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BODY AND MIND MEET: A FUNCTIONAL DAY FOR THE
MEMBERS OF HELSINKI AND UUSIMAA ASSOCIATION FOR
VISUALLY IMPAIRED

Degree Programme in Physiotherapy

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BODY AND MIND MEET: A FUNCTIONAL DAY FOR THE MEMBERS OF HELSINKI AND UUSIMAA ASSOCIATION FOR VISUALLY IMPAIRED

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The aim of this Bachelor's thesis was to plan and organize a functional day for the members of Helsinki and Uusimaa Association for Visually Impaired in October 2017. This was done in collaboration with the association. The objectives of the day were to promote physical activity to the visually impaired and support their mental health using psychophysical approach. In addition, introducing and giving participants tools how to practice body awareness and relaxation exercises.

The implementation was on 28th of October 2017. Nine people, with ages ranging from 49 to 76 years, attended the "Body and mind meet" functional day. The functional day lasted three and a half hours with the content divided into two separate sections: chair yoga and body awareness together with relaxation exercises. The feedback from the participants was collected verbally and in the form of a feedback questionnaire.

The feedback was collected from the participants with a feedback questionnaire considering participants restrictions in vision. With the feedback questionnaire, it was possible to evaluate whether the functional day was a success and whether developmental ideas arose for the future. Feedback collected from the participants was positive. According to the feedback, the content of the functional day was planned and implemented well to suit the target group's needs. Based on the feedback it can be concluded that a similar kind of event would be beneficial. As a developmental idea, a long-term implementation including many sessions would support the mental health of this target group and aid them in understanding as well as practicing body awareness and relaxation exercises at home further.

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1 INTRODUCTION

According to the registry maintained by World Health Organization there is 180 billion visually impaired people of which 1.5 million are children. From visually impaired people 90% live in developing countries. (Matti Saari, K. 2011, 488.) The number of visually impaired people in Finland is estimated to be around 1.5 % of the population but among those who are over 65-years it is even 10-12%. As the population ages, the number of visually impaired people will distinctly increase in the future. (Rissanen, Kallanranta & Suikkanen 2008, 329.)

A person is classified as visually impaired if their field of sight is significantly decreased causing them difficulty in activities of daily living. A visual impairment makes movement more difficult, restricts social and physical functional ability and effects on the ability to receive information. A person who loses their sight at a later stage of life can experience the loss of vision as a crisis and needs to build his or her self-image to fit the new identity of a disabled person. (Poussu-Olli & Keto 1999, 17, 19.)

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2 AIM AND OBJECTIVES OF THE THESIS

The aim of this Bachelor's thesis is to plan and organize a functional day for the members of Helsinki and Uusimaa Association for Visually Impaired. This is done in collaboration with the association. The objectives of the day are to promote physical activity to the visually impaired and support their mental health using psychophysical approach. In addition, to introduce and give participants tools how to practice body awareness and relaxation exercises.

3 VISUAL IMPAIRMENT

Sight provides more information to a person than any other sense (Poussu-Olli & Keto 1999, 67). A person with visual impairment is defined by a decrease in vision or some area of the vision and that causes significant hindrance in daily activities at home, in recreational activities or at work. Many factors have effect on the disadvantage caused by the disability such as the age when the disability started and how it occurred as well as how long the person has been visually impaired. Other factors include if the person has been able to psychically adjust to their situation and what is their ability to absorb new things. (Poussu-Olli & Keto 1999, 19.)

The mean age of visually impaired people registered is 80 years and in 2005 the portion of over 65-year old people was 84% of those who were registered. Every year approximately 100 visually impaired children are born. As the population ages the number of visually impaired people will distinctly increase. (Rissanen, Kallanranta & Suikkanen 2008, 329.)

The official determination of the visual impairment is done by the ophthalmologist. This determination is based on World Health Organization (WHO) classification where for example the accuracy of vision and shortage in the field of vision are considered. A visually impaired person can be a partially sighted person or blind. (Website of Näkövammaisten keskusliitto ry 2017.) Based on recommendations of WHO (Table 1) visual impairments are divided into five categories ranging from a person with low vision to completely blind (Matti Saari, K. 2011, 486-487). A person isn't classified as visually impaired if their sight can be corrected with glasses or if there is normal sight in the other eye. A person is defined as visually impaired if their visual acuity in their better eye, that has been corrected with glasses, is less than 0.3 classifying a person as partially sighted. A person is defined as blind if their visual acuity in their better eye, that has been fixed with glasses, is less than 0.05 or the field of vision is subsided into less than 20 degrees by diameter. (Website of Näkövammaisten keskusliitto 2017.)

Table 1. World Health Organizations (WHO) recommendation of the classification of visual impairments (Matti Saari, K. 2011)

WHO Class	Visus (v)	Eyesight diameter	Description
A person with low vision	$0,3 > v \geq 0,1$		Almost normal function based on vision possible with optic assistive devices
Severely low vision	$0,1 > v \geq 0,05$		The use of vision is possible only with special assistive devices
Deeply low vision	$0,05 > v \geq 0,02$	≤ 20	Reading is possible only with closed circuit television. Orientation vision missing. Moving creates difficulties. Need of other senses.
Almost blind	$0,02 > v \geq 1 / \infty$	≤ 10	Function is based mostly on other senses and technology instead of vision.
Completely blind	$v = 0$	0	Function is based on other senses and technology for the blind

3.1 Causes for visual impairment

A person's sight can deteriorate suddenly or slowly but sudden, full loss of vision is rare (Poussu-Olli & Keto 1999, 19). The most common reasons for visual impairment universally are cataract (50%), trachoma (15%), glaucoma (15%) and diabetic retinopathy (5%). How common a specific disease causing the visual impairment is varies by region. In Africa and India cataract is the leading cause and represents 80% of visual impairment while the similar number is less than 1% in Finland. In addition, accidents, onchocerciasis, xerophthalmia and leprosy are still common causes for visual impairment in developing countries. In Finland, the most common cause for visual impairment is aging when considering the whole population of the country.

Other causes listed for visual impairment are hereditary (16%) and congenital (12%) factors. (Matti Saari, K. 2011, 488.)

Glaucoma is described as a disease where there is too high inner pressure inside the eye causing a damage to the optic nerve (Figure 1) resulting in the pupil to cave. There is also progressive damage to the field of vision and vision loss associated with glaucoma. Inside the eye fluids circulates constantly. The fluids seep from corpus ciliare into confined posterior chamber confined by zonulas of the iris and lens as well as the lens itself. From there it drifts through the pupil to the anterior chamber and exits through the reticulum trabeculae in the chamber angle into the canal of Schlemm. The trabeculae tissue forms a layer and to pass it there is pressure needed also in the healthy eye. This is needed to maintain the normal tonus in the eye which is necessary to avoid the outer atmospheres pressure pressing the eye into caving in. Most of the cases in glaucoma the reason for the rise in inner pressure inside the eye to a pathological level is the outflow of fluids becoming more difficult in the reticulum trabeculae area. (Matti Saari, K. 2011, 280.)

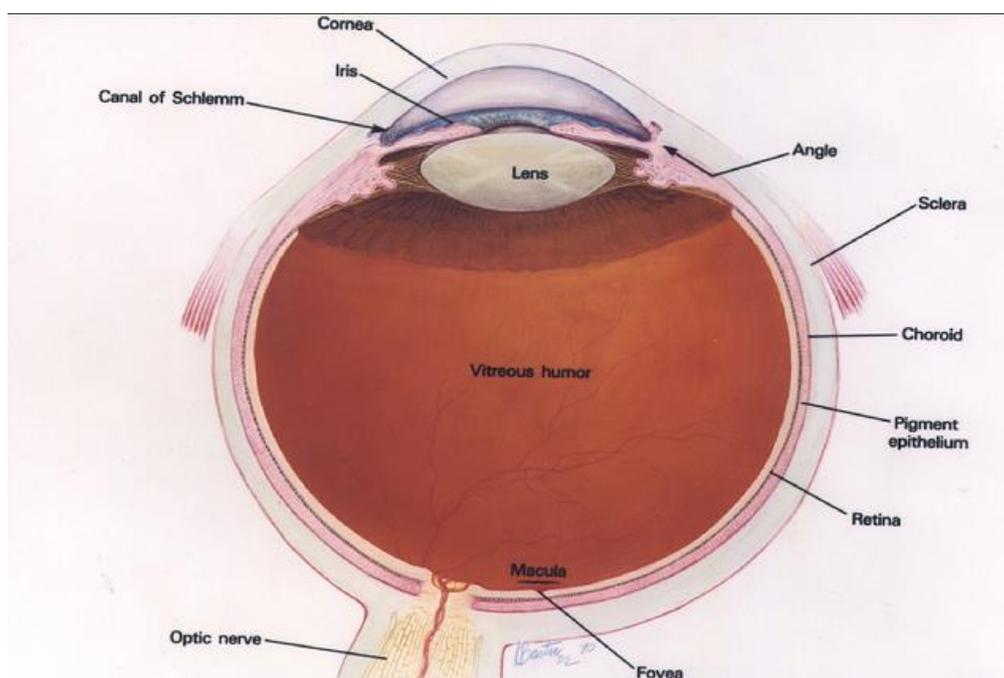


Figure 1. Drawing of the eye (Website of National Eye Institute 2017)

