into practice (Todres and Galvin, 2008).

Challenges in describing Basic Body Awareness Therapy

RQ2 focused on descriptive sentences used when presenting BBAT as a base for an introductory communication with patients, students, colleagues and society. Because clinicians and researchers have reported challenges when explaining BBAT, this part of the study was especially important and a framework for descriptions was needed to avoid misconceptions and to provide coherent presentations.

To develop the vocabulary has been a professional challenge when presenting the content of movement quality and movement awareness to others. The traditional vocabulary in physiotherapy is rooted in biomechanics, describing exercises, counting series and repetitions. In this study, the vocabulary is revealing some descriptions of BBAT. To communicate the content within the profession and widen the professional consciousness of movement quality needs further development. In fact, how professional groups communicate and what they voluntarily communicate is as important as the intervention itself (Quinn, Anderson, and Finkelstein, 2009). Thus, communication is an important key aspect in BBAT from the professional point of view.

Implications for clinicians

Physiotherapy includes treatment with human movement as its key component (Jensen, Gwyer, Hack, and Shepard, 1999). Physiotherapists are currently facing complex challenges when treating persons suffering from long-lasting musculoskeletal and mental health problems. This study identifies phenomena important for theory development and includes statements describing BBAT that facilitates the communication of the essentials of movement quality and movement awareness to patients and colleagues. The physiotherapist's own movement awareness provides an embodied familiarity with the movements that makes the transference to the patient easier and thus supports treatment effectiveness (Hedlund and Gyllensten, 2010; Skjaerven, Kristoffersen, and Gard, 2010).

The embodied knowledge of movement quality through the movement awareness learning begins with the physiotherapist's perception of the own movement (Ahola, Piirainen, and Skjaerven, 2017). Little is described of how the physiotherapist's own movement awareness influences movement observation and analysis. It is suggested that movement awareness sessions for students be integrated into the curriculum (Covington, 2015). Clinical physiotherapy teachers can thus facilitate students' emerging

integration of being in contact with their own movement experiences, embodying the particular movement awareness of expert physiotherapists.

Implications for policy makers

The demographic transformation worldwide requires an effective life-course strategy, giving priority to new approaches for promoting health and preventing diseases (World Health Organization, 2012). Moreover, the economic and fiscal crises facing many countries also present serious challenges to the profession of physiotherapy. In order to meet these societal demands, we consider that the findings of this study add value to the management of current health demands since they can be applied throughout the lifespan, involve the patient to a large extent, are rather easy to transfer to functional use and do not need high cost equipment. However, further research would need to confirm this.

Limitations of the study

The consensus-building process of core phenomena and statements describing BBAT was created both by the individual participants and the groups. It would have been interesting to know more about the participant's discussion during this process, most possibly enriching this paper. However, such data were not collected, and the focus was on the participants' identification of phenomena and statements.

The NGT was implemented as a first research step, encouraging participants to develop initial face-to-face discussions as a group. However, in a future study, we suggest implementing the Delphi technique (Camp et al., 2015). The main advantage of the NGT methodology was that it allowed each participant a voice, presenting as many phenomena as were considered to be relevant. The NGT enabled all participants to input, discuss and reach a consensus on core phenomena and statements. The stepped procedure, alternating between individual, small groups and large groups, may have increased the reliability of the results.

In RQ1, the analysis was made by the researchers after the workshop, using manifest content analysis. The analysis is a phenomenological description and does not convey the depth of the content. Content analysis of any message could be interpreted both in a manifest and in a latent way, depending on the depth of the data. In this study the focus was on manifest content analysis (Graneheim and Lundman, 2004).

In RQ2, the 30 statements were generated before the workshop, as a product of post-graduate students' projects during several years. The statement list was agreed upon by the researchers before the workshop and handed to the participants to verify or reject the statements. As researchers we observed that the face validity was high among the participants. It could have been an advantage if the participants, themselves, had formulated relevant statements within the workshop. The research-group had, however, considered this not possible to be generated at this particular workshop.

The language during the workshop was English, not the mother tongue for any participant. Despite everyone being fluent in English, this may have influenced their naming and understanding of core phenomena. The participants were concerned that they found overlapping among the core phenomena, relating both to clinical experience and research (Gyllensten, Gard, Hansson, and Ekdahl, 2000; Gyllensten, Gard, Salford, and Ekdahl, 1999). They were also concerned about the complexity of terms like "phenomenon" and "perspective." Accordingly, they faced challenges in the data generation, but handled them wisely.

The external researcher provided critical comments when reviewing the whole research process, which may increase the validity of both the process and the results. The participants were from various backgrounds. From 10 countries, representing clinical and academic levels, with differing genders, ages and educational levels and cultures in physiotherapy, all considered to deepen the reliability of the results (Elo et al., 2014; Graneheim and Lundman, 2004).

Conclusion

The use of the NGT in this study allowed a consensus on core phenomena and statements describing BBAT to be reached in this expert group. The research illuminating core phenomena and statements, promoting movement quality through movement awareness learning, is building fundamental theory within the area. The current study may support physiotherapists and educators when designing strategies and learning environments to enhance professional development within the field of human movement. The results call for new research to develop the movement awareness domain and movement quality as distinct phenomena within physiotherapy.

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Declaration of interest

The authors report no declarations of interest.

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Study II

A Vocabulary Describing Health-terms of Movement Quality – A Phenomenological Study of Movement Communication. Journal of Disability and Rehabilitation

Skjaerven LH, Gard G, Gomez-Coneza A, Catalan-Matamoros D.
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Abstract

Purpose. The aim of the study was to develop a vocabulary targeting communication of health-terms of movement quality, establishing professional knowledge of a movement terminology usefull within rehabilitation.

Methods. A phenomenological study design was chosen, inviting movement experts working in rehabilitation to describe movement observations when a change into more functional, health related ways of moving appeared in the rehabilitation processes. 15 physiotherapy experts were recruited, five from the field of neurology, primary health care and psychiatry. The informants had between 12-38 years of clinical practice, treating patients of all ages with a wide specter of diagnoses. Data collection followed a qualitative study design, of individual, in-depth interviews, based on a semi- structured interview guide. The interviews were taped, transcribed and sent to the informants for validation. Data analysis followed recommendation of Giorgi, modified by Malterud. Ethical considerations were followed.

Results. Data revealed a vocabulary, clustered in five themes, Biomechanical, Physiological, Psycho-socio- cultural, Existential and Overarching perspective, 16 underlying categories and 122 descriptive health-terms of movement quality.

Conclusion. The study demonstrated a multi-perspective movement vocabulary of 122 health characteristic terms, developed to facilitate movement communication within the broad field of rehabilitation. The result calls for further research concerning a movement vocabulary.

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ORIGINAL ARTICLE

A vocabulary describing health-terms of movement quality – a phenomenological study of movement communication

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ABSTRACT

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Conclusion: The study demonstrated a multi-perspective movement vocabulary of 122 health characteristic terms, developed to facilitate movement communication within the broad field of rehabilitation. The result calls for further research concerning a movement vocabulary.

➤ IMPLICATIONS FOR REHABILITATION

- The phenomenon of movement quality has a potential for promoting rehabilitation-specific skills.
- A vocabulary describing health-terms of movement quality is useful within the overall rehabilitation field providing enhanced and specific health directed communication.
- A movement specific health-terminology will have impact on implications and facilitating a person-centered and goal directed rehabilitation.
- Rehabilitation professionals will have a multi-perspective, movement specific and structured terminology to communicate direct and concretely with patients, the multi-professional team, in society, and with politicians.

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Introduction

In the broad context of rehabilitation and treatment, as in the profession of physiotherapy, patients in all ages are supported to regain functional movements to return to normal everyday activities [1,2]. Movement quality, or how the movements are performed and experienced is important, in daily life, for all human beings. Movement, in general, is essential to human life on a continuum from the microscopic level to the level of the individual in society and influenced by physical, psychological, social, environmental and existential factor [3–7]. In everyday language *movement* is used as a broad term [8]. However, research has identified movement as a very complex and multi-dimensional concept [9].

Knowledge on human movement draws on medicine, physiology, movement science, psychology, sociology and physiotherapy [10–14]. However, it mostly implement a vocabulary rooted in the biomedical paradigm, reflected in the therapeutic communication [8,15]. Communication, in general, meets several challenges and needs to follow a strategy, for the patient to understand in order to change movement behavior [16].

Movement is essential to human life, and every little movement can be experienced and become meaningful, in all human being. This study directs attention to an embodied understanding, where the living body provides possibilities for expressive terms useful in treatment and rehabilitation [17]. Being in mental contact with the moving body provides words considered to be close

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to experiences, and thus, reflecting descriptive and meaningful terms. The closeness to descriptive terms are useful in clinical communication [17,18].

A Movement Vocabulary for Communication

A vocabulary is developed from an existing paradigm [17]. This study has chosen a phenomenological view on embodied perceptual experiences related to human movement. Upon this basis, articulation and communication is built, with the moving human being as the source of experience and knowledge relating to expression and terminology [17]. Professionally it is necessary to have a vocabulary of appropriate terms when communicating details on movement awareness learning with the patient, within the multi-disciplinary team and society. By vocabulary is meant a collection of words, revealing specialized terms or concepts, available for use, in a specific field or activity [19]. Rehabilitation and interventions require a nuanced vocabulary to convey a clear and direct communication on human movement to the patients [20]. The words within the vocabulary makes a language, related to a particular subject and, thus, become a basis for communication, understanding and meaning.

The Phenomenon of Movement quality

Movement quality is a phenomenon focusing on *how* general movements, lying, sitting, standing, walking, are performed, experienced and expressed [21,22]. The phenomenon is described and variables has been operationalizied into measureable factors used includes the evaluation tool of Body Awareness Rating Scale – Movement Quality and Experience (BARS-MQE) for movement analysis and guidance in the rehabilitation process [23,24]. Previous studies on the phenomenon of movement quality culminated in the generation of a Movement Quality Model (MQ-Model) revealing an overview of the content and structure of the phenomenon [21].

Therapists are trained to focus on dysfunctional more than healthy movement elements and aspects [23]. The Movement Quality Model represents a fourfold perspective on human movement as an indicator for health [21,25–27]. Movement quality is defined as the way a movement is performed and experienced, in relation to space, time and energy. The findings direct attention to the physiotherapeutic approach, Basic Body Awareness Therapy (BBAT) and its specific therapeutic strategy of promoting movement quality through movement awareness learning [22]. By promoting is here meant to support, stimulate, guide, encourage, and/or raise more functional ways of moving [19,23]. BBAT is well-known for its core components directed towards health and for its specific health-promoting movement communication with the patient [22]. The health promoting strategies of implementing simple, small, soft, safe and stabilizing movements aims to provide learning to move in more functional ways, with a sense of coherence and well-being. The particular communication provided through these movement-principles is supporting the patient to recognize, become familiar with, embody, master, and use in everyday life. In this process, a movement vocabulary directed towards health characteristic terms is needed, as stimuli, to a nuanced communication on movement quality.

Salutogenesis

Salutogenesis focuses on factors supporting human health and experience of well-being [28–32]. This is in line with the World Health Organization and the Ottawa Charter developed to promote action enabling people to improving own health [33]. From this point of view the therapist creates a specific mode of attention, including a search for movement health-potentials that may lead to more functional movement quality when integrated. Salutogenesis has developed into an established concept for use within public health and health promotion. Salutogenesis is described as a scholarly discipline focusing attention on the origin of health [28]. The salutogenic model presents factors that support and promote human health and well-being, concerned with relationships between health, stress and coping strategies. On this background, salutogenesis contributes to include health promotion into treatment and rehabilitation communication. This is in line with development within social sciences, seeking for better understanding of health-related aspects of human experience [30].

Purpose

The aim of the study was to to develop a vocabulary targeting communication of health-terms of movement quality, establishing professional knowledge and awareness of a terminology of human movement, for use within rehabilitation in general and physiotherapy in particular.

