

Why yoga?

Subjective perceptions of yoga's influence on health and the possibility to combine yoga and physiotherapy treatment. - A qualitative research.

Maria Wiik

EXAMENSARBETE	
Arcada	
Utbildningsprogram:	Utbildningsprogrammet för Fysioterapi
Identifikationsnummer:	4502
Författare:	Maria Wiik
Arbetets namn:	Why yoga? Subjective perceptions of yoga's influence on health and the possibility to combine yoga and physiotherapy treatment. - A qualitative research.
Handledare (Arcada):	Hannele Sievers
Uppdragsgivare:	Little Yoga Space
<p>Sammandrag:</p> <p>Detta examensarbete är ett uppdrag av Little Yoga Space i Lissabon utfört för att fungera som grund för evaluering och förbättring av deras servicetjänster. Målet med studien är att undersöka varför yoga väljs som huvudsaklig motionsform för att upprätthålla hälsan och förebygga hälsorelaterade problem och smärta, samt att undersöka hur yoga och fysioterapiverksamhet kunde kombineras i större utsträckning.</p> <p>Studien är kvalitativ till sin karaktär och som datainsamlingsmetod användes semistrukturerad intervju och kroppskartor. Forskningsfrågorna var: <i>Vilka är de övergripande upplevda hälsofördelarna av yoga?</i> samt <i>Hur inverkar yoga på respondenternas subjektivt upplevda hälsa?</i></p> <p>Som referenser användes artiklar och undersökningar från databaser, sökmotorer, olika instituts webbsidor samt styrdokument och rekommendationer från organisationer. Studiens resultat analyserades utgående från en fenomenologisk ansats och resultaten kategoriserades i större helheter och teman utgående från WHO's definition av begreppet hälsa.</p> <p>Resultaten visar att yoga väljs tack vare sin positiva inverkan på olika nivåer av upplevd hälsa och välmående. Yoga upplevs ge tillfredsställelse och känsla av välmående i relation till den fysiska, psykiska och sociala hälsan och ökar den upplevda livskvaliteten i det dagliga livet. Yoga anses också ha positiv inverkan på förebyggande av skador och öka intresset för engagerande i hälsofrämjande aktiviteter och valet av en mer hälsoinriktad livsstil. Resultaten i den här studien stöds av tidigare forskningsresultat och understöder teorin om att fysioterapiverksamhet och yoga kan vara en fördelaktig kombination i fråga om upplevd hälsa, förebyggande och behandling av skador och fysiska samt psykosomatiska åkommor, deltagande i hälsofrämjande aktiviteter samt även gällande sociala och socio-ekonomiska frågor.</p>	
Nyckelord:	Physiotherapy, experienced health, physio-yoga, yoga therapy, Little Yoga Space, medical yoga, lääkinnällinen jooga, motivation
Sidantal:	50
Språk:	Engelska
Datum för godkännande:	30.4.2014

DEGREE THESIS	
Arcada – University of Applied Sciences	
Degree Programme:	Physiotherapy
Identification number:	4502
Author:	Maria Wiik
Title:	Why yoga? Subjective perceptions of yoga's influence on health and the possibility to combine yoga and physiotherapy treatment. - A qualitative research.
Supervisor (Arcada):	Hannele Sievers
Commissioned by:	Little Yoga Space
<p>Abstract:</p> <p>This thesis is requested by Little Yoga Space in Lisbon and conducted to stand as a base for evaluating and developing the services provided. The aim of the study is to investigate why people chose yoga as their primary exercise form to maintain health and treat discomforts and pain, and to understand how yoga could be combined with physiotherapy practice in a wider range. A qualitative method with semi-structured interview and body drawings as data collection method was used. The research questions were: <i>What are the overall experienced health benefits from yoga?</i> and <i>How does yoga contribute to the respondents' subjective perception of health?</i></p> <p>References consist of articles and researches from databases, search engines and institute webpages, steering documents and recommendations provided by organizations. The results of the study were analyzed using a phenomenological approach, organizing the data into categories and comprehensive themes based on the WHO definition of health.</p> <p>The results show that yoga is chosen for its many benefits on different levels of the human experience of wellness and health. Yoga is experienced to provide satisfaction and wellbeing in terms of health on physical, psychological and social levels, and it increases the experienced quality of life on a daily basis. Yoga is also seen as beneficial for preventing discomforts and injuries, for creating interest to engage in health promoting activities and choosing a more health focused life style. These results are supported by earlier findings and encourage the theory that physiotherapy practice and yoga could be a beneficial combination in terms of experienced health, injury prevention and treatment, engaging in health promoting activities and also regarding social and socio-economic issues.</p>	
Keywords:	Physiotherapy, experienced health, physio-yoga, yoga therapy, Little Yoga Space, medical yoga, lääkinällinen jooga, motivation
Number of pages:	50
Language:	English
Date of acceptance:	30.4.2014