Age-related degeneration of macula (Figure 1) (central part of the retina and it's responsible for sharp area of vision) is the most common disease causing visual

impairment in the western countries. In 2006 the causes of visual impairment 42,3 % of them were age-related degeneration of macula in Finland and in the next twenty to thirty years the estimated number of people with the disease will increase due to the aging of the population. Risk factors of the disease are high age and body mass index, way of life, genetics, eating big amounts of food containing fat and high glycemic index while eating too little fatty fish, fruit and green vegetables. Age-related degeneration of macula is divided into two categories: wet (neovascular or exudative) and dry. (Matti Saari, K. 2011, 29, 251, 489.) This disease causes damage to the macula and the progress can change from slow to fast resulting in the loss of vision in one or both eyes. Even so, the disease doesn't lead to blindness but instead one can have difficulties with activities of daily living such as driving or being able to see other people's faces due to the blurred area or blank spots in the center of one's vision. (Website of National Eye Institute 2017.)

3.2 Functional ability in visually impaired adults according to ICF

International Classification of Functioning, Disability and Health (ICF) aims to describe functional health and functional condition related to health through a coherent, internationally agreed language and framework. The purpose of ICF is to improve the communication between different health care professionals and other people for example those who have restrictions in participation. ICF aims also to provide an organized coding method to be used in information systems of health care. There is many uses for ICF for example in evaluating the need of rehabilitation and treatment, using ICF for educational purposes, collecting and recording data as well as utilizing ICF for examination purposes. ICF Core Sets is descriptions of list of categories relevant for example some diseases and conditions. ICF describes function (Figure 2) through body structures and functions, participation, activities, environmental and personal factors. (Terveyden ja Hyvinvoinnin laitos 2017.)

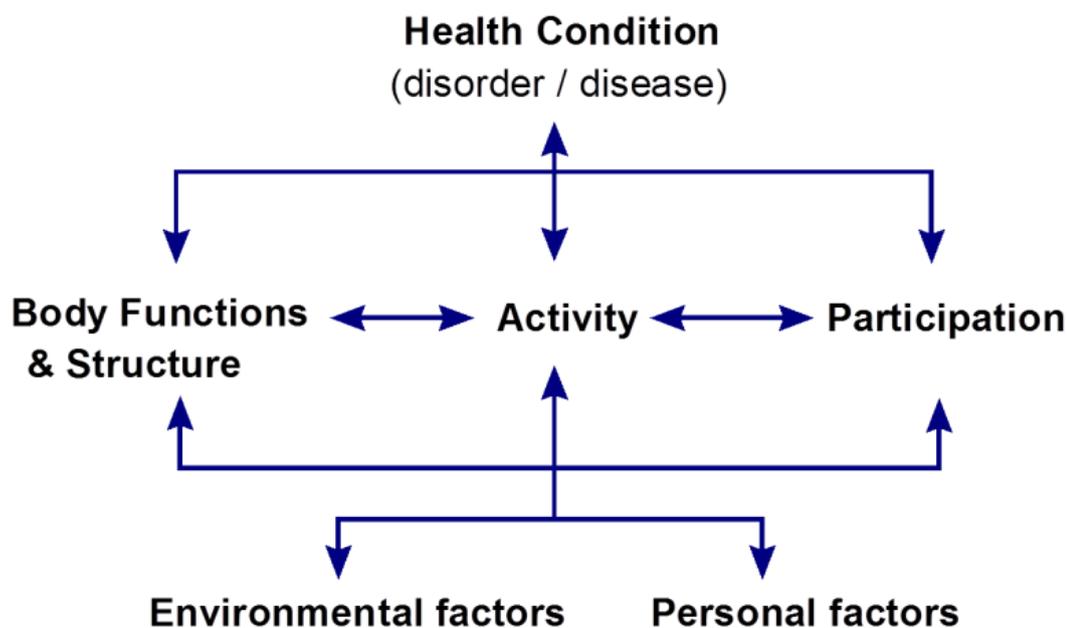


Figure 2. Terminology used in ICF (Website of Physiopedia 2017)

Body functions and structures are described as physical and psychological functions of our body and the body's anatomical parts (World Health Organization 2014). Some people with visual impairment may have poor balance, forward head posture, low cardiovascular fitness, obesity, lack of confidence, timidity, self-stimulatory behaviors for example rocking, and less social skills than others. Furthermore, the loss of peripheral vision may have an impact on mobility too. Any of the conditions mentioned above can have effect on the exercise response regardless of the person's degree of visual impairment. (Durstine, Moore, Painter & Roberts 2009, 392.)

With visual impairment, there can be changes in the posture due to the vision decreasing or blindness. Some of these postural changes can be for example the head extending forward or hanging down to see more closely while the upper body rounds inward and the back is rounded. In addition, a blind child or a child with severely poor vision may have difficulties in balance. Difficulties in balance are seen when the child in standing position takes a wider base of support and rotates the feet outward. When walking, the child takes shorter steps while transferring the weight from side to side. Normal weight transfer forward is unsafe and disturbs the balance of the child and therefore the walking style is different. (Törrönen & Onnela 1999, 17.) With a visually impaired person spatial information and information associated with space is

decreased. The insufficient function of vision also affects learning and slows down a child's learning from the environment. (Poussu-Olli & Keto 1999, 61-67.)

Sight is a constant source of information to us and we rely on it to orientate and recognize people and objects. In addition, sight regulates our motor control and social behavior and the lack of vision causes spatial information to decrease in visually impaired people. An individual with visual impairment must rely on other senses and in this way, compensate for the loss of vision. In a study made by Samuelson (1981) it was found that internal perception for example muscle sensation, tendons, information of body posture and movement given by inner stimuli decrease in people with sight and increases in blind people with age. How this is possible is explained by an example of a child crawling and reaching towards a ball several times until they finally reach it. After the child learns to use spatial perception and vision instead of reaching for the ball they will crawl towards and then grab the ball. A blind child uses proprioceptive senses in the similar situation to grab the ball. In a study conducted by Millar (1981) it was found that a severely visually impaired person forms the same image of an object as a seeing person with touching the objects surface, size and shape. (Poussu-Olli & Keto 1999, 61-62.)

Participation and activity include areas of life such as learning, interpersonal interactions and relationships, domestic life, locomotion, communal and social life (Website of Terveiden ja Hyvinvoinnin laitos 2017). Social relationships are important and to a visually impaired person being accepted and developing confidential relationships within family are the basis to how a visually impaired person's persona and social interaction skills develop. Visual impairment creates different personal and social issues and it's known that blind people have bigger shortage in social development than those who have poor eyesight. Social environment and the use of partial eyesight have a big role in how a visually impaired person develops their social skills and these factors affect how they can function in their environment as well as how much they depend on others. (Poussu-Olli & Keto 1999, 85.)

A visually impaired person's ability to move is a key factor in enabling them to be independent. What the above mentioned means for a visually impaired or to a blind

person is to be able to move safely in different situations and surroundings using different senses, assistive aids and orientating according to situations. A visually impaired person can also have a guide to move and function safely. When the person's ability to move is good it creates feelings of happiness and accomplishment as well as new possibilities to gain more experiences and contacts to people and the environment. (Törrönen & Onnela 1999, 8.)

Regular exercise in individuals with visual impairment has the same positive physiological and psychological benefits as in individuals without disability but the physical activities should have adaptations if needed. The additional benefits of regular exercise also offer more opportunities to improve socialization skills, practice and improve in balance skills, improve self-image, confidence, and spatial orientation as well as improve in cardiovascular fitness and decrease in obesity. (Durstine, Moore, Painter & Roberts 2009, 393.)