Materials and methods

A phenomenological design [34] was chosen to study the vocabulary of a group of movement experts focusing on health characteristic movement terms, describing their clinical experiences. Phenomenological research aims at descriptions of essence, excluding analytic reflections. Such an approach is directed towards descriptive terms the informants use in professional life, but may not be conscious about [35]. Implementing a phenomenological methodology is intended to focus on the world where the informants are living "in" the phenomena [35]. An expert is here described as one who has the ability to see what is significant in a certain situation [36,37]. By choosing phenomenology as a research method, we intended to transform the informants lived experiences from practice into a textual expression, revealing a possible vocabulary within the field [34].

This study is the third in a row of three studies, where movement experts were interviewed about movement quality, with a phenomenological approach, however with three different aims. The initial research protocol included three research questions, preparing the way for the three studies: (1) a study of the essence of the phenomenon of movement quality [21], (2) a study on how to promote movement quality [23] and the present study, (3) a study of a movement vocabulary promoting health. This study, number three, is the last in this row, presented this paper.

Recruitment

A group of six regional head physiotherapists, in Western Norway, were invited to participate in a nomination committee, nominating a group of experts for the study. The head physiotherapists were two from the university hospital, one from each of the two regional hospitals, one from the regional, primary health care unit and one from the psychiatric clinic, all women. When agreeing to participate in the committee, they were invited to nominee between 5-10 movement experts each to bring to a nomination meeting. Nomination criteria were: (1) being recognized by

colleagues for a high standard of treating patients diagnosed with complex movement problems, (2) recognized as having an "eye" for movement quality and (3) worked in the particular clinical field for more than three years. At the nomination meeting, the head physiotherapists initially came to consensus on the nomination process. Based on the nomination by each of the 6 heads, they together agreed on nominating, numbering and listing 10 informants from three fields, neurology, primary health care and psychiatry, altogether 30 informants. The three fields were identified and presented by the nomination committee as providing the most qualified informants for this particular study. After the nomination, the experts were contacted by the first author, starting recruitment from top of each of the three lists. The five first experts in each of the three fields, in total 15, agreed immediate to participate as informant in the study.

The informants

The 15 expert physiotherapists were 13 women and 2 men, age between 38-68 years, with a range of 12-38 years in clinical practice and a range of 6-28 years at the workplace when interviewed. Eight of the therapists worked in primary health care and seven in rehabilitation at hospitals, see Table 1.

Twelve of the 15 experts treated patients in all ages, covering a wide specter of diagnoses. Three informants treated children, one at a preschool, one at a psychiatric unit and one at a premature unit. The informants had fulfilled a variety of post-graduate courses in treating athletes at a high level [1], in the Bobath system [4], Feldenkrais method and Laban system [1], Norwegian Psychomotor Physiotherapy [3], Basic Body Awareness Therapy [3], treatment of chronic pain [2] and implementing the Pikler concept [1].

Table 1. Demographic data of the 15 informants, representing neurology, primary health care and psychiatry.

Variables	No.	%	Median	Range
Sex				
Men	2	13		
Women	13	87		
Years as Physiotherapist			24	12–38
10–19	5	33		
20–29	7	47		
30–39	3	20		
Years in one of the three fields			16	6–28
3–9	5	33		
10–19	6	40		
20–29	4	27		
Age at the interview			48	38–68
30–39	2	13		
40–49	8	53		
50–59	2	13		
60–69	3	20		

Data collection

Data collection was performed during individual, face-to-face, in-depth interviews conducted by the first author, at the informants' workplace, in a separate room. The study aimed at capturing in-depth descriptions on how the experts expressed themselves when invited to describe movement observations in clinical settings, concentrating on functional, health characteristic movement terms. Before the interviews, each informant got written information on the focus of the interview. They were invited to bring 2-3 clinical stories as a base for description. In addition, the informants got oral information at the start of the interview.

The interviewer used a semi-structured interview guide [38] of open questions, see Table 2.

During the interview, the informants were invited to associate freely, describing, as intuitive as possible, recalling the terms used when they guided their patients. The interviewer encouraged and provided time for silent reflection intertwined with time to describe.

Each interview lasted about 1.5 hours and was audio-taped [39]. All interviews were completed during 3 months.

Interview situation

The interview situation was an open-ended communication created by researcher and informant [40]. The researcher aimed to receive as full descriptions as possible and not be a hinder to the informant. Each informant was invited to describe with as little expectations from the interviewer as possible, focusing on a descriptive nature of their movement observations. They were encouraged to stay in contact with the felt sense, and describe observation of the change in the patients' movement quality, simply as they presented themselves in the situation [17]. The researchers' questions served as a process for the informant to keep a sense of being in the situation, as if guiding the patient, without being disturbed. If so, it would be possible to lose the felt sense and adapt the responses to the interviewer [17]. Accordingly, the researcher aimed to create an atmosphere of being open to new and unexpecte phenomena [38].

Data analysis

Each interview was transcribed verbatim by the first author [39]. A reliability check was made by the informants, reading the transcribed interviews. They were allowed to add meaning and descriptive words. All informants confirmed the content. Data

Table 2. Semi-structured interview guide.

Initially, I invite you to take contact with the clinical stories you bring to this interview, to describe your observations and guidance of concrete changes in movement quality, the way your patient was moving, and bodily reacting to your guidance, during a rehabilitation situation and what terminology you used to describe the nuanced change in his/her way of moving.

1. What did you observe when the movement quality changed into more functional, health related ways of moving in the rehabilitation processes. Can you describe?
2. What are the words, terms, concepts or phrases you used to describe human movement, and the changes during intervention, in particular when more health related movement aspects appeared, and you observed them? Can you describe?
3. What are the terms you use to describe human movement from a biomechanical perspective? From a physiological perspective? From a psychological, emotional, relational, cultural perspective? From an existential and personal perspective? How, and if possible to differentiate, are these movement observations to be described?
4. What terms do you see as important to be identified and expressed to support the patients understanding, in order to grasp your guidance to promote and integrate a change in the movement quality?
5. What movement related terms would you say are especially important to be identified and useful from a professional point of view when health characteristics and more functional ways of movement quality are focused?

analysis began after the first data collection. The second author participated in all steps of the analytic processes together with the first author. Data analysis of the qualitative interviews was based on the model described by Giorgi and modified by Malterud [35,41]. The first analytic step was the initial reading of each interview, one by one, to get an overview, reading the text several times, also returning to it during the whole analytic process. The second analytic step was searching for meaning units, keeping a focus on the research question. When a new meaning unit was identified, it was marked. The third step was a codification of meaning units. Main themes, clusters of categories and descriptive terms were identified and organized, as presented in Tables 3–6. In the fourth step, the overarching perspective, emerged, as presented in Table 7. Finally, all data were led into a coherent whole of a movement vocabulary, as presented in Table 8.

According to the research protocol a sample size of 30 informants was prepared in the nomination process for reaching saturation. However, a sample size on 10–12 informants was expected sufficient and realistic for reaching saturation in the material, because of the indepth interview of about $1^1/_2$ hours, and the nomination criteria of the informants. As expected, saturation was identified in the data-material during interview 12-13. It was decided to complete the planned 15 interviews.

Ethical considerations

Ethical considerations, according to the Declaration of Helsinki, were followed. The informants were healthy, professional physiotherapists. Their willingness to participate was ensured before the interview by written informed consent [39]. The study was approved and in line with the regulations of Western Norway University of Applied Sciences, Norway.

Results

The result includes data derived from the experts` in-depth descriptions of own movement observation and guidance chosen from rehabilitation situations. The identified data is the quotes or terms (single words or small phrases) extracted from the experts descriptive stories [36,38,40]. All data, the terms, were handled qualitatively and is presented below as quotations/terms in line with qualitative research, see Tables 3–8. As the study had a salutogenic focus, the presented terms in the text are named health-terms. The strongest and most meaningful health-term is presented [39,40]. Data from all informants are equally included below and no identification of the informants is presented [40].

The data analyses of the 15 in-depth interviews revealed a vocabulary (comma deleted) clustered in five themes, 16 categories, presenting 122 movement health-terms.

Theme 1: Movement health-terms – Biomechanical perspective

This theme represents movement health-terms, described by the informants, related to a biomechanical perspective. It refers to the anatomical structure of a person, describing the way movements are performed in relation to space. Two categories were identified, the Path (i) and Form (ii) in the movement. Together the two categories include in total 19 health-terms, see Table 3.

These health-terms represent a vocabulary related to anatomical references, the skeleton, its structure, joints and muscles, regarding their organization and interrelation, referring to the Path and Form of the movements. "Path" can be understood as the spherical path or direction of a movement in the three dimensional space, like vertical, horizontal and sagittal. "Form" can be understood as the shape or the mold of the total movement, the completed appearance of a movement, from start to end, referring to a fact that movements happen in space, creating shapes, carving its three-dimensional volume. For example, a movement in the shoulder joint could have a figure-8 form, referring to the specific form of the joint, the movement is "carving" this path. Thus, human movement can be described as a sequence of actions, rather than a single action.

Theme 2: Movement health-terms - Physiological perspective

This theme represents movement health-terms, described by the informants, related to a physiological perspective, referring to the physiological processes and the way movements are performed in relation to time. Three categories were identified, Flow (i), Elasticity (ii) and Rhythm (iii), together they include 25 movement health-terms, see Table 4.

These health-terms represent a vocabulary related to how physiological processes are expressed in the movements, reflecting how"time" is expressed. The terms reflect physiological characteristics of the muscles, breathing, circulatory- and nervous-

Table 3. Movement health-terms reflecting a biomechanical perspective

Theme 1: Movement health-terms – Biomechanical perspective
Two categories and 19 movement health-terms
Path (i): *Diagonal Movements; Round Movements; Straight (linear, movements following a line); Figure-Eight Movements; Spiral Movements; Three Dimensional Movements; Sinus-Curve Movements; Elliptic Movements; Symmetric-Asymmetric Movements; Peripheral – Centered Movements*
Form (ii): *Opening-Closing Movements; High-Low Movements; Advance-Retreat; Stretch/Elongate – Release Movements*; *Flexion and Extension; Abduction and Adduction; Internal and External Rotation; Concentric and Eccentric movement; Agonist and Antagonist*

Table 4. Movement health-terms reflecting a physiological perspective.

Theme 2: Movement health-terms – Physiological perspective
Three categories and 25 movement health-terms
Flow (i): *Soft Movement; Gliding Movement; Even Movement; Movement Flow; Continuity in Movement*
Elasticity (ii): *Elastic Movement; Springy Movement; Flexible; Vital; Spontaneous Movement; Buoyant Movement; Bubbling Movement; Suppleness in the Movement; Lightness in the Movements; Freedom in the Movements; Tension-Release*
Rhythm (iii): *Rhythmic; Rhythmic Suppleness; Even Rhythm; Dynamic Rhythm; Life-Energizing Movement; Alive; Dance in the Movement; Musical in the Movement; Breathing in the Movement*

Table 5. Movement health-terms reflecting a psycho-socio-cultural perspective.

Theme 3: Movement health-terms – Psycho-socio-cultural perspective
Six categories and 31 movement health-terms
Attention (i): *Bodily Preparedness; Movement Preparedness; Bodily Attention; Movement Attention; Attentiveness in Movements; On-guard Movement*
Intention (ii): *Intentional Movement; Targeted Movement; Accurate (precise) Movement; Task-Oriented Movement; Goal-Directed Movement; Thoughtful Movement; Directional Movement; Willful Movement*
Emotions (iii): *Emotional Expression in the Movement; Freedom in Movement; Joyful Movement; Swinging Movement;*
Effort (iv): *Energy; Energetic Movement; Powerful Movement; Economic-Effective Movements; Strong Movement; Effortless - Minimum Effort - Energy Efficient*
Social Interrelation (v): *Borders in Movements; Limitlessness in Movement; Solid Movements; Open and/or closed Movements; Relational Movement*
Culture (vi): *Cultural Imprint on the Movements; Culture Expressed in Movement*

Table 6. Movement health-terms reflecting an existential perspective.