OPINNÄYTE	
Arcada – University of Applied Sciences	
Koulutusohjelma:	Fysioterapia
Tunnistenumero:	4502
Tekijä:	Maria Wiik
Työn nimi:	Why yoga? Subjective perceptions of yoga's influence on health and the possibility to combine yoga and physiotherapy treatment. - A qualitative research.
Työn ohjaaja (Arcada):	Hannele Sievers
Toimeksiantaja:	Little Yoga Space
<p>Tiivistelmä:</p> <p>Tämä opintinäyte on Lissabonissa sijaitsevan Little Yoga Spacen tilaama kehitystyö, jonka tavoite on toimia pohjana heidän palvelujensa arvioinnissa ja kehittämisessä. Tutkimuksen tavoite on ymmärtää miksi jooga valitaan pääliikuntamuodoksi terveyden kunnossa pitämisessä ja terveyteen liittyvien ongelmien ennaltaehkäisyssä, sekä tutkia miten jooga ja fysioterapian toiminta voitaisiin paremmin yhdistää laajemmassa muodossa. Tutkimus on luonnoltaan kvalitatiivinen ja tiedonkeruun menetelmänä käytettiin puolistrukturoitua haastattelua ja kehonkuvan piirtämistä. Tutkimuskysymykset ovat: <i>Mitkä ovat joogasta koettuja terveyshyötyjä?</i> ja <i>Miten jooga vaikuttaa vastaajien subjektiivisesti koettuun terveyteen?</i></p> <p>Artikkeleita ja tutkimuksia tietokannoista, hakukoneista sekä erilaisten laitosten internet-sivut että järjestöjen poliittisia asiakirjoja ja suosituksia käytettiin viitteinä. Tutkimuksen tulokset analysoitiin fenomenologisen analyysimenetelmän avulla. Tulokset ryhmiteltiin suuremmiksi kokonaisuuksiksi ja pääteemoihin WHOn terveys-määritelmä perusteena.</p> <p>Tuloksien mukaan, joogaa valitaan eritasoisten terveyteen ja hyvinvointiin kohdistuvien positiivisten vaikutusten perusteella. Jooga koetaan antavan tyytyväisyyden ja hyvinvoinnin tunteita suhteessa fyysiseen, psyykkiseen ja sosiaaliseen terveyteen, ja lisäävän koettua elämänlaatua jokapäiväisessä elämässä. Joogan katsotaan myös olevan tärkeä tekijä vammojen ennaltaehkäisyssä ja terveyden edistämisen toiminnassa. Tämän tutkimuksen tulokset saavat tukea aiemmista tutkimustuloksista ja tukevat teoriaa siitä, että käytännön fysioterapia sekä jooga saattavat muodostaa suotuisan yhdistelmän liittyen koettuun terveyteen, vammojen ehkäisyyn ja hoitoon, sitoutettuun edistettyyn terveys-toimintaan sekä sosiaalisiin ja sosio-ekonomisiin kysymyksiin.</p>	
Avainsanat:	Physiotherapy, experienced health, physio-yoga, yoga therapy, Little Yoga Space, medical yoga, lääkinnällinen jooga, motivation
Sivumäärä:	50
Kieli:	Englanti
Hyväksymispäivämäärä:	30.4.2014