Environmental factors include the physical, social and the attitude of the environment where people live. Personal factors are for example age, race, social background, personal features and present experiences including past and current life events. (Terveyden ja Hyvinvoinnin laitos 2017.) Vision loss at a later age comes with different stages: grief, withdrawal, denial, re-evaluation and acceptance. In addition, feelings of helplessness and difficulties in controlling this feeling create problems. If the loss of vision is experienced as a crisis, the process of the loss leads to life changing, stopping or at worst ending. Accepting yourself and achieving self-confidence takes practice and interaction with people who have eyesight. Visually impaired or blind children don't see themselves being different until people surrounding them start to treat them differently or they notice that they are unable to do certain things because of lack of eyesight. (Poussu-Olli & Keto 1999, 22, 85.)

A visually impaired person uses other senses to orientate, make sense of their surroundings and for technique of movement (Törrönen & Onnela 1999, 20). Things that cause difficulties for a visually impaired in making sense of one's surroundings are for example estimating the distances, noticing level differences, lack of color vision, night blindness, maladjustment of lighting levels and tripping or bumping into something. How to avoid these is to place guard rails in construction areas and keep

the common lanes clear for a visually impaired person. (Näkövammaisten liitto ry 2017.) Differentiating sounds enables the person to tell the difference of for example between a bus and a car as well as the sound of traffic lights when crossing the street. In addition, how a person distinguishes the level differences when walking on the pavement and crossing the street can be done using pendulum technique with a white cane to follow the curb of the sidewalk to find the straight part of the street between both sides of the curb. (Törrönen & Onnela, 28-29, 87-88.) Difficulties related to social interactions are noticing when someone makes eye contact and responding to that, recognizing people based on their appearance and difficulties in detecting different facial expressions and gestures. When meeting a visually impaired person, notify your presence by informing your name or saying something and touching their shoulder so the visually impaired person knows they are being talked to. (Website of Näkövammaisten liitto ry 2017.)

The most common assistive aids used to help a visually impaired person in moving and doing activities of daily living are a white cane, a guide dog and binoculars. Other assistive aids that for example a person with poor eyesight can use is efficient eyeglasses, a magnifying lens, a magnifying closed circuit television and a computer program that magnifies text. (Kettunen, Kähäri-Wiik, Vuori-Kemilä & Ihalainen 2009, 173.) With healthy visually impaired adults there is no commonly prescribed medications and the only common management to be taken into consideration is for example an individual who has glaucoma and may need to use eye drops before or after exercise. If an individual with visual impairment participates in physical activity or is tested and has other primary health problems such as diabetes, specific medications for these problems should be taken into consideration. (Durstine, Moore, Painter & Roberts 2009, 393.)

4 PHYSICAL ACTIVITY IN SUPPORTING HEALTH

The World Health Organization (WHO) defines physical activity as any kind of bodily movement produced by skeletal muscles that requires energy expenditure. These kinds of activities can range from carrying out the household chores to participating in recreational pursuits. Exercise is a subcategory of physical activity and is described as planned, structured, repetitive and aims to improve or maintain one or more components of physical activity. In addition, any other physical activity for example walking done during leisure time has a health benefit whereas moderate- and vigorous-intensity physical activity improves health. (Website of World Health Organization 2017.)

According to the data the percentage of adults participating in moderate physical activity decreases with age. Overall of adults aged 18 to 24 years 38% meet the aims of physical activity whereas only 26 % of adults aged 64 to 75 years do. (Kisner & Colby 2012, 43.) The World Health Organization recommends that adults aged 18 to 64 years should do at least 150 minutes of moderate-intensity physical activity in a week or at least 75 minutes of vigorous-intensity physical activity in a week. If an adult is looking to gain more health benefits they should add the amount of moderate-intensity physical activity to 300 minutes or do something else that has a similar effect. Similar option that has the same effect is to do a combination of moderate-and vigorous-intensity physical activity. It's recommended that the physical activity should contain muscle strengthening activities that involve all the major muscle groups at least two times in a week or more. (Website of World Health Organization 2017.)

Scientific studies show that inactivity leads to premature morbidity and mortality (Durstine, Moore, Painter & Roberts 2003, 22). In the 21st century immobility has become the fourth most common cause of death. It is estimated that every second youth and every third adult in Finland doesn't reach the recommendations of physical activity. In addition, all around the world people who have a basic education are less physically active compared to those who have a higher education. (Website of UKK-Instituutti 2017.) In addition of chronic health conditions creating medical costs, they also are related to physical inactivity such as lower quality of life, loss of functional

independence, depression, mood disorders and decreased life expectancy (Durstine, Moore, Painter & Roberts 2009, 23).

4.1 Health benefits of physical activity

Moderate intensity physical activity that is done regularly is shown to have significant health benefits. Moderate intensity physical activity can be for example cycling, walking or doing sports. Physical activity is beneficial at all ages and even taking part in some physical activity is better than none. Regular and appropriate level of physical activity has many health benefits such as improving muscular and cardiorespiratory fitness as well as bone and functional health. In addition, physical activity reduces the risk of hypertension, coronary heart disease, stroke, diabetes, various types of cancer (including breast cancer and colon cancer), and depression. Regular physical activity reduces the risk of falls as well as fractures of the hip and vertebrae of the spine and is an important factor in controlling your weight and keeping the energy levels at balance. (Website of World Health Organization 2017.)

Physical activity improves cardiorespiratory fitness and can reduce the risk of congenital heart defect, cardiovascular disease, stroke and hypertension. Being physically active 150 minutes of at least moderate-intensity activity per week can reduce the risk of congenital heart defect and cardiovascular disease. Physical activity also reduces the risk of diabetes and metabolic syndrome if one is active 150 minutes per week doing moderate to vigorous-intensity physical activity. (Website of World Health Organization 2017.)

Physical wellbeing is just as important as psychological health (Sandström & Ahonen 2011, 142). Studies show that people who exercise a lot are more satisfied with their life and exercise effects positively on the mind: decreasing feelings of anxiety, depression and tension while severing the cycle of negativity (Sandström & Ahonen 2011, 142; Kettunen, Kähäri-Wiik, Vuori-Kemilä & Ihalainen 2009, 176). It has been shown that aerobic exercise that is done many times per week and the load being on average level promotes effectively psychical wellbeing and performance. There has

been a study done on 13 to 20-year old girls who are leading a sedentary lifestyle. It was studied how aerobic exercise has effect on the participant's physical self-concept meaning how they evaluate their appearance, physical strength and other body features. There were two groups, the exercise group had girls participating 40 minutes, five times per week for nine months in an instructed exercise session at school. The second group of girls didn't take part in exercise. The conclusion of the study was that there was no change in the participants' self-concept who were in the second group but those in the exercise group who improved their aerobic fitness also improved their self-concept. Another study on college students showed that the amount of exercise the students did had a direct effect on their mood therefore when they exercised more they experienced their mental health to be better. (Sandström & Ahonen 2011, 142.)

Exercise is also a form of active relaxation and at least a sufficiently light exercise has a relaxing effect. Only ten minutes of daily practice in the form of physical activity is a simple way to get the mind to relax. Consumption of energy from nearly all exercise performances effects on the body and nervous system where the autonomic nervous systems sympathetic parts effect turns into parasympathetic effect leading to relaxation. (Jukka Kataja, 68-70.)

For 65-year-old adults the guidelines from 2007 recommend aerobic endurance exercise minimum of 30-minutes of moderate-intensity exercise five times a week or as another option of 20-minutes of vigorous-intensity exercise three times a week. In addition, exercise maintaining or increasing muscle strength or muscle endurance, exercise enhancing balance and flexibility are recommended. Furthermore, regular exercise already decreases the risk of falls and balance exercises done three times a week are shown to be beneficial for health. (Website of Käypä hoito 2017.)

Evidence shows that resistance and aerobic training are both important forms of physical activity in maintaining cognitive and brain health in older people. For example, a 30-minute walk done daily, that raises the heart rate, effects on lowering the risk of cognitive impairment and by increasing the amount of physical activity can one effect on their cognitive decline from decreasing. Through being active and even improving the cognitive and physical functions, taking part in one's own life by participating in rewarding activities and having social relationships builds to being

able to age successfully. Successful aging involves four different factors: physical activity, spirituality, emotional and educational health and social satisfaction. (McArdle, Katch & Katch 2015, 840.)