Theme 4: Movement health-terms – Existential perspective
Two categories and 26 movement health-terms
Personal (i): *Personal Expression; Inner Power Expressed in Movement; Self-Expression in Movement; Presence in Movements; Glow in Movements; Personal Drive in Movements; Being in Movement; Being One Self, fully in the Movement; Personal Movement Sphere; Self-Experience in Movement; Resting in Own Movements; Being in the Movement, More Fully; Personal, Unique in Movement; Expression of the Self in Movements*
Universal (ii): *Unity in the Movement; Density in Movements; Involvement of Whole Person in Movement; Unifying Movement; Timing; Attunement in Movement; Integrated Movement; Organic Movement; Purely Human Movement; Universal Movements; Equilibrium in Movement; Mastery of Movement*

Table 7. Movement health-terms reflecting an overarching perspective.

Theme 5. Movement health-terms - Overarching Perspective
Three categories and 19 movement health-terms
Aesthetic and Natural (i): *Graceful Movements; Elegant Movements; Beautiful Movements; Harmonic Movements; Stylish in Movements; Art in the Movements; Silence in the Movements; Centered Movements*
Practical, Functional (ii): *Organic Whole Movement; Being in the Movement; Relaxed, Unified Controlled Movements; Unified Movements; Timing in the Movement*
Economic (iii): *Energy Relative to Task; Energy Economic; Variability in Movements; Movement Repertoire; Movement Diversity; Playful Movement*

system, all physiological processes in the human being, adding a rhythmic pattern to movement. It is well-known that physiological flow and rhythm of breathing, is reflected and expressed in the way a person moves revealing an even continuity in the movement. A rhythmic movement pattern, has a variation marked by the regular recurrence of natural flow in the movement. Time can be described as a period during which an action/movement exists or continues. Accordingly, it is possible to observe in the movements if breathing is free or locked, as locked breathing is reflected as stiff, jerky characteristic in movement. The three categories in Table 4 reveal movement health-terms, associating to "life" and flexibility in human movement.

Theme 3: Movement health-terms – Psycho-Socio-Cultural Perspective

This theme represents health-terms, used by the informants, related to a psycho-socio-cultural perspective, reflecting psychological, social and cultural factors. The descriptive terms refer to how mental processes can influence and be expressed as characteristics in the person's movements. Six categories were identified, Attention (i), Intention (ii), Emotions (iii), Effort (iv), Social relations (v) and Culture (vi). Together the six categories include in total 33 movement health-terms, see Table 5.

These health-terms represent a vocabulary related to how a broad scope of mental processes are expressed in human movements. Such human processes are constantly ongoing, intertwining both internal and external processes, influencing, imprinting and coloring certain characteristics of human movement. It is a well-known fact that emotional states and relationships with other persons are expressed in human movement, as are also cultural characteristics. These findings may represent an extract of a broad scope of mental expressions in movement.

Theme 4: Movement health-terms - Existential perspective

This theme represents health-terms, described by the informants, related to an existential perspective, reflecting existential factors. The descriptive terms refer to how these factors can be expressed as qualities or aspects in a person's movements. Two categories were identified, Personal (i) and Universal (ii) terms. Together the two include 26 movement health-terms, see Table 6.

These health-terms represent a vocabulary that is relating to the experience of the self or the "I am". First, this theme demonstrate descriptive data representing personal, unique terms, reflecting how the person's contact with the *self* is expressed as a nuance in human movement. Second, this theme demonstrates descriptive data, representing universal, unique characteristics and terms, being identified in all human being.

Theme 5: Descriptive terms – Overarching perspective

This theme represents clusters of overviewing health-terms, identifying a general view of terms. Three categories were identified, Aesthetic and Natural (i), Practical and Functional (ii) and Economic (iii). This theme represents healthy movement terms, encompassing an "over-arching whole". Together the three categories include 19 movement health-terms, see Table 7.

We find in this theme a vocabulary describing health-terms of a more general and more overruling character, merging previous themes, including subtle interrelationships between the data, in the terminology.

Summary of Findings - a Movement Vocabulary

The findings are presented as a glossary or a unified movement vocabulary, in Table 8, providing an overview of perspectives, categories and the descriptive health-terms.

Table 8. A movement vocabulary of health-terms for professional communication – overview of perspectives, categories and terms, representing the fields of neurology, primary health care and psychiatry.

	CATEGORIES	MOVEMENT HEALTH-TERMS
Biomechanical 2 Categories	1) Path (10 terns)	*Diagonal Movements; Round Movements; Straight (linear, movements following a line); Figure-Eight Movements; Spiral Movements; Three Dimensional Movements; Sinus-curve movements; Elliptic movements; Symmetric-Asymmetric Movements; Peripheral – Centered Movements*
19 Movement Health-terms	2) Form (9 terms)	*Opening-Closing Movements; High-Low Movements; Advance-Retreat Movements; Stretch/Elongate – Release Movements; Flexion and Extension; Abduction and Adduction; Internal and External Rotation; Concentric and Eccentric movement; Agonist and Antagonist*
Physiological 3 Categories	1) Flow (5 terms)	*Soft Movement; Gliding movement; Even Movement; Movement Flow; Continuity in Movement*
25Movement Health-terms	2) Elasticity (11 terms)	*Elastic Movement; Springy Movement; Flexible; Vital; Spontaneous Movement; Buoyant Movement; Bubbling Movement; Suppleness in the Movement; Lightness in the Movements; Freedom in the Movements; Tension-Release*
	3) Rhythm(9 terms)	*Rhythmic; Rhythmic Suppleness; Even Rhythm; Dynamic Rhythm; Life-Energizing Movement; Alive; Dance in the Movement; Musical in the Movement; Breathing Movements*
Psychosocio-cultural 6 Categories 31 Movement Health-terms	1) Attention (6 terms)	*Bodily Preparedness; Movement Preparedness; Bodily Attention; Movement Attention; Attentive Movements; On-guard Movement*
	2) Intention (8 terms)	*Intentional Movement; Targeted Movement; Accurate (precise) Movement; Task-oriented Movement; Goal-directed Movement; Thoughtful Movement; Directional Movement; Willful*
	3) Emotion (4 terms)	*Emotional Expression in the Movement; Freedom in Movement; Joyful Movement; Swinging Movement*
	4) Effort (6 terms)	*Energy; Energetic Movement; Powerful Movement; Economic-Effective Movements; Strong Movement; Effortless - Minimum Effort - Energy Efficient*
	5)Relational (5 terms)	*Borders in Movements; Limitlessness in Movement; Solid Move-ments; Open and/or Closed Movements; Relational Movements*
	6) Cultural (2 terms)	*Cultural Imprint on the Movements; Culture Expr. in Movement*
Existential 2 Categories 26 Movement Health-terms	1) Personal (14 terms)	*Personal Expression; Inner Power Expressed in Movement; Self-Expression in Movement; Presence in Movements; Glow in Movements; Personal Drive in Movements; Being in Movement; Being One Self, Fully in the Movement; Personal Movement Sphere; Self-Experience in Movement; Resting in Own Movements; Being in the Movement, More Fully; Personal, Unique in Movement; Expression of the Self in Movements*
	2) Universal (12 terms)	*Unity in the Movement; Density in Movements; Involvement of Whole Person in Movement; Unifying Movement; Timing; Attunement in Movement; Integrated Movement; Organic Movement; Purely Human Movement; Universal Movements; Equilibrium in Movement; Mastery of Movement*
Overarching Perspective 3 Categories	1) Aesthetic and Natural (8 terms)	*Graceful Movements; Elegant; Beautiful; Harmonic Movements; Stylish Elements; Art in the Movements; Silent Movements; Centered Movements*
19Movement Health-terms	2) Practical and Functional (5 terms)	*Organic Movement; Being in the Movement; Relaxed, Unified Controlled Movements; Unified Movements; Timing Movem.*
	3) Economical (6 terms)	*Energy Relative to Task; Energy Economic; Variability; Movement Repertoire; Movement Diversity; Playful Movement*

This table is a listing, overviewing and relating data, making it possible for the therapist to relate to both content and structure of a movement vocabulary with health related terms.

Discussion

The aim of the study was to develop a vocabulary targeting communication of health characteristic terms of movement quality, establishing professional knowledge and awareness of a terminology concerning human movement.

The phenomenological study demonstrates 122 terms (descriptive words), clustered in 16 categories and five themes, reflecting a multi-perspective movement vocabulary. The broad span in the terminology reflect not only physical and physiological terms, as presented in Tables 3 and 4, psycho-socio-cultural and existential terms as presented in Tables 5 and 6, but also terms representing an overarching, unifying whole, as presented in Table 7. Altogether the result is demonstrating a whole movement vocabulary of specific health characteristic terms, as brought together in Table 8.

This whole movement vocabulary demonstrates health-related terms recognizable within the profession of physiotherapy, in rehabilitation in general, as well as in everyday life. Through data-analysis it was identified terms associated to body-oriented psycho-therapy [42,43], existential psychology [44,45], philosophy [46] and movement science [6]. In addition, it was identified terms associated to sports, drama [47], dance [48,49] and fine arts [50,51]. Table 8 demonstrates a movement terminology including mostly adjectives, providing synonyms, adding "life-full" terms, bridging a gap between professional and patient terminology. Development of a movement terminology supports the patient's insight in movement quality components possible to integrate into movement awareness learning. This may facilitate embodiment of health characteristic movement quality components into their movements, adding experience of familiarity and meaning [17,23].

Choice of perspectives

This study presents new, in-depth data of descriptive health characteristic terms, within a movement vocabulary organized along five perspectives. A perspective is an ordered view of the world, of what is taken for granted about the attributes of various objects, events and human nature [52]. A bio-psycho-social perspective is most commonly referred to in physiotherapy and rehabilitation, integrating knowledge from natural sciences, humanities and social sciences [53]. Leaning on phenomenology, as in this study, a wider platform is provided for the vocabulary, including an existential perspective, addressing the person and adding meaning to the understanding. In clinical practice, therapists decide the perspectives, communicating with the patient on his/her movement quality. However, such choices of perspective can be hidden or open, conscious or unconscious, and differ between what is expressed in words and how one acts [54]. The clinical choice of perspective will have an impact on the therapeutic meeting [55,56], as well as on the strategies when observing, describing, promoting and communicating human movement. The result provides multi-perspective movement health characteristic terms, making it possible, to react on what is lacking in the patients' movement quality and promote health-terms of movement quality [21,22].

Communicating movement terms

Early research on the phenomenon of movement quality led to development of the Movement Quality Model (MQ-Model), recognizing a differentiation between pathological and health promoting terms [21,57,58]. The present study extends this information, now forming a more nuanced movement vocabulary of health characteristic terms. This is important as an indicator of health to be recognized and communicated concretely in the dialogue between therapist and patient.

Among the several movement terms are integration of flow, elasticity and rhythm, into the movement quality. By implementing such terms into the movement vocabulary of movement guidance, the patient can gain contact with own movement quality and awareness of more functional flow, elasticity and rhythm in the movements. This carries a potential of transfer into their daily movement co-ordinations. It is important to have descriptive terms to communicate specific health-terms on human movement that are close to movement experiences. The development of health services during the last decades, with increasing responsibility for personal health, makes health professionals more involved and, thus, challenged in the communication with the patients. A movement vocabulary is important for professional conceptualization and for clarity in professional communication to transfer such health information [16].