CONTENT

1	INTRODUCTION	9
2	THEORETHICAL BACKGROUND AND CONCEPTUAL FRAMEWORK .	12
2.1	The multidimensional health concept	12
2.1.1	Perceived health	13
2.2	Physiotherapy	14
2.3	Yoga.....	15
2.4	Motivation	17
2.4.1	A Theory of Human Motivation	18
2.4.2	Self-determination theory (SDT)	19
2.4.3	Health belief and motivation	19
3	PREVIOUS RESEARCHES	21
3.1	Physio-yoga.....	21
3.1.1	Previous researches on physio-yoga.....	22
4	METHODOLOGY	24
4.1	Qualitative research	24
4.2	Data collection method.....	25
4.3	Sample and design of the study	26
4.4	Analyzing data.....	27
4.5	Reliability and validity.....	28
4.6	Ethical considerations	28
4.7	Limitations.....	29
5	RESULTS.....	31
5.1	What are the overall experienced health benefits from yoga?	31
5.1.1	Why yoga?	32
5.2	How does yoga contribute to the respondent's subjective perception of health?	34
5.2.1	Subjective experiences related to physical health.....	34
5.2.2	Experiences related to mental and psychological health.....	36
5.2.3	Experiences related to social well being and daily life activities	38
5.3	Review of results.....	40
6	DISCUSSION	41
6.1	Choice of method.....	41

6.2 Discussion about results.....	42
6.3 Summary and implications.....	44
REFERENCES.....	46
APPENDICES	51

Figures

Figure 2.4.3. The Health Belief Model. (US Public Health Service, 1950).

FOREWORD

My warmest and sincerest *thank you*, to all of you who have helped me, pushed me and supported me in proceeding with this research.

To Hannele Sievers, my supervisor at Arcada University of Applied Sciences, for patience, support and wise counseling,

To Arina Holm Joenssen, at Little Yoga Space, for making this cloud of thoughts in to something more than just thoughts, for organizing, helping and making it possible,

To Ludde Nylund and Linnea Snickars for being my second glasses, phrasebook and giving me the well needed grammatical reminders,

And last, but not least, to my dad, for leading me onto a health conscious path of life, for always cheering and never doubting.

Thank you.

Natural forces within us are the true healers of disease.

- Hippocrates

1 INTRODUCTION

According to the World Health Organization (WHO, 2013) at least 2.8 million adult people in the world die as a result of obesity and overweight. In the meantime more than 60% of the world's population fails to complete the recommended amount of physical activity required to achieve health benefits. These results are no doubt alarming. Meanwhile, other research results show that an increasing number of people actually are concerned about their health. There are huge ongoing health and healthy lifestyle trends around the world concerning workout styles, like cross-fit, high intensity training (HIT) and yogalates (Thompson, 2013) and diets like the anti-wheat and ancient grains diets, LCHF and Paleolithic diet (Food Navigator USA, 2014) which have recently become interests for a lot of health devoted and also maybe not that health devoted people.

In 2001, the Swedish health authorities introduced a new concept, where preventing diseases and health related discomforts are the central topics. The project is called FaR, (Fysisk aktivitet på recept; Physical activity on medical description) and is based on empirical results showing that physical exercise can prevent and treat several diseases and illnesses just as good as medical descriptions. Physical activity is made part of the treatment based on the client's own goals and interests, and can be conducted individually or in groups (Folkhälsomyndigheten, 2001). Similar recommendations are nowadays seen in all the Nordic countries and most national health authorities are recommending 60 minutes of physical activity each day.