Yoga as a form of physical activity focuses on bringing the mind and body together in such a way that the person experiences them being one unity instead of separate from each other. Changing positions in yoga has an important part in the participant's current state of mind and mood as just by changing the body's position you can change your attitude and emotions if you are aware of your body language. Performing a small task such as smiling can create a feeling of relaxation and happiness. Performing yoga exercises create a place to practice being aware of your own thoughts, feelings and mood. Furthermore, you can practice being aware of your breathing and different sensations that are brought forth by doing yoga. The importance in practicing yoga is to be present in the moment and observe how your perspective to your body, thought and whole essence can change by doing different positions and maintaining them. In addition, yoga strengthens and flexes the whole body and if practiced intensively it can also have a positive effect on the heart and blood vessels. (Jon Kabat-Zinn 2012, 145-148.)

4.2 Motivation in health behaviour

Motivation is a want, need or a strength that activates a certain behaviour. Motivation is described as an activity of the nervous system that guides a person to avoid uncomfortable situations and experiences or direct the person to a desired goal. Factors that are behind motivation and its existence are motives, body's condition or events of the environment and they regulate a motivated person's function. A motive is categorized as a psychical motive of action that can be conscious or subconscious. This means that a person can pursue towards different goals without being aware why they do so. A person can experience motives as needs, wishes or feelings such as the experience of positive and negative feelings. (Sandström & Ahonen 2011, 71.)

Self-esteem is a person's subjective emotional evaluation of his or her own talents and abilities. Good self-esteem is described as steady emotions, surviving the challenges of life, enduring stress and maintaining a healthy lifestyle while bad self-esteem is related to different mood disorders for example depression or anxiety. Inner speech is thought to be the base of self-consciousness as through inner speech a person deals with their own qualities. Both self-esteem and the image of one has of themselves together operate together on a conscious level and with other factors effect on how well a person is aware of him or her. Furthermore, first-person perspective enables a person to examine and deal with matters of their own life and understand that they have the power to affect their own life by being aware of one's self. This creates a fundament to finding one's identity and the development of roles based on social status and expectations of that status. Issues included in the inner speech are different beliefs of one's own abilities and restrictions related to that, realistic and unrealistic expectations, presumptions of other people's attitudes to one's self and observations of how one reacts towards other people. Example of inner speech and evaluating one's behaviour is: "I'm the type of person that works too much." (Herrala, Kahrola & Sandström 2008, 150-151.)

Empowerment is described as an inner feeling of power and it's a process where an individual sets the course of their life and goals, pursues control of themselves and their actions. Motivation and empowerment are connected to each other and they both share an interest in setting and directing goals as well as being interested in the results of the action. Empowerment is connected to freedom of choice, atmosphere, appreciation, safety, the wellbeing of the environment and strengthening of one's self. The process of empowerment leads to one developing to an independent and self-sufficient person. (Herrala, Kahrola & Sandström 2008, 151.)

Self-efficacy effects on the process of a person choosing personal goals, making commitments and indirectly in figuring out one's goals. Feedback from achieved accomplishments is important because the lack of positive reward leads to feeling of dissatisfaction and affects for example work performance. (Herrala, Kahrola & Sandström 2008, 154.)

5 PSYCHOPHYSICAL APPROACH IN PHYSIOTHERAPY

The association of psychophysical physiotherapy in Finland (PSYFY) defines psychophysical physiotherapy as a special field that aims to promote a human's overall performance. In psychophysical physiotherapy, the emphasis is on the client being a psychophysical being meaning the body and mind are an entity and are constantly interacting together. In psychophysical physiotherapy, the client is given resources to survive and examples how to solve problems in their life based on their current condition. (Website of PSYFY ry 2017.)

In psychophysical physiotherapy, the baseline is in experimental learning meaning that in the therapy the client's own resources needed to cope with daily life are searched for. This is done by observing and relaxing the client as well as practicing the client's posture, movement and reactions of the body and mind. How a person understands oneself through experience is essential and plays a part in the physiotherapy process. The crucial factors in psychophysical approach are meeting of the physiotherapist and the client, how the physiotherapist and the client comprehend a human being, the client's motivation and their bodily self. Furthermore, how the client feels that they are understood, treated and taken care of is important and together with the client's motivation and background have effect on how they commit to the physiotherapy. (Talvitie, Karppi & Mansikkamäki 2006, 265-267.)

In the end, how successful the physiotherapy and rehabilitation is depends on how the goal of the rehabilitation fits and is relevant to the client's life. By doing something that feels meaningful, having the right attitude and awareness of your possibilities are determinant to the success of exercises in the physiotherapy. In psychophysical physiotherapy, the client becomes more aware of their body through the exercises and a key part is the physiotherapist being able to instruct the client in listening to their body and themselves. (Talvitie, Karppi & Mansikkamäki 2006, 266-267.)

5.1 Mental health and stress

Mental health is described as a resource and a state of wellbeing where a person can work, take part in activities organized in their community, deal with challenges occurring in life and be able to see their own abilities (Vuorilehto, Larri, Kurki & Hätönen 2014, 11; Website of Suomen Mielenterveysseura 2017). Those that suffer from mental illnesses may have resources to handle household chores or working but lack resources to care for other things such as friendships (Vuorilehto, Larri, Kurki & Hätönen 2014, 13). One might feel healthy and perceive their mental health to be good while performing well in their work but feeling fatigued while at the same time a loved one, work colleague or a health care professional perceive the state of his or her health differently. Both aspects and experiences of the individual and people surrounding him or her are correct but the focus should be on mutual understanding through conversation of matters involving the individual, for example how the individual can manage at work. (Vuorilehto, Larri, Kurki & Hätönen 2014, 13.)

Our mental health is protected by inner and outer factors such as meaningful relationships and a job, equality and feeling of being accepted (Website of Suomen Mielenterveysseura 2017). Factors that impact negatively to the mental health of children and teenagers can be bad social relationships, being bullied and experiencing violence. (Vuorilehto, Larri, Kurki & Hätönen 2014, 15). There are many ways how one can actively improve their mental health such as being social and active, learning new things, having a curious mind towards yourself and doing good things for someone else, for example volunteering. (Website of Suomen Mielenterveysseura 2017.)

Stress is a natural reaction and it's experienced in challenging situations and defined as a reaction to any kind of situations where there is a pressure or a demand. (Herrala, Kahrola & Sandström 2008, 157; Kabat-Zinn, J. 2012, 308.) A positive stress causes the body and mind to be more alert therefore increasing the persons potentials, making them voluntarily strive, learn new things and try their best. In positive stress, the load on the body is suitable and it's not experienced as loading on the body and mind. Stress can be prolonged and seen as the person performing over their current resources or

alternatively being passive. Factors causing stress can be physical or mental such as low blood sugar, heat, cold, disease, lack of sleep or challenging relationships. Prolonged stress also has an influence on breathing causing it to be unbalanced and in constant overactivation. Exercise is considered one of the most common stress relievers and forms of stress management. In addition, instructing breathing methods to a person with stress can affect their bodily stress responses, calm the mind and make the person feel more energetic. Stress is a normal way to react to different physical and mental strain but it's important to pay attention to the signs causing stress and decrease the factors causing it on time. (Martin, Seppä, Lehtinen & Törö 2014, 80-86.)

5.2 Body and mind

By sensing, observing and acting in different situations and surroundings one can be aware of one's body, its position and state of motion. Before it was considered that body schema controls the body, its positions and movement but nowadays body schema is known as conscious observation of where the body or a part of it is in relation to the operating state. The vestibular system, proprioception, visual system, touch and pressure receptors send stimulus to the body schema. (Sandström & Ahonen 2011, 21.)

Body image is defined as a psychological representation of the body and consists of visual perception of the size, shape and special features of the body. Different emotions and attitudes awakened by the body together with the physiological state of the body all shape the body image. (Sandström & Ahonen 2011, 22.) When the person is developing, social feedback for example from friends and school helps in finding their place in the society. How a child gets to know themselves is by putting themselves, their outer appearance and inner experiences into perspective to the people surrounding them. Knowing their place in the society and in their own home is important to give the child a chance to grow and develop in peace. A person evaluates constantly the experiences of their body. At the same time the mental image of their body, attitudes and demands set for themselves interact in the form of dialogue with the reality. Already formed perceptions of the body image can be shaped and reformed

for example by diseases, pain and aging. (Herrala, Kahrola & Sandström 2008, 29-30.)