A Health Oriented Movement Vocabulary

This study present a health oriented movement vocabulary with a salutogenic view [30]. It is well known that rehabilitation systems and patients tend to overlook this, because of a constant focus on disease, rooted in a biomedical model [20]. Research shows that healthcare providers often are unprepared to support patients to make concrete actions that are health promoting, not knowing what vocabulary to use [16]. Patients with poor health may equally, have difficulties with receiving information and linking it to any kind of health. This may limit their understanding of how to promote and maintain own health. The patient has the lawful right to influence own rehabilitation process, learning to focus on health and coping strategies. Active participation is a fundamental social goal for everyone to achieve the best possible health. It is interesting that health literate physicians tend to be better able to communicate with patients. At the same time, patients have a desire to know more about their health status and how to restore, promote and keep it [59]. Movement quality, directed towards small, simple, stable and secure movements, is important within rehabilitation because it influences daily activities and social participation. Accordingly, health-care-providers, within any rehabilitation program, needs to have access to a health oriented movement vocabulary as communication strategy along a health continuum, inter-weaving salutogenesis into treatment and rehabilitation.

A Rehabilitation Specific Movement Vocabulary

Communicating with the patient, implementing movement health-terms, needs a rehabilitation specific movement vocabulary, closely linked to daily movement function, facilitating interaction between patient and therapist. Concreteness and closeness to movement experiences related to rehabilitation specific components, support the patient to become aware, and integrate more functional, coherent, fluent and stable movements [23]. The embodied knowledge of movement quality, promoted through movement awareness learning, begins with the therapists` contact with own movement quality in the same movements and components as used in rehabilitation of the patients [22,60]. This provides the patient with a therapist-distinct and personal knowledge [60,61]. Human movement, from a phenomenological perspective, refers to awareness of own movement potentials, and a rehabilitation process of learning to adjust the movements to becoming balanced, rhythmic and intentional. In this context, movement quality is linked to an acceptance of here-and-now experience, as a basis for development of movement health potentials.

Rehabilitation is facilitating or restoring the process of recovery from injury, illness, disease, and mental distress to more normal function. A wide variety of rehabilitation programs are providing health-care in outpatient clinics, in acute care, intensive care hospital wards as in different rehabilitation units [20]. Physiotherapy is integrated in rehabilitation, and is important in a patients` recovery plan. Rehabilitation and physiotherapy, as terms, can have different meanings, and differs between cultures and contexts. Physiotherapy can provide more than physical training and activity, counting repetitions, as within a medical model [23].

Human movement is fundamental to human life, as it is fundamental for all health professionals within rehabilitation. "*An eye*" for movement quality and a vocabulary close to a persons' movement experiences is important for providing a rehabilitation that is patient-centered and goal-directed. Being present, becoming aware, the quality in everyday simple movements, implementing a rehabilitation specific movement vocabulary, is essential in any movement communication, in examination as during intervention [21,61,62].

Development of a theory cannot be made without identifying terms, defining phenomena, perspectives and basic philosophy [5,63]. As argued for, a movement vocabulary targeting health-specific movement aspects, facilitates communication, and learning [21,58,62,64–67]. Even if health providers draws inspiration from a variety of techniques and approaches, the existing movement terminology is mainly dominated by a medical vocabulary [68,69]. It is therefore important to critical reflect upon the movement vocabulary used within movement rehabilitation.

Strengths and limitations of the study

This study provides a vocabulary of a movement terminology for professional communication, considered useful within the broad context of rehabilitation. The phenomenological study design was made to reveal movement terms derived direct from clinical practice described by a specific group of expert informants. The research was designed to reveal their intimate relationship between observing, promoting and describing movement observations, to allow for descriptions of an essence, transforming lived experiences into a textual expression. The structured recruitment process led to 15 informants, mainly women, with only two men in the group of experts. No gender issue has been identified in the data, but for a next study, more men will be recruited as informants.

The data collection and data analysis followed the phenomenological design. As researchers, we intended to bracket previous research on movement quality and findings of a wide perspective-structure. This was discussed in the authors' group during the analytic process, because of its potential bias. It was, however, concluded to follow the findings of five perspective structure because several of the informants, added "*seeing it from this point of view…*" and "*…seeing it from another point of view*", when describing movement observations.

This is a first study to raise professional knowledge and awareness of a movement vocabulary directed towards health, reflecting the informants' perspectives on human movement. The study could have included informants from rheumatology, orthopedic and acute care leading to a richer vocabulary. Even if the material is rather small, we see this study as important because it reveals terms that direct attention to a terminology towards health, which is promising.

In addition, more in-depth descriptions of clinical cases could have provided extended insight into the dialogue between therapist and patient and how a movement awareness learning-process can be. A vocabulary of pathological descriptions together with health characteristic terms could have added a differentiated vocabulary. Moreover, it would have been interesting also to report on characteristics, in movement vocabulary, between the three fields of neurological, community health care and psychiatry. However, this was not the aim of the study and too few informants were included.

As stated, this study was influenced by the physiotherapeutic approach of Basic Body Awareness Therapy (BBAT), and its concrete and structured rehabilitation process of implementing small, simple, secure and stable movement focusing on implementing health charateristic terms of movement quality. Because principles from BBAT are increasingly implemented into treatment and rehabilitation of patients with a broad spectrum of diagnoses, it is urgent to study phenomena and strategies identified in communication [22]. The influences from BBAT could be a limitation if searching for confirmation, and not implementing a critical distance from the data.

A limitation of the study is the missing handling of data from linguistic and semantic points of view. Such knowledge could add important information and will be implemented in coming studies.

Conclusion

The study demonstrates a multi-perspective movement vocabulary, presenting 122 movement health characteristic terms of movement quality, clustered in themes and categories, establishing a terminology concerning human movement for professional communication. The vocabulary can be implemented within a broad specter of rehabilitation in general and in physiotherapy in special, when human movement is in focus. The results call for continued research and further development of a movement vocabulary promoting movement quality, weaving salutogenesis into physiotherapy and rehabilitation.

Disclosure statement

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Study III

Mapping a Road to a Movement Awareness Domain for Mental Health Rehabilitation – A Meta-synthesis of Qualitative Studies.

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In review.

Abstract

Purpose. The purpose of this study was to conduct a meta-synthesis of three previous publications of qualitative studies, in the period 2008 till 2018, focusing on the phenomena of movement quality and movement awareness and to construct and map a movement awareness domain for mental health rehabilitation.

Method. A meta-synthesis was chosen as research design to analyse previous findings, to deepen the understanding of the phenomena. The first publication focuses on the phenomena of movement quality, the second on movement awareness, both with a phenomenological design. A cohort of 15 physiotherapy experts where recruited for each of the two studies, from three fields, namely neurology, primary health care and psychiatry. The physiotherapists were defined as movement experts according to criteria. The third study focuses on core phenomena in Basic Body Awareness Therapy, based on a consensus-building process, with a cohort of 21 physiotherapy experts from ten European countries. Content analysis was used for the meta-synthesis. The study analysed earlier findings, de-contextualising descriptions and synthesising published text-material and models.

Result. A specific learning perspective was identified as a new, expending view on the whole material. The result revealed a construct of a movement awareness domain, consisting of three pillars, (i) Movement quality components, (ii) Choice of movement components and (iii) Movement awareness strategy components, together with three learning forms, learning about, learning through and learning by being in the movement itself. The three pillars are visualised in a small-scale and large-scale map, overviewing the domain.

Conclusion. A construct of a movement awareness domain for physiotherapy in mental health rehabilitation is identified and visualised through a small-scale and a three layers large-scale map. The domain, identified, in this study, includes three pillars, the movement quality components, choice of movement components and movement awareness strategy components, together with a differentiation of three forms of movement awareness learning. The study was made to structure and facilitate implementation of movement awareness learning in mental health physiotherapy, rehabilitation, preventive health care and health promotion. More in-depth studies are needed.

Implications for Rehabilitation

- Movement awareness learning is a professional topic of interest within mental health rehabilitation as altered movement strategies are often presented by patients and thus targeted within a rehabilitation program
- Health-related learning strategies, being present in and aware of daily life movements, are important agents in movement awareness learning
- Small, simple, soft and safe movements, learned and trained in the scope of every-day movements, as lying, sitting, standing, walking, are involving the whole moving person
- Promoting movement quality through movement awareness strategies emphasise a learning that makes the patient active and the rehabilitation approach goal-directed
- A small-scale and a large-scale map as construct for a Movement Awareness Domain and three differentiated learning forms are suggested for implementation in clinical practice, rehabilitation, preventive health care and health promotion.

Introduction

Movement awareness learning is a professional topic of interest within mental health rehabilitation (Probst and Skjaerven, 2018; Skjærven et al., 2018). As intervention within physiotherapy in mental health rehabilitation, it is especially directed towards persons suffering from a combination of muscle-skeletal pain and mental disorders and consequently, their movement abilities and their mastering to cope with daily life challenges.

The health system is increasingly engaging in a wider concept of health rehabilitation (WHO, 2013), which includes lifestyle conditions, experience of well-being and disease (Mittelmark et al., 2017; Wade, 2015b). This challenges physiotherapy to take an active role in preparing for modern health care rehabilitation. Few studies have described strategies and components of movement awareness learning as background for implementation within rehabilitation intervention.

A bio-psycho-social model is proposed within rehabilitation (Gard and Skjaerven, 2018; Probst and Skjaerven, 2018; Wade, 2015b). Such a model defines health as a state of well-being, referring to biological, social and psychological well-being and focuses attention towards health (Wade, 2015b). Such model has a special emphasise on the importance of learning within the rehabilitation process, urging health-care providers to implement a learning that supports patients to understand and respond to illness in a health-related way. This makes the patient active and involved and the rehabilitation approach goal-directed (Wade, 2015a). In this way, the patient is encouraged and enabled to practice the suggested activity included in the rehabilitation program, intended to be transferred to daily life.

Within the broad scope of rehabilitation, the service provided by the physiotherapist is expected to develop, maintain and promote functional movement and ability throughout the lifespan (WCPT, 2017). The therapist is continuously observing, describing, evaluating, rehabilitating and promoting health, focusing on and handling human movement. Movement, as a basic

concept in physiotherapy, has been presented by Hislop (Hislop, 1975), Cott (Cott and Finch, 2007), Gentile (Gentile, 2000), Wikstom-Grotell (Wikstöm-Grotell et al., 2017) as by scholars within movement science (Bernstein, 1967; Carr and Shepard, 1987; Shumway-Cook and Wollacott, 2017; Wikström-Grotell, 2016). With competence in human movement, the therapist is demonstrating a large number of movement factors, not only from a biomedical and pathological perspective. From a bio-psycho-social perspective the therapist is underlining enabling and health promoting factors. When contributing to reduce disability, the physiotherapist is identifying health-promoting movement factors improving performance in daily life.

The background for this article dates back to the 1970s regarding physiotherapy within psychiatry and mental health rehabilitation, and the needs for tools to treat patient suffering from long-lasting musculoskeletal problems and mental health problems. The emergence of professional development and research together with a diversity of body and movement awareness approaches has inspired physiotherapists working within rehabilitation (Probst and Skjaerven, 2018).

Basic Bode Awareness Therapy (BBAT) is well known, as intervention, for promoting movement quality through movement awareness (Skjærven et al., 2018). BBAT is person-centred, process-oriented, and health-directed and introduces simple and basic movement principle in the rehabilitation situation. This is a structured and well-designed approach, and easy to use for the learner in everyday-life. There are significant publications on BBAT (Skjærven et al., 2018). However, clarification in terminology and movement awareness learning components and strategies are needed.

Other studies are in-cooperating the term movement quality, in the title and/or in the abstract, presenting movement quality as important diagnostic aspect (Wallbott, 1989), incorporated in evaluation tools (Boyce et al., 1991; Hickey and Ziviani, 1998), in studies on preterm infants (Geerdink and Hopkins, 1993) and in neurological studies (Bos et al., 1998; Hadders-Algra and Groothuis, 1999; Kakebeeke et al., 1998). Movement quality is also referred to within clinical rehabilitation (Hodges et al., 2013), back pain (Kaarbø et al., 2018; van Dijk et al., 2017a,b), cerebral palsy (Janssen et al., 2012; Sorsdahl et al., 2010, 2011), eating disorders (Catalan-Matamoros, 2007; Catalan-Matamoros et al., 2011), fibromyalgia (Bravo et al., 2018), rheumatic disease (Olsen and Skjaerven, 2016), osteoarthritis (Olsen et al., 2016), patients with severe mental illness (Hedlund et al., 2016,?), as assessment toolSkjaerven et al. (2015), and as a study of physiotherapy students movement experiences (Ahola et al., 2016).