In the meantime the physiotherapy profession stands at a crossroad and needs to somewhat redefine itself. Nicholls and Larmer (2005) suggest in their paper *Possible futures for physiotherapy* that times are changing and the physiotherapists will face new challenges. The formerly health care professional-centered services are becoming more patient-centered, issues related to training, health, trends and the rapidly growing use of technical equipment require new curricula and training programs. Due to increasingly diverse populations and future economic burdens, physiotherapy will need to integrate more with other health care related professions and areas bringing the strengths of physiotherapy practice into a more holistic approach to health. A research carried out by the

Australian Physiotherapy Association (APA, 2013) report similar findings. Their report states that in the future, due to a changing health need among the population, physiotherapy needs to be able to provide a broader range of services that are more in response to the consumers need.

The work of a physiotherapist is multidisciplinary, and the professionals work with the whole body and the whole human being. Not only promoting, but also helping to create a sustainably healthy life and sustainable feelings of wellness and wellbeing. It is even our duty to help individuals finding their own energy resources and helping them improve their quality of life (Suomen Fysioterapeutit, 2010). This includes motivating the clients, trying to make the treatment as meaningful and useful as possible, and also, trying to affect the general life style of the client.

Little Yoga Space in Lisbon is owned by a physiotherapist and yoga teacher, currently aiming at evaluating and improving the work and service provided. Motivation and understanding the needs and wishes of the clients are central questions within this work, and to improve the services it is necessary to understand what the clients want and need.

According to Posadzki and Parekh (2009) obstacles like time, lack of motivation and the question about making the physiotherapy treatment attractive might be a challenge for many physiotherapists. The importance of doing the exercises correctly and trying to internalize new movement patterns and ergonomic positions cannot be overlooked within this profession, and this can be both difficult and very time consuming, not least if the client is unmotivated. According to recent research results discussed by these above-mentioned authors, yoga and physiotherapy share several benefits and could perhaps even be considered paths to a mutual goal.

This research is made for Little Yoga Space as part of their evaluation and service-improvement and aims at trying to understand what makes a certain kind of workout, in this case yoga, appealing to clients. What are the benefits we are looking for, which are the factors that will make us internalize a certain health related behavior and redefine our lifestyle? What are the subjective experiences of yoga that make the clients continuously come back for more?

For the author, integrating physiotherapy and yoga is an interesting option. Physio-yoga is a relatively new phenomenon that has come to grow quite fast during the last years, especially among private practitioners in physiotherapy. Could integration between these two be beneficial for the physiotherapy practice in times of redefinition and change, and what are the theoretical benefits that could be gained from this union? These are the underlying main concepts for this study.

2 THEORETICAL BACKGROUND AND CONCEPTUAL FRAMEWORK

In this chapter the author will define the main concepts for the study and also present underlying theories within the same or connecting areas. The aim is to offer the reader concepts important for establishing a basic understanding of the areas and also to provide background information on related theories from the field.

2.1 The multidimensional health concept

Health, and the experience of having health or feeling healthy, might be a rather broad and difficult concept to define. The currently prevailing definition of health is stated by the World Health Organization in 1948: *Health is a state of complete physical, mental, and social wellbeing and not merely the absence of disease or infirmity.*

Health presumes a sense of wellbeing. According to the National Accounts of Wellbeing, NEF, wellbeing built up by the following parts:

- sense of individual vitality
- undertaking meaningful, engaging activities that makes the individual feel important, competent and autonomous
- inner resources or coping mechanisms that help us when things go wrong.

(NEF, 2009).

Wellbeing is furthermore a dynamic process that interacts with circumstances, activities and psychological researches meanwhile providing the individual a sense or feeling of how his or her life is going at the moment. High level of wellbeing indicate, that we better can deal with difficulties and problems, that we can engage with other people and the world around us and that we are more persistent and resistant to adversities and setbacks (NEF, 2009).