Body awareness is defined as the ability to control and guide movement and positions of the body (Talvitie, Mansikkamäki & Karppi 2008, 270). It also involves things related to body experience such as internal body sensations, body movement for example how a person experiences their own body's limits in relation to the outside world, how they perceive their own body and recognize bodily reactions to internal and environmental conditions (Talvitie, Mansikkamäki & Karppi 2008, 270; Probst & Skjaerven 2018, 61).

In Roxendal's approach (1987) the person is examined with the help of two aspects: movement and experience. Movement aspect consists of body control, movement patterns and body management. Movement pattern is learned and further in life adjusted in the timeline of a human's psychomotor development. Body management makes human function automatic and effortless such as changing from one position to the other. Body control consists of body regulation for example it is responsible for regulating breathing. Experience aspect consists of function that is conscious and the focus is on the feelings one receives from their body, how they perceive their body and are aware of it. In addition, a person must conclude that they have an influence on their own actions to accomplish body awareness. (Talvitie, Mansikkamäki & Karppi 2008, 32-33.)

5.3 Breathing and relaxation

Very little notice is paid to breathing even though it has a role of being one of the most important body functions (Herrala, Kahrola & Sandström 2008, 76). Being stressed and busy effects on the breathing making it superficial. In superficial breathing the diaphragm contracts, muscles of the larynx tighten, the breathing is faster and abrupt. Natural and calm breathing that is also deep and rhythmic helps in being more focused and calming a person down. In addition, correct breathing helps in increasing our resources. (Jukka Kataja 2004, 54.)

The diaphragm, a strong muscle located below the lungs separating the thoracic from the abdomen, is the most important muscle used for breathing. The central part of the diaphragm is pressed slightly downwards. With inspiration, the diaphragm contracts down while pushing the intestines to the abdomen, distending the stomach out and creating a negative pressure whereupon air fills the lowest parts of the lungs. From the effect of the diaphragm and the intercostal muscles causes the body's five lowest pair of ribs to expand and fill the middle part of the lungs after the diaphragm has first filled the lower parts of the lungs. (Jukka Kataja 2004, 54-55.) The rib cage expands to four different directions: forward, back and to both sides while the movement of the rib cage travels all the way up to other ribs and from the shoulders to the back and front of the neck (Herrala, Kahrola & Sandström 2008, 80-81).

In exhalation, the diaphragm reverts into a resting position while air is pushed out of the lungs and the abdomen contracts back the way it was. Other muscles that assist in the exhalation are the innermost intercostal muscles and if necessary the abdominal muscles. By breathing correctly, we use less muscle energy and transport more oxygen to our brain and our body that uses it as fuel. When breathing with the upper part of the lungs we use approximately half a litre of air compared to breathing with the diaphragm the air flows into the lungs twice the amount more. When breathing correctly all parts of the lungs should fill with air and the diaphragm plays a significant part in this process. Furthermore, correct breathing has many other benefits such as activation of the parasympathetic nervous system, regulation of the metabolism channels, calms and directs emotions as well as stops from hyperventilating. (Jukka Kataja 2004, 54-55.)

The autonomic nervous system, that controls breathing, can be divided into two parts: parasympathetic and sympathetic. The role of parasympathetic nervous system is to slow down the heart rate, contract bronchus and fasten the digestion while sympathetic has the opposite effect on the body. The role of sympathetic nervous system is to activate in situations that require the person to act fast ("fight or flight") and in these situations the heart rate thickens, hearts pumping rate increases and the bronchus expand. In turn, some bodily functions slow down for example the blood vessels of the internal organs contract, causing the digestion to slow down, and the blood pressure

to increase. Stressful situations can disrupt the balanced co-operation of the sympathetic and parasympathetic nervous system for example fear and anxiety are factors that add stress. This leads to the sympathetic nervous system to activate and if this situation carries on it has negative effects to being able to relax, sleep and feel refreshed after rest. (Herrala, Kahrola & Sandström 2008, 76.)

Breathing naturally and evening out the breathing is a central part in relaxation-and suggestion relaxation methods. All breathing methods share a common factor which is good and correct breathing. Nowadays practicing breathing has become more relevant in active relaxation methods because of increase in superficial breathing due to people exercising less and the increase in constant tension. With breathing exercises, it's possible to effect on the mobility of the rib cage and the function of the respiratory muscles. In some sports such as free-diving, where the aim is to regulate the autonomic nervous system, breathing exercises have an important role and swimming is the best form of sports to improve breathing. (Jukka Kataja 2004, 53-54.)

Relaxation in its different forms is described as maintaining, preserving or strengthening resources of the body that keep the body in balance and maintain its health. In addition, relaxing means tension being alleviated in a physical and mental way. (Herrala, Kahrola & Sandström 2008, 169, 171.) Relaxation has been practiced for centuries and in Eastern cultures relaxation has been part of basic activities of life for a long time. Many methods used in the Eastern culture for thousands of years are for example Zen Buddhism and yoga. In Asian culture, autosuggestion is a fundamental part in the cultures methods and that is where western medicines form of relaxation methods used as a cure have gotten the incitement from. What these methods have in common is the conscious focus on relaxing the muscles volitionally. (Jukka Kataja 2004, 22.)

The aim in relaxation is to preserve balance of the body and mind in different situations for example by meditation which is common in the East (Kataja, J. 2004, 22; Herrala, Kahrola & Sandström, 2008, 169). For some different forms of exercise ranging from light to very demanding activities is a way to release pressure. One might need rest, silence and even a moment of being alone to relax and the other need physical action with friends for example watching a football game to have the energy for daily life.

For example, reading, music, yoga, art are all ways to relax. (Herrala, Kahrola & Sandström 2008, 170.)

Being relaxed is a conscious action and occurs when a person is awake. When practicing a certain relaxation method, it starts with light relaxation while the person is conscious but the state of consciousness changes towards sleep and subconscious state when the relaxation deepens. Being able to relax is associated with feelings, emotions and changes in alertness for example relaxation is always associated with feelings of pleasure. In addition, other psychical causes of relaxation are calming down the mood, balancing the mind and making the person feel refreshed all over. Relaxation creates a feeling of being more focused as well as having a positive, confident and accepting attitude towards the present and future. Other physical causes of relaxation are easing of tension, relaxation of muscles and diaphragm, breathing becomes steady, blood circulation increasing and the feeling of warmth as well as the decrease in pain. (Herrala, Kahrola & Sandström 2008, 170-171.)

There are many relaxation methods and they all effect on the body differently for example music, experienced as pleasant, activates the brain's rewarding system leading to positive feelings. In the body's relaxation response changes occur (oxygen consumption decreases, heart rate and breathing frequency grows smaller and the blood vessels of peripheric blood flow dilate) that can be seen in the sympathetic nervous system slowing down and parasympathetic vagus nerve activating. Due to relaxation response, the limbic areas in the brain arise to alleviate feelings of stress and anxiety. The longstanding Jacobson's and Mitchell's relaxation techniques make the relaxation response possible even though the events initiating the process are not related to the rewarding system. In Jacobson's progressive relaxation is based on tension-relaxation technique where the whole body's muscles including the diaphragm muscles are alternately contracted and relaxed in a systematic order. The muscles are first contracted isometrically and then relaxed moving from one body part to the other. When relaxation occurs the diastolic and systolic blood pressure decrease, heart rate slows down and breathing frequency grows smaller. (Herrala, Kahrola & Sandström 2008, 170-171.)

5.4 Psychophysical therapy methods

Exercise has an essential part in guiding the client to exercise voluntarily in a way that increases the feeling of being in control of their own life. Exercise is considered beneficial for the health while effecting positively on physical and mental wellbeing. In methods of psychophysical therapy mentioned below, the key factor is on normal function of the diaphragm together with breathing as that is connected to the whole function of the body. When the breathing flows freely in different positions and movements it shows that the self-image of one's body is functioning. (Talvitie, Karppi & Mansikkamäki 2008, 271-272, 281-282.)