The phenomena of movement quality and movement awareness, have the last 20 years, been in focus for research, concerning description and structure, and models have been presented. However more in-depth clarification is needed, because of its increasing evidence base and wide clinical use. We provide, herein, definitions relevant for a movement awareness domain, see Table 1.

The complexities of movement awareness, its relationship to movement quality, its therapeutic components and movement pedagogy needs further clarification, considering a construct. Such a construct can provide a framework for interventions, supporting therapists to facilitate implementation in clinical practice, rehabilitation, preventive health care and health promotion.

Table 1: Definitions of key terminology related to a movement awareness domain.

PHENOMENON	DEFINITION	SYNONYM
Phenomenon	An object known through the senses rather than by thought or intuition; an observable fact or event of scientific interest susceptible to scientific description and explanation	A sensation
Concept	Something conceived in the mind; a thought; an abstract or generic idea; an idea of what something is	An abstraction; an idea
Perspective	A mental view or prospect; a visible scene; one giving a distinctive impression; an angle or direction in which a person looks at an object	Angle; standpoint; viewpoint
Element	One of the factors determining the outcome of a process; one of the parts that make up a whole	Factor; ingredient; a building block, component; a constituent
Aspect	The appearance of something; appearance to the eye or mind; an expression; a certain way in which something appear	Facet; phase; plural: characteristics; qualities
Dimension	The range over which or the degree to which something extends; an area over which activity or influence extends	Extent; magnitude; breadth; size; width; scope; range
Domain	Related components or items that reflect the unified subject matter of a discipline	Territory; sphere; discipline
Attention	The act or state of applying the mind to some-thing; a condition of readiness for such attention involving especially a selective narrowing or focusing of consciousness and receptivity	Absorption; immersion
Intention	A determination to act in a certain way	Intent; significance; content; drift; import
Concentration	The act or process of concentrating; the state of being concentrated: the ability to give your thought to a single object or activity, especially directing attention to a single object	Engrossment; enthrallment
Presence	The state of being present; the state or fact of existing, occurring, or being in the moment	Being; appearance; a person's appearance, a look
Embodied Presence	A closeness and familiarity between mind and body; a bodily felt sense; a form of personal knowing that evokes understanding and fosters meaning	
Awareness	Derived from human consciousness, encompassing both awareness and attention. It is an attentive, relaxed and alert presence, not analogous with concentration. It is possible to be aware of stimuli without making them the centre of attention. Awareness is a relative phenomenon; being aware is continually monitoring internal sensations and external environment, providing heightened sensitivity to experiences.	To be attentive and calmly aware of the immediate experience of the present moment
Body Awareness	A sensitivity to bodily signals; to be aware of bodily states, and to identify subtle bodily reactions to internal and environmental conditions	

Purpose

The purpose of this study is to conduct a meta-synthesis of three previous publications of qualitative studies, in the period 2008 till 2018, focusing on the phenomena of movement quality and movement awareness and to construct and map a movement awareness domain for mental health fysioterapy and rehabilitation.

Methods and Material

Method and Material

A qualitative meta-synthesis was chosen as research design to analyse previous findings across already published qualitative studies (Levack, 2012; Lindquist et al., 2010; Richardson and Lindquist, 2010). A meta-synthesis is a strategy to conduct secondary qualitative analysis of primary, published findings, providing a more in-depth description of a phenomena and an overview the findings. The aim was to combine the findings reported in previous studies to deepen the understanding of movement quality and movement awareness, aiming to create one single, more in-depth presentation of the field.

This study is limited to three previous published qualitative studies, focusing on the phenomena of movement quality and movement awareness. The first study focuses on the phenomena of movement quality, the second on movement awareness, both studies have a phenomenological design and data based on qualitative interviews with a cohort of fifteen physiotherapy experts, each. The third study, performed 10 years later, focuses on core phenomena in BBAT, implementing a consensus-building process using the Nominal Group Technique (NGT) (Potter et al., 2004) for data-collection through a weekend-workshop with a cohort of 21 physiotherapy experts in BBAT. The cohort of movement experts was also chosen because BBAT is well known for promoting movement quality. Two of the authors of this publication are included in all publications (LHS and GG), while three new authors are added to the study of the meta-synthesis (MAS, AGC, DCM).

Material

The three publications, selected for meta-synthesis, where published during a period of ten years, 2008-2018, see Table 2. They represent three different groups of informants, strategically recruited, and two different qualitative research designs.

The first study, published in 2008, includes a cohort of 15 physiotherapy experts, from the national, local field of neurology, primary health care and psychiatry, five physiotherapists from each of the three fields (Skjaerven et al., 2008).The informants were strategic nominated and recruited by a group of six head physiotherapists from the regional university hospital and community health care, based on nomination criteria. Data-material for the study were collected from individual, in-depth interview, each of 1 1/2 hours, made by the first author of the publication. The informants were invited to bring two-three narratives from their clinic, reporting and describing treatment narratives. The study focuses on the experts movement terminology used in treatment, when promoting movement quality. The findings are summarised in the Movement

Quality Model, originally published in 2008 and slightly adapted in 2018 (Skjærven et al., 2018; Skjaerven et al., 2008).

The second study, published in 2010, includes another cohort of physiotherapy experts, recruited from the three same fields, on the same criteria, with a similar recruitment process, with same invitation to bring clinical narratives to the interview, as a base for the focused individual, in-depth interview by the first author (Skjærven et al., 2010). This study focuses on the informants' identification and descriptions on the process of change concerning movement awareness learning, the therapists words, helping the patient to become aware and to move more functionally. These findings are summarised in two models, Therapeutic Component Model and Movement Awareness Learning Cycle (Skjærven et al., 2010).

The third study, published 2018, include a cohort of 21 BBAT physiotherapy experts, recruited from ten European countries (Skjærven et al., 2018). The experts had between five and 35 years of clinical and educational experience treating patients with severe mental health problems, as well as teaching clinical use of BBAT. Of the 21 experts, 16 worked within clinical settings, five both at clinical and faculty, and one at faculty, only. In this study the experts were asked to identify core phenomena in and descriptions of BBAT, collecting data through a consensus-building structured in line with the NGT. These finding are summarised in the Consensus of Core Phenomena Model (Skjærven et al., 2018).

Data Analysis

Content analysis was chosen for data-analysis in the meta-synthesis of the earlier recorded and transcribed material (Graneheim and Lundman, 2004). This process started with systematic reading and analysis of the material (Graneheim and Lundman, 2004). Content analysis was used to analysis and synthesise findings, in two levels, a text level and model level. Step 1 was a process of de-contextualising, re-familiarising with and start analysing the qualitative text-data, combining and bringing them into each other, going back and fro, towards the end also start including analysis of the four published models. In Step 2, a learning perspective on the whole material was identified, and specific learning focus (what) and form (how) were described as data-analysis continued. In Step 3, three main themes of learning components were identified and the four published models were re-analysed, progressing into new description of format, structure and content of each model, see Table 3. In Step 4, the text material and models were synthesised into one whole, including naming the three learning pillars as basis for the construct of a movement awareness domain. This final analytic process, led to development of a figure, as a small-scale map, and a table, as a large-scale map, as construct of a movement awareness domain.

Ethical Issues

Ethical consideration and approval was followed according to the Helsinki Declaration and in line with the previous published articles. The informants were healthy, professional physiotherapists and their willingness to participate was ensured before the studies, by signed, written informed consent. All studies were approved by and in line with the regulation of Western Norway University of Applied Sciences, Bergen, Norway.

Table 2: Overview of the three previous publications included in the meta-synthesis (Method).

Overview	**Study 1**	**Study 2**	**Study 3**
Year of Publication	2008	2010	2018
Journal	J. of Physiotherapy Theory and Practice	American J. of Physical Therapy	J. of Physiotherapy Theory and Practice
Study Design	Phenomenological study	Phenomenological study	Nominal group Technique (NGT)
Purpose	Study of the essence of the phenomenon of MQ	Study of how to promote MQ through a movement awareness approach	Study of core phenomena and statements in BBAT
Setting	In-depth Interview, face-to-face, 1 1/2hrs	In-depth Interview, face-to-face, 1 1/2hrs	A condensed 3-days workshop of 20 hrs
Informants	Physiotherapist experts strategically chosen	Physiotherapist experts strategically chosen	BBAT Teachers and candidates from ten European Countries
Field	Neurology, Primary Health Care and Psychiatry	Neurology, Primary Health Care and Psychiatry	Teachers and Candidates in BBAT
Sample Size	15 movement experts according to criteria	15 movement experts according to criteria	21 BBAT experts according to criteria
Method of Analysis	Giorgi's recommendation of data-analysis	Giorgi's, modified by Malterud's research methodology	Content Analysis
Outcome	Identification of multi-perspective movement elements and aspects of the phenomenon of movement quality	Identification of 3 main themes with altogether 13 underlying categories of therapeutic components and strategies	MQ- phenomena, practical movements and Movement Awareness Therapy Strategies
Models	(i) The Movement Quality Model	(ii) Therapeutic Component Model, (iii) Movement Aware-ness Learning Cycle	Consensus on Clinical Core Phenomena Model

Table 3: Descriptions of the four previous published models.

MODELS	DESCRIPTION OF THE FOUR MODELS
Movement Quality Model (Skjaerven et al., 2008)	Model I includes movement quality components, and is formed as a two-layer flower-model: the first layer contains a central composite and the second layer contains a differentiated perspective-specific structure of movement elements and aspects. The first layer, the general movement quality, describes a unifying and general essence of the movement, a synthesis of all interacting movement processes, representing a whole. In the second layer, the four leaves each describe perspective-specific movement elements and aspects (characteristics or qualities)
Therapeutic Components Model (Skjærven et al., 2010)	Model II includes therapeutic and pedagogic strategy components and is composed of three boxes, shaped as a triangle of three themes, all interrelating with each other conceptualising a close interrelation. The model includes three sets of therapeutic factors, the therapists own movement awareness, factors used to prepare the patients‘ learning, and concrete strategies, all serving as a framework for implementation in rehabilitation settings. The three themes are (i) preconditions for promoting movement quality, (ii) platform for promoting movement quality; and (iii) movement awareness action strategies for promoting movement quality,
Movement Awareness Learning Cycle (Skjærven et al., 2010)	Model III includes components of step-wise movement awareness learning and has a cyclic format of seven periodically recurring learning-steps, where the output of one set of processes serves as the input to another. The first steps in the movement awareness learning are to make contact with and explore the specific movement. Furthermore, attention is focused on the experience, integration, meaning, mastering and conceptualising and reflecting on one‘s own movement quality
Consensus on Clinical Core Phenomena Model (Skjærven et al., 2018)	Model IV includes an overview of clinical core phenomena identified in BBAT and has a square rectangular format of three layers, containing altogether 106 clinical core phenomena, in three clusters: (i) 44 movement quality phenomena of five clusters, (ii) 18 movement awareness practice phenomena of two clusters and (iii) 44 movement awareness therapy and pedagogy phenomena of four clusters

Results

-The result from the meta-synthesis of the three previous publications is presented below, including findings from the text-material and the four models.