The WHO health definition is based on a holistic perspective of health, and is usually divided into several dimensions. One of the models divides health into three different sectors, all needed to experience complete health. *Physical health* can be defined as the

absence of disease and disabilities, and is related to the mechanical functions of the body. *Mental health* can be defined as the inner feelings of being well, having self-control and the presence of positive affections. It is the opposite of mental illness or mental disorders. *Social wellbeing*, or social health, is usually defined as the positive connection between people and the ability of functioning in the society. (Larson, 1993; Folkhälsoguiden, 2012; WHO; 2007).

2.1.2 Perceived health

Perceived health, or experienced health, is a subjective measure used for describing the health status in general. The concept usually includes the presence/absence of disease, physical health, physiological and psychological reserves and social functioning. Perceived health is furthermore a subjective and relative measure, and factors that might contribute to differences in perceived health vary from age, gender and social status to education, income and psychological factors (Idler & Kasl, 1995; Shields & Shooshtari, 2001).

WHO's definition of health is often called a holistic model, looking at the person as a whole. The wellness model is another frequently used health definition model, which adds the different states or levels of health, e.g. "better than normal, better than average". This model gives importance to our subjective feelings of health, or our perceived health (Larson, 1991).

According to Cramer et al. (2012) it is possible to divide the human experience into five dimensions; physical, emotional, cognitive, behavioral and social. What we experience and perceive, can be understood based on one or several of these dimensions. An experience might be positive on one level, but more negative on another. The more positive features we perceive on the five levels, the more positive is the experience in general and vice versa.

2.2 Physiotherapy

Physiotherapy, according to the World Confederation for Physical Therapy, WCPT (2011a), is a clinical health science that helps the clients to develop, maintain and restore maximum movement and functional ability throughout the lifespan. The use of evidence-based, natural methods such as exercise, motivation, adapted equipment, advocating and education are characteristic for the field of physiotherapy.

Physiotherapy takes a holistic, whole-person, approach towards health and wellbeing and includes the general lifestyle of the client (CSP, 2013). The character of the physiotherapy practice can vary according to the nature of the reason for the need of physiotherapy. Physiotherapy might be related to prevention of pain, diseases and movement disorders and/or health promotion, or related to treatment, intervention, habilitation or rehabilitation to an already existing need. The interventions can be individual and person specific, population oriented or group specific. (CSP, 2013; WCPT, 2011b).

Since early 1800s, physiotherapy has been a recognized health profession. The Swedish gymnast, Per Henrik Ling, is considered to be the *Father of Gymnastics* and he was the first to develop a physical education system based on patient treatment, training and guidance (Ther, 2007). Today physiotherapy interventions are holistic, taking the whole individual in mind, and often connected to the client's needs and motivational factors. Physiotherapy focuses on the whole aspect of health and it is difficult to separate these three areas (see chapter 2.1) from each other.

Today CSP and WCPT strongly suggest that proper goal setting, involving specific, measurable, achievable, realistic and time-targeted goals (S.M.A.R.T), aiming at a whole-person approach and promoting a healthy lifestyle are factors important for the outcome of the physiotherapy practice. Physiotherapy has shown to be beneficial in several ways. Neurological, neuromusculoskeletal (i.e. sports injuries, joint mobility, and muscular conditions), cardiovascular and respiratory improvements are some of the evidence-based benefits reported from physiotherapy.

In the World Confederation for Physical Therapy (WCPT) *guideline for quality exercise along the lifespan*, yoga is listed as one of the exercise forms that can be used within physiotherapy interventions. The purpose of these guidelines is to help the physiotherapist to design and structure a program or an intervention, and to assure the quality of the interventions and therapy. Yoga and physiotherapy share many aspects and have several similarities, the key similarities will be presented below.