The Body Awareness Therapy was developed by Getrud Roxendal and it aims to increase body awareness. By increasing body awareness, we also increase body control and self-awareness. Body control is our ability to control our posture, movements and the tension in our muscles. The basics in the therapy are the body's relation to the surface they are on and the midline, the body's movement center, breathing, flow of movement and conscious presence. Furthermore, conversations initiated by the client about how they experience the exercises and what feelings they awaken have an important part in the therapy. Usually the focus isn't on muscle tension or relaxation because muscle tensions go off when different dimensions of the bodily self can be brought to function. Different functions examined in the therapy are divided into three parts; observation, assessment and exercise. Important to remember in the therapy is that the exercises are not meant to become a routine but instead are a part in a person's process of developing conscious presence and awareness of his or herself. (Talvitie, Karppi & Mansikkamäki 2008, 269-272.)

The body's relation to the surface has a big role in the person's posture and balance. The body's relation to the surface means how the person uses the supporting surface and how their body weight settles on surfaces in different positions for example in sitting, laying down and in walking. A safe, wide base of support against the surface is required to relax and be balanced whereas a small base of support against the surface can create tension to the posture. A balanced position is such that the body's relation to the vertical axis is such that the load on the muscles supporting the posture is the

smallest amount. In this position, the body has energy enough for the muscles to function in the distal parts of the body. Postural errors (the body's deviations from the vertical axis) can create strain on the joints, muscle tension, pain and balance problems. The body's movement center is (located on the same height where the thoracic diaphragm attaches to the spine) where many movements for example rotations, elevations and upper body movements originate from. The muscles use less energy to perform movements and the movements are more efficient when the body control is balanced. (Talvitie, Karppi & Mansikkamäki 2008, 270-271.)

The Norwegian Psycho Motor Physiotherapy (NPMP) is based on Wilhem Reich's concept where therapeutic body approach is combined with psychoanalysis. In this therapy, the idea is that the human psyche and body are inseparable. They both are functionally united together and the emotional, physical and mental reactions of the human psyche and body cannot be divided clearly from each other. Breathing is the core concept of the therapy and releasing the breathing releases feelings at the same time. In addition, our manner of breathing influences the experiences we have. The human body shows many things such as the genetic factors, the human life cycle and posture. According to Reich severe muscle tensions are related to suppressed emotions as well as difficulties in breathing, emotional state and problems all of which are linked to each other. Based on psychomotor theory a healthy individual has a good balance, elastic tissues, a body that stretches and moves freely as well as flexibly in relation to each other. (Talvitie, Mansikkamäki & Karppi 2008, 272-273.)

Psychodynamic body therapy is a form of therapy that aims for the acknowledgement of experiences, conflicts caused by them as well as attempts to solve them. Furthermore, it involves the client knowing that these experiences reflect on the body. The goal is for the client to be more in touch with themselves and their body through concrete experiences as well as understand the meaning of their physical reactions. The focus is primarily not on the disease or changes and problems caused by it but instead the client starts with areas they have resources for. Psychodynamic body therapy is divided into two approaches; physical and psychotherapeutic. The physical approach mainly represents the Norwegian Psycho Motor Physiotherapy and the focus is on the client's breathing, posture and muscle tensions. The psychotherapeutic approach focuses on the physiotherapist explaining the client what their physical

reactions mean and the interaction between client and the professional is directed at the experiences and expressions of the client. (Talvitie, Mansikkamäki & Karppi 2008, 275-276.)

There are many different body therapies that increase self-awareness used in physiotherapy. Through different body exercises the aim is to increase understanding of the effect the body and mind have on each other. By becoming aware of this and increasing self-awareness it's possible to correct incorrect muscle tensions that result in loading postures, incorrect movements and pain. Other essential methods used in Finland by physiotherapists are the Feldenkrais Method, progressive relaxation, autogenous relaxation, applied relaxation and touch and massage. (Talvitie, Mansikkamäki & Karppi 2008, 276-280.)

6 ASSOCIATION FOR VISUALLY IMPAIRED

Helsinki and Uusimaa Association for Visually Impaired is an association for the blind and severely visually impaired operating in Uusimaa. The association was founded in 1910 and there are six local associations in their area of operation. The association also takes part in the decision making of improving services and accessibility for the visually impaired. The association organizes different events together with volunteers. (Website of Helsingin ja Uudenmaan Näkövammaiset Ry 2017.)

The association aims at working towards visually impaired people being able to live independently and as an equal citizen while contributing to a functional society. This is done by effecting on the society and its services as well as organizing services and activities themselves. (Website of Helsingin ja Uudenmaan Näkövammaiset Ry 2017.)

7 BODY AND MIND MEET – A FUNCTIONAL DAY

The thesis idea was in the mind of the author from the start. The author chose a different thesis topic at first but changed it later because the author didn't feel passionate about the topic. The interest towards this topic was personal as the author has a family member with visual impairment. Later searching for theoretical and practical information the author felt that there is a need for this specific topic because of the needs of this target group and the small number of similar implementations found.

7.1 Preparation of the project

The project started with having an initial plan of the event. After that the author contacted the association and met with the association's representative to discuss the idea of a collaboration. In the first meeting, the thesis topic was introduced and initial idea of the content of the functional day. Based on the discussion and information the author received about the association and its members the author and the association's representative agreed on a collaboration and the possible content of the functional day. All the associations members are past middle age or older and together with the objective of the thesis it was agreed that the author would instruct chair yoga to the members of the association as the first part of the functional day. The rest of the program the author decided and planned by herself. The program was sent to the associations representative and from there it was sent onwards as an audio leaflet as well as a printed version to reach the members of the association and possible participants interested in the event. After the leaflet was sent out the author visited the associations weekly meeting on 29th September 2017 and met possible participants, introduced herself and the event and invited all to join.

7.2 Implementation of the functional day

The implementation of the “Body and mind meet” was on the 28th of November from 13-15.30. The functional day was held in the facilities of Pengertalo in Helsinki. The author of the thesis was responsible for planning the content and implementation of the day. The functional day consisted of a 45-minute chair yoga session and an hour of different body awareness and relaxation exercises. In the end, there was 30 minutes of coffee service where the participants could give feedback and answer to the feedback questionnaire.

The outline of the functional day (Appendix 3) stayed the same throughout the process but the content in detail was planned before the implementation to suit the target group’s needs. For chair yoga, there was reserved 40 minutes of time but in the implementation 45 minutes was used. The body awareness and relaxation part had four sections which lasted 10-15 minutes per section. All the movements were done in standing or sitting position.

In the implementation, the focus was on breathing, body awareness and relaxation exercises. After each part of the program (Appendix 2) there was a short discussion where the participants could tell freely what thoughts they had about the exercise and how they felt. The program ended in a pair relaxation. The use of voice was important in the implementation and instruction and that was where the emphasis was in the planning of the exercises. The instruction of the exercises in the program was planned and carried out in a way that all the participants could perform them without needing visual guidance of the instructor. In the chair yoga, the instructor circled around the group of participants. First with a verbal greeting the instructor informed the participant of her presence and then facilitated the participants in the movements. With the body awareness and relaxation exercises the participants performed each in their own way without guidance or correction.

The participants were gathered through the advertisement (Appendix 1) that was in written form and as an audio recording. The number of participants, that attended the functional day, were nine altogether including one assistant of the participant. Two of the association’s representatives were also present. The age of the participants ranged

from 49 to 76-years of age. One participant had a guide dog with them. From other assistive aids present in the functional day, there was a white cane that one participant used. All the other participants were without assistive aids and two of them arrived with an assistant to the premises.

The objective of the day was to promote physical activity to the participants and support their mental health. The other objective was to introduce body awareness and relaxation exercises and give tools how to practice these exercises. Increasing self-awareness effects to muscle tension, pain, posture and incorrect movements. In the functional day through practicing different breathing-, relaxation-, and posture exercises the idea was to effect on the body awareness and mental health of the participants.

7.3 Feedback questionnaire

The feedback questionnaire (Appendix 3) was created to acquire information about the participants and if the purpose of the thesis was met in the implementation. It was already decided in the second discussion with the association's representative to not collect information beforehand about the participants for example via email. The most important reasons listed were based on the association's representative's thoughts of the difficulty participants would have filling out information online without help together with the possible lack of participants due to obligatory enrolment to the instructor via email.

Feedback questionnaires were filled out by eight participants leaving one participant without feedback due to the participant leaving before the feedback could be given. All the participants, who filled out the feedback questionnaire, felt that the "Body and mind meet" functional day was useful and that they would like to participate in a similar event in the future. Some of the participants' experiences and thoughts of the exercises are mentioned below:

"My body is constantly tense."