Overviewing Movement Awareness Learning – A Synthesisation

Early in the meta-synthesis of the data-material, a specific learning perspective was identified as a new, expanding view on the material, across all text in the three publications, concerning what to learn and how to learn. Findings from the material are summarised, see Table 4. The findings along the vertical axis are learning presented as Pillar I-III, (i) Movement quality components, (ii) Choice of movements and (iii) Movement awareness strategy components. The findings along the horizontal axis are learning (a) theory, "about" movement, (b) skills, "through" movement, personal and clinical skills and (c) attitude of "being in", practising, movement, see Table 4.

Pillar 1 – Movement Quality Components

Pillar I represents a variety of categorised movement quality phenomena. These are the elements and aspects, within the phenomenon, named movement quality components, abbreviated to MQ-components. Learning MQ-components direct attention to the essence of such components, what they are, how they are experienced, and revealing their relationship to anatomy, physiology and psychology and how such components influence the general movement quality.

The result revealed a differentiation between the general term, movement quality, reflecting the sum, of a whole, and the specific terms, the singular qualities, or aspects, specifying the terminology of the MQ-components. The result uncovered the informants‘ ability to see and understand movement from a wide scope of perspectives, providing a differentiating in learning according to the perspective-specific elements and aspects. The findings showed that the MQ-components were handled as a theme or specific focus when implemented.

The data uncovered how the informants were referring to elements like the vertical axis, breathing and contact with the body, being aware, describing them mutually and equally important, when guiding the movement to become more functional. When we reflect upon lived space in relation to movement, we refer to how gravity and space, influence and are experienced and expressed, according to how the person attune and relate to the ground, the vertical axis and the whole him/herself. From a physiological perspective, breathing as organic element, was described as effecting movement quality. The informants described the vertical axis, breathing and mental awareness, as important preconditions to gain movement quality, when brought together into learning.

Rhythm was identified as one of several MQ-aspects, possible to be observed and guided by the therapist. The value of rhythm cannot be understood through a theoretical definition, alone. When it came to learning rhythmical movement, this was rooted in a lived, organic experience, described in the text. Developing a sense of rhythm was associated to an experience of well-being and health, described as important learning aspect of movement quality.

Table 4: Learning to promote movement quality through movement awareness - What and How (Result).

Learning	Learning	Learning	Learning
MOVEMENT What ⟶ How ↓	**MOVEMENT QUALITY COMPONENTS***	**CHOICE OF MOVEMENT COMPONENTS**	**MOVEMENT AWARENESS STRATEGY COMPONENTS****
1: THEORY Learning *about*	MQ-components: Five Perspectives of MQ-components	1) Movement Position in Space; 2) Movement descriptions	1) Therapeutic components; 2) Movement Pedagogy
2: SKILLS Learning *through*	1) Therapist personal skills in MQ-components; 2) Skills in guiding patients in the same MQ-components	1) Therapists personal skills in basic coordinations + simple movements; 2) Skills in guiding patients in the same movements	1) Therapists personal skills in movement awareness strategy components; 2) Skills in guiding patients in the same strategies
3: ATTITUDE Learning *being in*	Being *in* – Embodied and reflective know-how of the MQ-components	Being *in* – Embodied and reflective know-how of basic coordinations and simple movements	Being *in* – Embodied and reflective know-how of movement awareness strategy components

*The MQ-components refer to the multi-perspective view and its perspective-specific components in the phenomenon of movement quality, its movement elements and aspects, and how to move in relation to space, time and energy (Skjaerven et al., 2008; Skjærven et al., 2018). **The movement awareness strategy components refer to the therapeutic component model and its specific movement pedagogy (Skjærven et al., 2010, 2018).

The meta-synthesis uncovered informants' paying attention to the health characteristic MQ-aspects, valuing them and integrating them into the described rehabilitation program. This learning was described as important to support the patient to get access to such health-related components, connect to meaning and learn to implement them in daily use. The meta-synthesis, showed informants describing the importance of learning to acquire sensitivity to variations in MQ-components, recognising some patients using far too much energy, others too little, some without any intention in the movement, some moving rather stiff, almost mechanical and "lifeless" with varying degree of flow and rhythm, some as devoid of life in the movements.

Learning the MQ-components is practical and experiential. The meta-synthesis showed that learning such components is especially acquired through personal learning, practicing, repeating and being in the movement as well as having time to conceptualise and reflect upon the

learning. This fosters increased sensitivity, familiarity and understanding of meaning. However, the different scopes in learning, including learning from theory and integration of such skills in daily life, were all mentioned to support the therapists' ability to recognise, analyse, define and promote movement quality in rehabilitation settings.

Pillar II – Choice of Movements Components

Pillar II represents findings revealed as two clusters of components, first cluster, choice of movements relating to space and, second cluster, movement descriptions. The first, revealed the informants choice of which concrete movement to invite the patient into, when involving the whole human being into the practice of movement awareness learning, and the positioning in space. The text revealed close descriptions and reflections on such choices, as if joint and muscles slightly, were fading into the background of the therapist, and movement it-self, become prominent and focused in the situation.

The data showed the experts reflections of choice of movements in relation to each patient, considering the most preferable position in space, and the choice of horizontal and/or vertical positioning. Lying, sitting, standing and walking were described as important choices, with both physical and psychological aspects, but also because it mirrored every day life. Such choices showed to be preferred in order to make learning easy to transfer to life. The data centred on implementing well-known daily life movements, chosen because it was considered easy to arrange, at home, at work, transferred into activities and hobbies. It was argued that the transference of such practical movements, reflecting life, was easier to learn and transfer into a diversity of situations, than more complicated and specific, less natural and familiar movements.

The second cluster, movement descriptions, revealed health-terms descriptions of movement quality: simple, economic, effortless, efficient, grounded, functional and mindful movements. The data showed that informants were choosing small, simple, soft and safe movements, rather than large, hard and complicated movements in the learning of gaining more functional movements. This findings showed the therapists choice of movements that were manageable for the patients, to gain trust, but also to help the patient to encourage oneself through such learning. Learning to relate and trust experiences of potentially economical, effortless and efficient movements, made the patient come in contact with and experience health promoting movement potentials, described as important in the data-material.

Pillar III - Movement Awareness Strategy Components

Pillar III represents findings of movement awareness strategy components, including therapeutic factors and movement pedagogy, closely intertwined. By therapeutic factors is meant, factors identified and described being useful and important for the outcome of therapy. By movement pedagogy is meant the specific learning form implemented for movement awareness and the characteristic of such specific learning.

The identified movement awareness strategy components, uncovered the experts' use of a variety of therapeutic factors, referring to own sensitivity and understanding, learning a processes of change, seeing movement processes and what is needed to create such learning situation. The findings revealed that they valued practicing the movement together with the patients and created

possibility for the patient to embody the MQ-components through the specific movement awareness learning components. The experts, in the material, described the value and outcome of a familiarity and insight into such process of movement awareness learning, describing examples from learning situations implemented in treatment for patient with complicated diagnoses.

The material revealed a specific movement pedagogy, a movement awareness learning of explorative nature, learning through small steps, coming into contact with, searching for the particular health related MQ-components. This kind of learning was based, less on external instructions, more on acquiring a know-how, when being guided by the therapist. This learning, as revealed in the analysis, relied on the therapists' ability to recognise small and subtle change in the MQ-components in the therapeutic setting and to value them as important. To allow exploration and experimentation, as presented in the Movement Awareness Learning Cycle, showed to support and allow the patient to enter a mood of curiosity, which required accept and trust from the therapist, more than corrections and pointing to a "right-wrong-judgement".

The text uncovered a movement awareness learning being permeated with condensed, specified and very subtle steps in the guidance. The learning was directed and specified towards becoming aware, promoting and linking mental and physical aspects into concrete performance in the movement, resting on an action-oriented transformation strategy. Before "becoming aware", comes the simple invitation: "make contact with", underlining a term which was uncovered as a most important key in the material.

The findings showed that it was not a goal in itself to master neither all MQ-components nor all movement awareness strategies to be achieved to the full. The findings underlined that movement awareness learning focus on being sensitive to differentiate between a dynamic interrelation between tension and release in the general movements, the use of effort relative the task, and to become perceptible to what is recognised as a more optimal, functional movement in contrast to a maximal range or use of energy in movement.

Synthesizing significance

Merging text-material and models from the three publications led to identification of a construct for a movement awareness domain, visualised by two maps, a small- and a large-scale map. The small-scale map has few details, and shows an overview of the construct of three Pillars I-III, the learning of (i) movement quality components, (ii) choice of movement components and (iii) movement awareness strategy components, see Figure 1.

The map in Figure 1 visualises the three main pillars as construct in the movement awareness domain, how they interrelate and their interdependence, pillar I (learning content of movement quality components) and III (learning form of movement awareness therapeutic and strategy components) are both needed into therapy, pillar II (movement as the arena in physiotherapy). The small-scale map is overviewing and embracing the domain, referring to equally important sets of learning components.

Furthermore, the map of Table 5, reveals a three-layers map, visualising the construct of the domain in greater details. This map provides insight into each of the three pillars, relating to more details both to movement quality, choice of movements and movement awareness (Table 5). As seen, the second and third layer in the figure, provides deepened content of components in each of the three pillars in the domain.

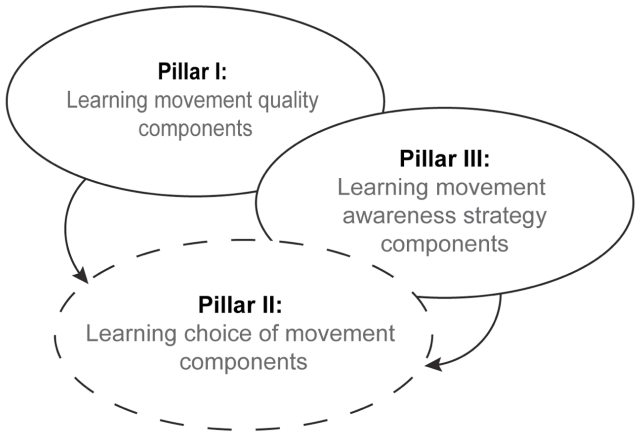

Figure 1: Small-Scale Map as Construct for a Movement Awareness Domain

Table 5: Large-Scale Map as Construct for a Movement Awareness Domain.

A Movement Awareness Domain		
(i) Movement Quality Components	(ii) Choice of Movement Components	(iii) Movement Awareness Strategy Components
Movement Perspectives Movement Elementss Movement Aspects	Movement Position in Space Movement Descriptions	Therapeutic Factors Movement Pedagogy
Perspectives: Anatomical, Physiological, Psych-Socio-Cultural and Existential. **Elements**: Postural Stability, Free Breathing, Awareness. **Aspects**: Form, Path, Flow, Elasticity, Rhythm, Attention, Intention, Emotion, Social/ Cultural, Personal, Unity.	**Movement Position in Space**: Lying, Sitting, Standing, Relational, Walking Movements. **Movement Descriptions**: Simple, Economic, Effortless, Efficient, Grounded, Functional, Mindful	**Therapeutic Factors**: PT's Own Movement Awareness, Platform for Promoting MQ, Therapeutic Action Strategies. **Movement Pedagogy**: Movement Awareness Learning Cycle: Contact – Explore – Experience – Integrate – Meaning – Master – Conceptualise and Reflect.
Movement Awareness Learning Forms: About, Through, Being in		

Discussion

The meta-synthesis uncovered findings based on text-material and on four models from three previous qualitative publications during a period of 10 years. The study revealed a construct for a movement awareness domain for mental health physiotherapy, containing three pillars of

(i) Movement quality components, (ii) Choice of movement components and (iii) Movement awareness strategies components, visualised in a small-scale and large-scale map of the domain, including three learning forms. These findings will be discussed below.

A theory is developed by identifying components that influence a phenomenon and the relationship between the phenomenon and conditions under which these relationship occur (Nutbeam et al., 2010). The three sets of findings identified in this study are (i) Movement quality components, (ii) Choice of movement components and (iii) Movement awareness strategy components, are all important for future research in the field and as a base for development of an evidence-based practice (Hammel, 2004; Jamtvedt et al., 2003). The described clusters of components and their structure, can open the way for quantifying and thus makes the field of movement quality and movement awareness more accessible to study. Thus, this article intends to map a road for a movement awareness domain for clinical implementation. A map, similar to a model, is a construct to support understanding (Merriam-Webster, 2017). This is important because, maps as models, simplify complex patterns and provides insight. Mapping is widely used for theory constructs, as in neurology (Brodal, 2016), occupational therapy (Townsend and Wilcock, 2004) and nursing theory, in clinical practice and research (Peterson and Bredow, 2009).

Movement awareness learning, as revealed in the meta-study, is a process of attuning and timing MQ-components into the shaping of learning functional and health-related movement pattern through movement awareness strategy components. Most patients receiving mental health care need some kind of rehabilitation input, gaining more functional movements, for example in balance-training or in walking (Wade, 2016).

Below, the discussion concentrates, on the three pillars in the domain, including content and form of learning.

Movement Quality Components

The first pillar in the construct of the movement awareness domain, is the movement quality components, representing important findings from the earlier publications. The meta-synthesis uncovered a myriad of MQ-components, possible to observe, in the moving human beings. In mental health physiotherapy, as in the broad rehabilitation field, the goal of the therapist is to identify components important for outcome of the patients‘ rehabilitation (Probst and Skjaerven, 2018). The MQ-components are anchored in the professional disciplines of physiotherapy, in anatomy, physiology, neurology, movement science, psychology, sociology and pedagogy (Larsson and Gard, 2006).

As seen in the constructed movement quality model, the phenomenon of movement quality includes richness and layers of observable and experienced MQ-components, identified in clusteres (Skjærven et al., 2018; Skjaerven et al., 2008). Together they represent a multi-perspective structure, differentiating between perspective as well as movement elements and aspects. Some literature express this as components, others as basic parameter of movement (Moore and Yamamoto, 2012), others describing qualities (Laban, 1974). Some components are of a spatial nature, some of time, effort, or of personal nature (Dropsy, 1984; Laban, 1960; Moore and Yamamoto, 2012). In this context the MQ-components, are used as a sum of elements and aspects, representing health-specific movement components, in line with a health-related view

(Mittelmark et al., 2017). Such health-promoting components related to human movement are associated to more functional movements as also empowerment of the self (Skjærven et al., 2003).

The meta-synthesis revealed space, time and effort as components to be brought into learning, as single learning component. MQ-components, such as the aspects of form, flow, elasticity and rhythm are expressed in the movement and can be (re-)learned, as are also intention, emotional-, relational-, cultural-, and personal MQ-components. Components related to space is described as a hidden feature of movement, as the form of the movement is dependant on the anatomy of the skeleton, the structure of the joints and the muscles, leading the movement (Laban, 1960; Moore and Yamamoto, 2012).

What constitutes a movement, is not only its movement aspects, but also what "makes the movements", how the movement "comes together", what influences the general movement coordination, and what basic elements are in-cooperated into the movement awareness learning (Dropsy, 1984; Moore and Yamamoto, 2012). As recognised as outstanding components through the meta-analysis, are the vertical axis, breathing and mental awareness. When integrated into movement, the movement become more whole and unified (Dropsy, 1984). Posture, up-rightness, postural control, alignment, balance are all elements, as are breathing and awareness, reaching the whole moving person (Dropsy, 1984; Shumway-Cook and Wollacott, 2017).

As seen in Table 4, learning MQ-components, can be acquired though different learning forms. First, learning MQ-components can be learned intellectually, through theory, acquiring knowledge about movement elements and aspects, interpreting its significance in abstract terms. As also seen in Table 4, learning the MQ-components, is also approached through two other learning forms, one, learning through, aiming towards skill learning for implementation and, third, being in the movement, practicing, repeating, exploring and experiencing, and thus, personally acquiring and embodying the specific movement component. This learning is similar learning to bike or to swim, or acquiring a practical tool.

In such a way the outcome of learning from being in, practising a movement aspects into the coordination, develops from repetition and integration of the specific movement aspects, to be anchored in the persons' movement. Learning the MQ-components provides insight, acquiring a specific perception of it and quality in it. In such a way phenomenology links action to experiences and to the existence itself (Martinsen, 2006).

Little is described on how to develop perception of MQ-components in physiotherapy curricula, how this is presented by teachers and learned by students, how perceptions of movement quality, its vocabulary and therapeutic guidance, can be developed within the profession (Ahola et al., 2016). There seems, however, to be increased professional interest in this (Ahola et al., 2016; Covington et al., 2015; Moore and Yamamoto, 2012). Experiencing MQ-components and at the same time conceptualising and reflecting upon the experience without disconnecting from it, offers a unique opportunity to develop significant insight into the richness of human movement. Such shared reflections can be adapted to different kind of movement awareness learning situations (Skjærven et al., 2019).

Choice of Movement

The second pillar in the construct of the domain - choice of movement components - includes two clusters, namely (1) movement position in space and (2) movement description. Throughout the meta-analysis, learning MQ-components, as well as learning movement awareness strategy components, uncovered informants‘ consideration of choosing concrete movement situations as arena for the learning.

The first cluster, movement position in space, relates to the therapist choice of consciously using space wherein movement is performed, trained and learned. A common arena in physiotherapy is treatment in relation to a plinth or training in location designed and equipped for physical training. Location, equipment, and choice of movement arena, are related to the intervention chosen in therapy. To consider the space and facilities for movement awareness learning is important as the treatment environment itself tones and set the standard for practice (Martinsen, 2006). The influence of treatment environment needs to be further studied, since movement is the core at the arena developed by the physiotherapist.

The second cluster in the choice of movement components, is named the movement descriptions, and presents identification of health terms of movement quality, including descriptive terms as simple, economic, effortless, efficient, grounded, functional and mindful movements. An expression revealed in the data of the meta-study, was the terminology related to “simpel daily life movements” and the identification of what is meant by such a term. In this study it was associated to lying, sitting, standing and walking, also described as the four dignities of man (Brooks, 1976). Such movements, was described in the findings as useful, when creating situations for the learning of MQ-components to be transferred, into daily use.

Movement Awareness Strategy Components

The third pillar in the construct is the movement awareness strategy components, including two sets of components, namely clusters of therapeutic factors and description of a movement pedagogy. The two are closely intertwined with each other.

The first cluster, therapeutic factors, are described as useful and important for the outcome pf therapy (Yalom, 1995). Therapeutic factors, their vocabulary and strategies, provide a frame, and are intended to facilitate outcome of therapy. Among the therapeutic factors are therapeutic guidance, what strategy and terminology to use. Findings uncovered less focus on corrections, and more on guidance, bringing the therapy forward and at the same time, being empathetic for the patients needs, physically and mentally. There is evidence that mental state and stressors in daily life influence several bodily and mental processes with impact on sensory-motor coordination and movement awareness (Brodal, 2016). The ability to cope and learn simple strategies to handle life is decisive for a persons‘ function and mental health. The model of the movement awareness domain adds knowledge, overviewing strategies and preparing the therapist to create a professional therapeutic context designed for mental health rehabilitation.

The overview of therapeutic components as identified in the meta-synthesis, is presented in result. This includes factors directed towards the patient’s change in movement quality initiated by the therapist (Yalom, 1995). Such movement awareness strategy incorporate trust, acceptance, and development of self-confidence when creating therapeutic relationship (Skjærven

et al., 2010). The movement awareness learning components, provides a strengthening of the patients' curiosity, initiative and motivation, all important therapeutic factors for supporting the patient to attune and handling basic movements in daily life (Gyllensten et al., 2010, 2000).

The second cluster describes findings related to movement pedagogy, a term used within the movement awareness traditions. The movement pedagogy identified in the meta-synthesis, enabling the person to be involved and participate in learning (Dropsy, 1984; Duesund, 1995; Laban, 1960). Three different ways of movement awareness learning, is indicated in Table 4, learning through, about and being in movement (Arnold, 1979; Brown, 2013; Duesund, 1995). Being in movement, repeating, and exploring corresponds with movement awareness learning provided in other fields, aiming towards insight, integration and ownership in learning (Arnold, 1979). This learning direct attention to health, but also towards recognising dysfunctional movement habits (Barlow, 1990; Dropsy, 1973). A movement habit is a learned movement pattern that is repeated, becoming automatic with consequence for the general movement quality (Barlow, 1990). A habit keeps the patient into an existing movement pattern and is often difficult to change. To turn the vicious circle, the movement pedagogy of the seven learning steps presented in the movement awareness learning cycle acts as a guide directing attention to the health-related MQ-components, empowering and increasing the patient' self-efficacy (Skjærven et al., 2010).

To communicate with the patient on movement, requires a terminology to be shared with the patient, as well within the rehabilitation team (Wade, 2016). A shared movement vocabulary and a vocabulary and structure for the learning process are needed in professional communication, sharing common knowledge of rehabilitation (Skjærven et al., 2019; Wade, 2016). The Movement Awareness Learning Cycle together with the MQ-components is described as providing meaning and understanding of the concrete change in ability to move. Meaning and understanding is described as fundamental and crucial for movement learning (Dewey, 1934; Dropsy, 1984; Duesund, 1995; Kolb, 1984). The learning is relating to what is going on in the actual learning situation and also relating to the context the person is living in.

Mental Health Rehabilitation

Current rehabilitation recommend increased focus on learning principles: the patient must want and be motivated to learn, must practice, get feedback, take responsibility, and learning must to be related to daily life (Wade, 2015a). These principles are in line with construct of the Movement Awareness Domain and the treatment philosophy. As within mental health rehabilitation, altered movement strategies are targeted, as an entrance to the person. This requires a systematic movement analyses, undertaken to identify the patients‘ potential movement resources as well as problems. In order to reduce disability, the therapist identifies components that will support the learner to acquire more functional movement coordination, through implementing therapeutic components. The movement quality components, the choice of movements and the therapeutic components together draws attention to required aims within rehabilitation. According to Wade, both physical psychological factors, including expectations, emotions, goals and social relationships needs to included (Wade, 2015b). Learning strategies for being present, and aware, is important agent in the movement awareness learning, but needs to be evaluated by the therapist, according to progression in therapy relating to the patients‘ needs and the therapists evaluation (Skjaerven et al., 2015).

Current rehabilitation suggests increased involvement in patients learning (Wade, 2016). As seen in the findings as in the previous discussion, the movement awareness learning are involving the patient, not only physical, but also mentally. Learning to stay in contact and practicing the actual movement coordination as well as a movement quality element or aspect, repeating and exploring them, is involving for the patients. The aim is to inform the person, from a bodily, movement and experienced point of view, and make the patient learn to recognise hindrances, stiffness, unbalance, dys-coordinations. In addition, to make the patient learn to connect to, adjust to and create more functional and health-related ways to move, at work and in life itself, is as important. Increased involvement in therapy, make the patient learn to adjust and adapt the movements to the environment, him/herself, to a more free, firm and stable balance.

Method Discussion

Strength and limitations

The purpose of this study was to deepen insight in the phenomena of movement quality and movement awareness rooted in clinical physiotherapy, providing a construct for a movement awareness domain. The article have de-conceptualised, synthesised and described outcomes of previous research presented in three previous publications. The material is based on two kind of cohorts, one national cohort, each study of 15 movement experts, from neurology, community health care and psychiatry (Skjaerven et al., 2008; Skjærven et al., 2010), and another international cohort of 21 movement experts from BBAT (Skjærven et al., 2018). Altogether 51 informants were included. Even though the material is limited, the data provide a deepened and condensed insight of the two main phenomena, their interrelation and application. Further studies can be needed including other populations of clinicians, recruited from others movement awareness traditions within physiotherapy as well of other influencing traditions.