"I got the encouragement to start yoga again."

“Expression of the exercises were clear for a visually impaired person.”

The mean age of the participants (Figure 3) was 64.6 ranging from the youngest being 49 years and the oldest being 76 years old. The degree of the disability caused by the visual impairment of the participants based on the questionnaire was: one participant had congenital visual impairment of 99.5%, other three participants had visual impairment of 100% since childhood and the other three participants had visual impairment ranging from 18-100% that occurred in the last 3-20-years. The assistant of the participant was not counted in the figure. Forms of exercise the participants engage in now mentioned in the feedback were: volleyball, walking with the dog, going to the gym and swimming. One participant mentioned exercising four times a week, another one to two times a week while the other six participants said to exercise one time a week.

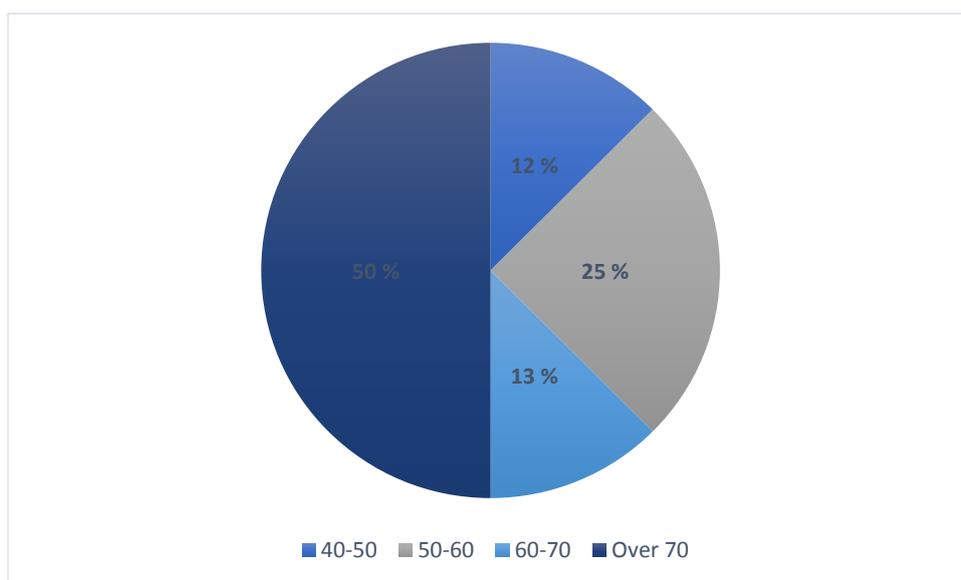


Figure 3. Age distribution of the participants

Different musculoskeletal and other problems mentioned were pain in shoulder, shoulder impingement, knee injuries, mild brain infarct, hip artificial joints, pacemaker, formation of cartilage in the hand and pulmonary fibrosis. The discussion in the beginning and in the end of the day of the participants current mood ranging from 0-10 showed that most of the participants' had an increase of mood at the end of the day. One participant experienced their mood to stay at the same level and another participant joined in the middle of chair yoga leading to that person's current

mood to be missing in the questionnaire while the rest of the participants had a mood increase.

The most useful exercises (Figure 4) mentioned in the verbal and feedback questionnaire were breathing and voice exercises. Other useful exercises were chair yoga, tension-relaxation exercise, pair massage with a ball and one participant thought that the overall implementation of going through the whole body was good. One participant answered maybe to continuing the exercises in the future while the rest of the participants were interested in continuing with some of the exercises. In addition, all the participants were interested in participating in a similar event in the future and felt that the “Body and mind meet” functional day was useful. Feedback to the author was positive and one participant said the way of instruction suited to person with visual impairment. One participant mentioned that with tension-relaxation method there wasn't enough time to get the sensation of the difference between relaxed and tense. Another participant suggested that there should be more events like this as instructed exercise motivates to move. Feedback of the new thoughts or ideas the functional day gave to the clients in their own wellbeing and activity of daily life are mentioned below:

“I did get new ideas. Especially I hope to start breathing and relaxation exercises.”

“The event could be divided into two separate days focusing on breathing and the use of voice on a separate day.”

“I used to do yoga. Now I can't do yoga on the floor so this was useful.”

“Practicing relaxation. I would like to learn how to relax.”

“I got new ideas of breathing exercises done on the floor.”

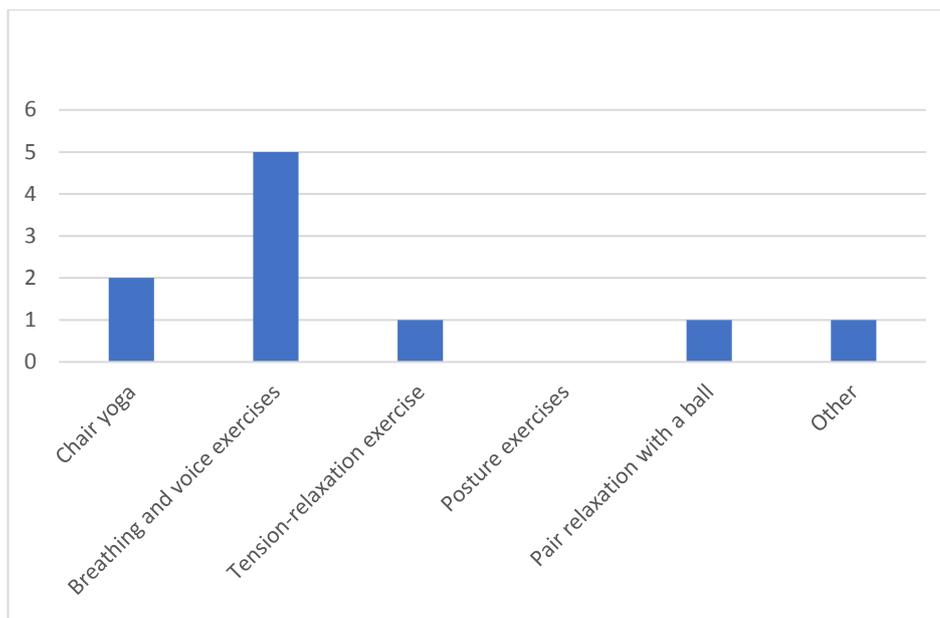


Figure 4. Which exercises did you find the most useful?

7.4 Conclusion

The functional day was perceived as useful and all the participants were interested in taking part in a similar event in the future. The method of instructing suited the target group's needs and the exercises were suited for all the participants regardless of their level of fitness or disability. The most useful exercises found by the participants were breathing and voice exercises. Suggestions for the future were that the day could be divided into two parts and that way there could be more focus on breathing and use of voice. This option also gives the participants more time to relax and practice body awareness. Based on the feedback it can be concluded that a similar kind of event would be beneficial for this target group.

8 THESIS PROCESS

The process started initially in September 2016 with coming up with a topic for the thesis. The plan in the beginning was to do a collaboration with an association and gradually the author came up with the idea to do it in collaboration with an association

for the visually impaired. During the late autumn, the topic was tentatively decided and discussed further with the teacher. The timeline of the thesis (Figure 5) was approved by the supervisor and thesis topic was presented in February 2017. After that there was a long break and eventually a change of thesis topic during the summer of 2017. In the summer, the author started to plan a new thesis topic and develop the idea of the topic further. In the beginning of September 2017, the author contacted the association about the collaboration. The implementation day was decided in September and the content planned in more detail. Writing the theory and planning the implementation was focused on the autumn and winter. The implementation was held on the 28th November 2017. Presentation of the thesis will be on 19th January 2018.