The current emphasis on evidence-based physiotherapy focuses on building knowledge through systematic reviews, most often through quantitative studies, more seldom through qualitative studies (Richardson and Lindquist, 2010). There is argued for increased attention to meta-synthesis of qualitative research encouraged to identify knowledge relevant for practice, providing a framework to support practitioners (Richardson and Lindquist, 2010). The intention of a meta-synthesis is also to provide a collective qualitative understanding, not only to deepen but also to broaden a field of practice (Murray et al., 2014).

The article directs attention to linkages between clinical physiotherapy and research results, bridging and structuring perspectives, elements and aspects to facilitate clinical implementation. The published empirical data in the analysed publications are considered of satisfactory methodological quality, which strengthens the study. This supports the ability of the therapist to add meaning to human movement and in structuring transference of learning from therapist to patient.

Concept mapping involves taking a broad topic and visually breaking it into smaller topics to reveal relationships between learning phenomena and strategies, creating manageable areas on complex fields. Combining the maps brought forth the cohesion of the findings, allowing a clearer picture of the domain and its components. Such grouping of information and spotting of problems and opportunities provides new insight. Maps are not the answer to all in this

domain, but they may be a powerful piece in the puzzle of rehabilitation. Synthesising the models revealed a way of organising the complexity, representing consolidation and assumption, combining phenomena into a meaningful arrangement. The models sought to represent the situation, showing the structure of the original idea.

There has been little interest in physiotherapy theory concerning movement quality and movement awareness learning and differentiation in terminology is often blurred when it comes to the terminology of movement. With increasing prevalence of patients suffering from mental health problems and dysfunctional movement coordination affected by pain, stiffness, unrhythmic and lifeless movements, this study provides learning strategies for management, investigation and decision-making through the condensed maps.

The development of Table 5 propelled development of a map at an organizational level for mental health rehabilitation (Figure 2). The construct is considered to assist a future development in rehabilitation, formulating beliefs, values and goals, supporting better definition of the particular contribution, in research and education.

Figure 2 is an abstraction of ideas, providing vision, mission and strategic enabling pillars regarding the domain of learning movement quality through movement awareness learning strategies.

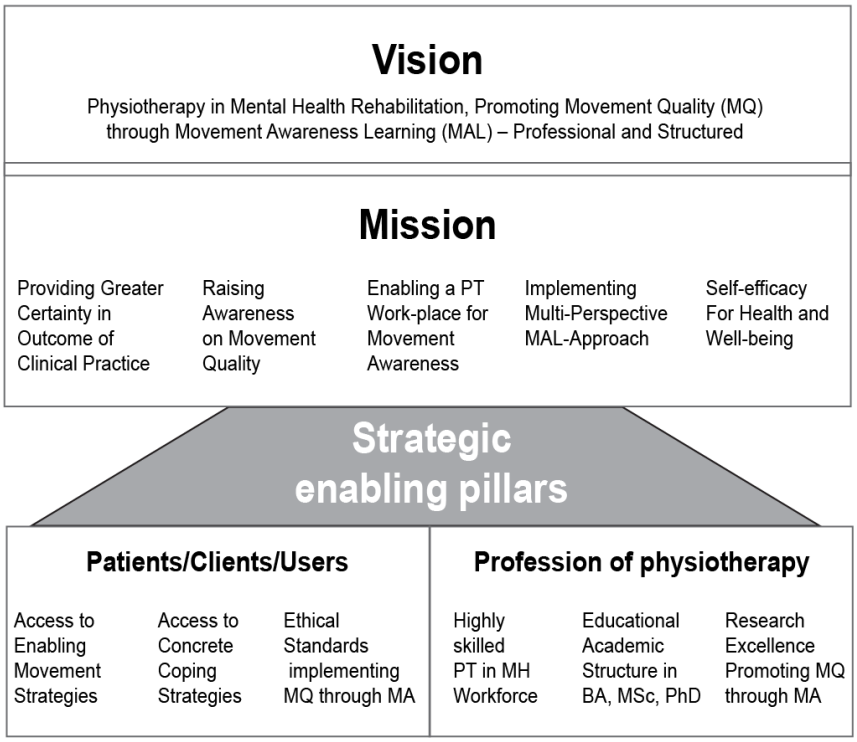

Figure 2: Vision, Mission and Enabling Pillars for a Movement Awareness Domain promoting Movement Quality in Mental Health Rehabilitation

Conclusion

A construct of a movement awareness domain for mental health physiotherapy is identified and visualised through a small- and a large-scale derived from the meta-synthesis of three previous qualitative publications. The domain includes three pillars, the (i) movement quality components, (ii) choice of movement components and (iii) movement awareness strategy components, together with three different forms of movement awareness learning, learning about, through and being in, experiencing the particular movement. This is presented for implementation in mental health rehabilitation. The study was developed to structure and facilitate implementation of movement awareness learning, in physiotherapy, rehabilitation, preventive health care and for health promotion. The result calls for further research supporting development of a movement awareness domain and movement quality as distinct phenomena.

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Appendix A

Modified Movement Quality Model

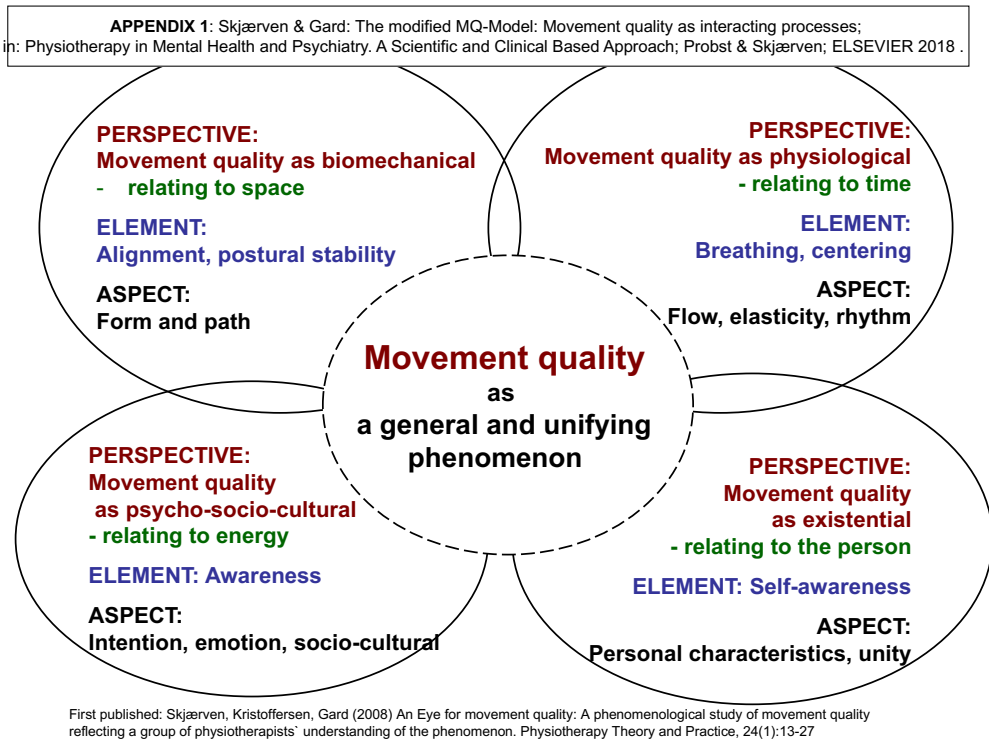

Figure A.1: The modified Movement Quality-Model (Skjaerven et al., 2008; Probst and Skjaerven, 2018).

Appendix B

Therapeutic Component Model

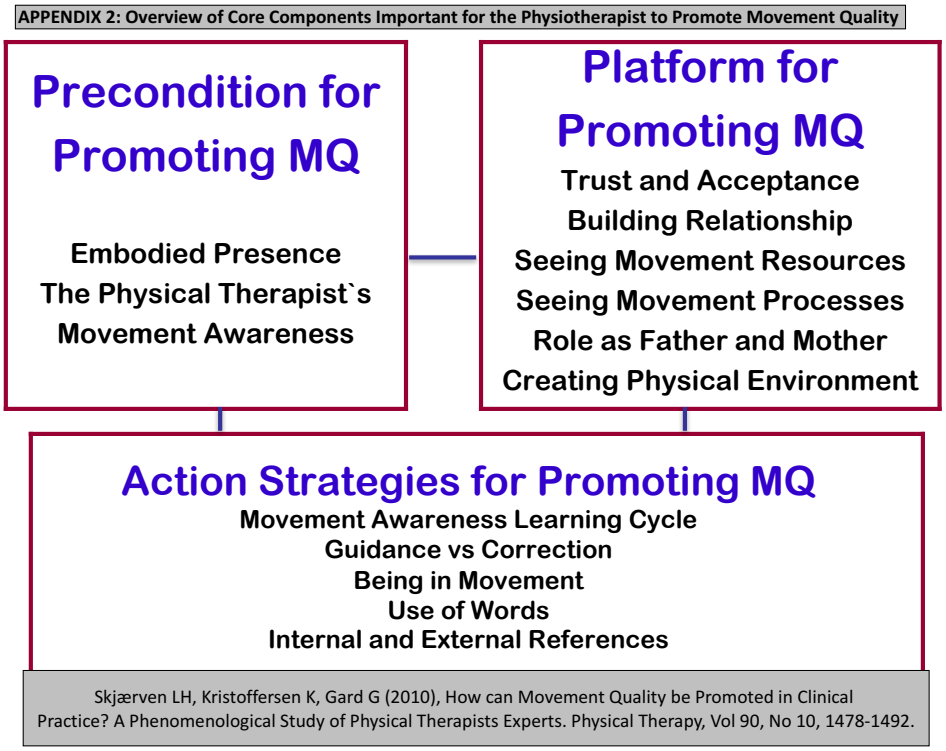

Figure B.1: Overview of Core Components Important for the Physiotherapist to Promote Movement Quality (Skjærven et al., 2010).

Appendix C

Movement Awareness Learning Cycle

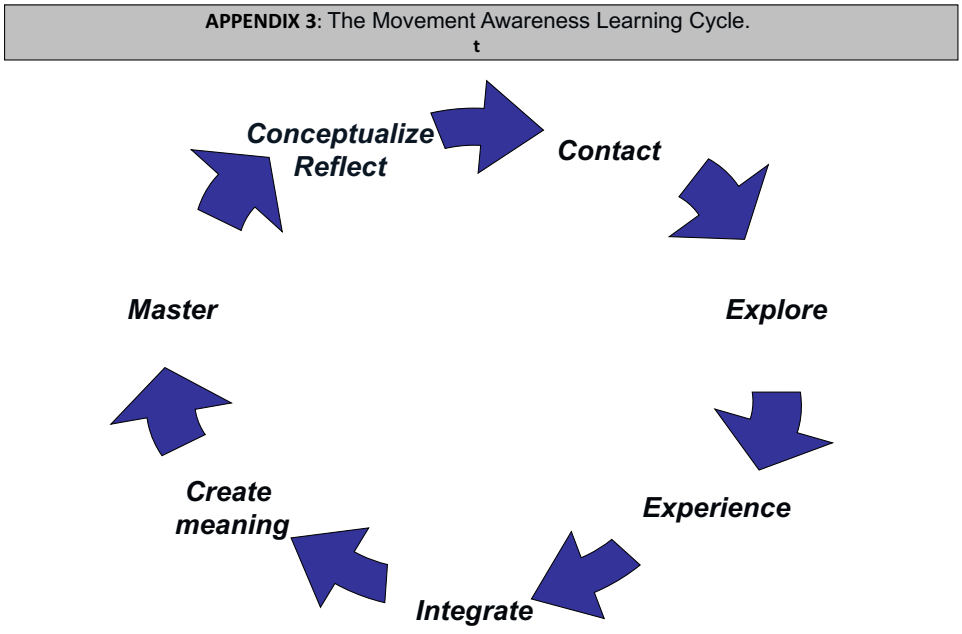

Figure C.1: The Movement Awareness Learning Cycle (Skjærven et al., 2010).

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