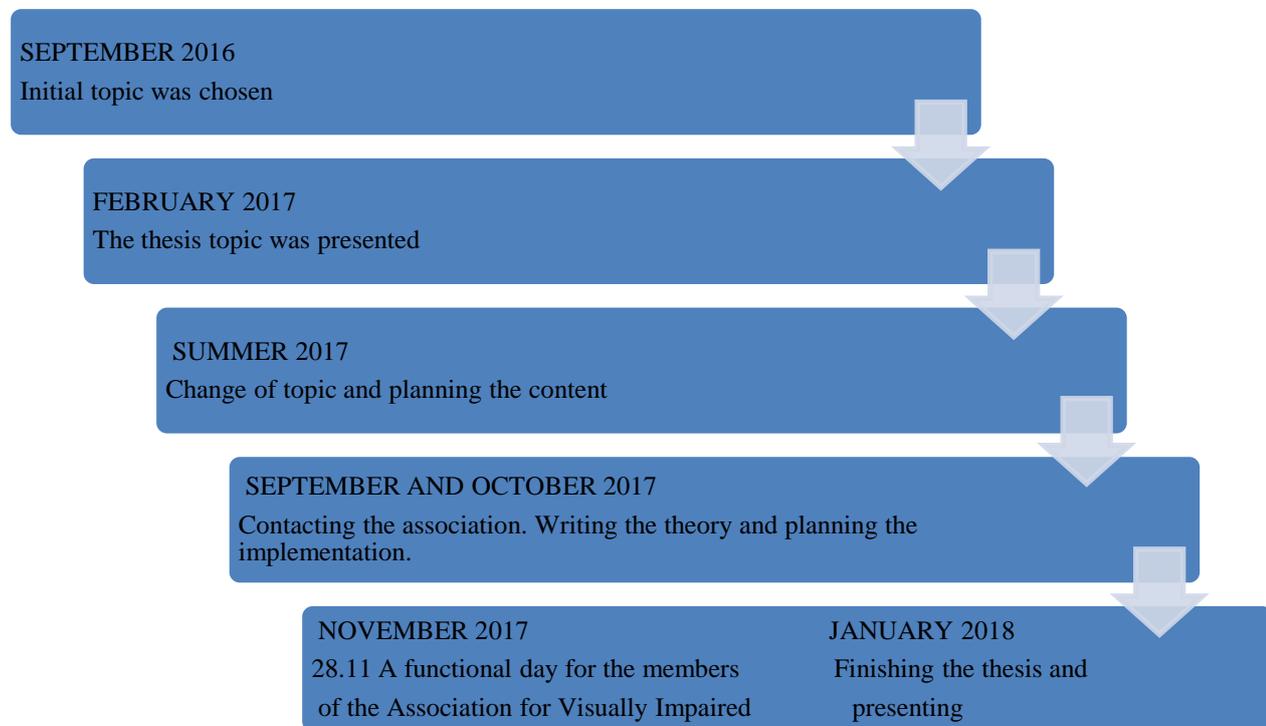


Figure 5. Showing the thesis process

9 DISCUSSION

My thesis implementation is in a way introduction to this specific area as psychophysical approach in physiotherapy is a very wide subject. As I implemented and planned a functional day focusing on psychophysical approach I decided early on that the implementation would be organized for one day. Depression, tension, postural

changes and many other things take time to change as they might have been present for many years. As a participant said: “Being constantly tense in my surroundings, it’s hard to stop and relax.” Some of the exercises could have been longer in the functional day so that all the participants could get the chance to experience relaxation in the exercises. As a developmental idea, a long-term implementation including many sessions would support the mental health of this target group and aid them in understanding as well as practicing body awareness and relaxation exercises at home further. In addition, this kind of topic could have body awareness tests or other tests to gain information from the participants together with questionnaires in the beginning and end of the implementation. In addition, it would be better done with a pair to divide the work. However, my topic focused on promoting physical activity and supporting the mental health and my objectives for the thesis were chosen keeping in mind the content of my implementation.

The results of the functional day were positive and exceeded my expectations. However, the participants attending were already motivated as they are interested in their own health and usually attend the meetings organized by the association. Reaching to those who would really benefit from this implementation would require a different approach and implementation of the thesis to get participants attending. For example, visually impaired teenagers are an important group in regards of their body image developing and comparing themselves to their peer’s due to their visual impairment. This age group would benefit from a psychophysical approach implemented for example in their school surroundings.

Overall, the thesis has its strengths and weaknesses. The theoretical background of the thesis could have been more in depth for some parts and the author had occasionally difficulties in limiting some subjects and wanting to cover the areas found important for the topic. Limited research and implementations related to the topic also caused difficulties but at the same time increased the interest towards the topic. In addition, the collection of feedback from the participants was influenced as the representatives of the association and the author collected the feedback from the participants. It must be kept mind that this effects possibly to the content of the feedback and participants might feel restricted in giving more honest feedback when the author or another person is present. Nevertheless, collecting feedback in such a manner was decided suitable

for this implementation due to the participants' restrictions in vision. The strength of the thesis was the implementation of the functional day and there were no mentionable challenges when instructing the exercises which highlighted the in-depth planning of the functional day. The participants were motivated from the start, reflected the exercises un-prompted and made developmental suggestions. In the implementation, the planning of the content and instructing style required much thought as a visually impaired person demands a whole different approach to get the idea of the movements correctly than a person who has sight. In the process of the thesis the author learned a lot of new things that can be used in future career as a physiotherapist.

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APPENDIX 1. AN ADVERTISEMENT OF THE FUNCTIONAL DAY

Keho ja mieli kohtaavat

Lämpimästi tervetuloa ”**Keho ja mieli kohtaavat**” tilaisuuteen tiistaina 28.11.2017 klo 13-15.30 Pengertuvan tiloissa, Pengerkatu 11 A 3. Tapahtuman vetäjänä toimii fysioterapeuttiopiskelija Oona Salo ja tapahtuma on osa hänen opinnäytetyötään. Kaikki ovat tervetulleita mukaan, paikalle tarvitset vain avoimen mielen ja vaatteet, joissa on mukava olla. Ohjelman pääpaino on toiminnallinen ja tilaisuudessa liikutaan kevyesti. Tilaisuus on kaikille, jotka ovat kiinnostuneita mielen hyvinvoinnista ja liikkumisen ilosta! Tilaisuuden tarkempi ohjelma on mainittuna alla. Lopuksi on pieni kahvitarjoilu ja palaute vetäjälle tapahtumasta, joten varaathan aikaa sille.

- 13-13.20 Tutustuminen ja tapahtuman esittely
- 13.20-14 Tuolijooga
- 14-15 Rentoutuminen & Kehotietoisuus
- 15-15.30 Kahvitarjoilu ja keskustelu



APPENDIX 2

APPENDIX 2. "BODY AND MIND MEET" CONTENT OF THE DAY

Functional day was from 13-15.30 in Pengertupa, Helsinki.

1. Introduction of the thesis and instructor. Participants introduce themselves by name and inform their current mood ranging from 0-10.
2. Short introduction of chair yoga and 45-minutes of instructed chair yoga. Reflection in the end.
3. Body awareness and relaxation exercises. Short theoretical information about breathing. Conversation between participants about what is body awareness. Short introduction and theoretical information about what is body awareness. Sitting and standing body awareness exercises where the focus is on finding the vertical axis of the standing balance and a stable, free alignment of the sitting posture. Reflection in the end.

Different types of breathing: superficial, deep and the participants normal way of breathing. Different sound exercises: m-, i- and o- sounds. Reflection in the end.

Tension-relaxation exercise in sitting position. Reflection in the end.

Pair relaxation with massage balls and each pair has 4 minutes per person to relax. Reflection in the end.

4. Verbal feedback from participants and current mood ranging from 0-10. Participants fill out feedback questionnaire and have coffee service.

APPENDIX 3. FEEDBACK QUESTIONNAIRE

KYSELYLOMAKE

Sukupuoli: _____ Ikä: _____

Kuinka kauan sinulla on ollut näkövamma ja minkä asteinen?

Onko sinulla liikunta- ja tukielimistön ongelmia? Mitä?

Millaiseksi arvioit mielialasi tällä hetkellä asteikolla 0-10?

Millaiseksi arvioit mielialasi ”keho ja mieli kohtaavat” tunnin jälkeen asteikolla 0-10?

Harrastatko liikuntaa tällä hetkellä? Mitä ja kuinka usein?

Mitkä harjoitukset koit hyödyllisimmiksi? Aiotko tehdä harjoitteita tulevaisuudessa?

Koitko tapahtuman hyödylliseksi? Olisitko kiinnostunut osallistumaan vastaavanlaiseen tapahtumaan myöhemmin?

Koetko saaneesi uusia ajatuksia ja ideoita arjessa liikkumisen ja omaan hyvinvointiin tapahtuman myötä? Kerro omin sanoin.

Mitä palautetta antaisit ohjaajalle?

Onko sinulla ideoita tai palautetta, mitä olisit toivonut tapahtumalta?

KIITOS VASTAUKSESTASI!