2.3 Yoga

Yoga is an ancient exercise form that combines physical training with a strive for mental and spiritual wellbeing. Yoga has its roots in India, and the word *yoga* is Sanskrit and means *to unite* or *to join*. This connection, or union, is thought to occur between body, mind and spirit. Yoga can, in other words, be seen as a holistic exercise form that concerns the whole person and the whole wellbeing concept. According to the Merriam Webster dictionary, yoga is defined as a *system of exercises for mental and physical health*.

According to Mishra et. al. (2012), yoga is a science as well as an art of healthy living. During the last decades yoga has become more and more popular in the West World as well, partially because of the current researches made on yoga in relation to medical conditions, types of therapy and rehabilitation. Today the focus is towards a holistic treatment with modality for various somatic or psychological symptoms or dysfunctions.

Yoga is internationally recognized for its potential, and WHO began promoting yoga in developed countries in 1978. A study made in 2007 by the National Health Interview Survey (NHIS) shows, that yoga is the sixth most commonly used complementary practice among adults. At its best, yoga is also a preventing exercise form.

Psychological benefits from yoga

According to Posadzki and Parekh (2009) yoga techniques improve the stress tolerance, mood, mental focus and general wellbeing, meanwhile Rautaparta (2005, 23) and Cramer et al. (2012) reports findings as improved body awareness and use of better ergonomic postures in general life. There are also other research results stating that yoga significantly improves the attentiveness, lowers irritability and anxiety, and improves interpersonal relationships as well as enhances the self-rated quality of life (QOL) scores (Malathi & Damodaran, 1999; Waelde et. al, 2004; Moadel et. al, 2007). It might be worth pointing out that the QOL rating mentioned in Posadzki and Parekhs review is based on a study among breast cancer patients, but apparently the same results apply for other conditions as well as for healthy individuals.

Yoga also has positive psychological and neuropsychological effects showing improvement in coordination, balance and sensory-motor performance, increased feelings of self-efficacy and self-control, enhanced possibility to focus and to tolerate stress. (Manjunath et. al, 2003; Harinath et. al 2004; Posadzki & Parekh, 2009; Manchanda et. al, 2000.)

Physical and physiological benefits from yoga

Physical benefits from yoga are well documented in research reports. Reduction in neck- and lower back pain, improved posture and flexibility along with increased ROM, improved muscular strength and endurance, improved gait function and improved prevention of soft tissue injuries are some of the most common findings. Among the physiological ones, enhanced breathing techniques and improved lung functions, improved metabolism, increased blood circulation, stabilized blood pressure and heart rate, and improved cardiovascular capacity are some of the findings worth mentioning. (Manjunath et. al, 2003; Harinath et. al 2004; Posadzki & Parekh, 2009; Manchanda et. al, 2000.)

The yoga exercises are based on the use of postures (*asanas* or *yogasanas*) and sometimes, on the movemental flow created when combining different postures and posi-

tions. The asanas combined with a focused breathing pattern are carried out slowly and carefully in closed kinematic chains, possibly including isometric contractions and active stretching of muscles as well as auto mobilization of joints (Posadzski & Parekh, 2009). These stretches and auto mobilizations are similar to the ones used in physiotherapy, more known as various types of manual therapy.

Thus can be concluded that the above-mentioned researches have proven, that yoga has positive effects on the body's homeostasis similar to those gained from physiotherapy, which is why yoga can be combined with physiotherapy interventions (Posadzski & Parekh, 2009).

Yoga as a therapy form

In strive for wellbeing and health, yoga has been used as a therapy form conducted by yoga therapists all over the world. The International Association of Yoga Therapists (IAYT) wanted to define the concept yoga therapy and concluded in their conference in 2007, that *yoga therapy* is a process of empowering individuals to progress towards enhanced health and wellbeing, using the philosophy and practice of yoga.

According to a Finnish study, the nature of yoga therapy is flexible and adaptable, and yoga exercises can be used by people in various ages and with different levels of physical fitness. Yoga allows each person to adapt the exercises to best meet their individual needs (Niemelä & Rintala 2002, 223). Yoga therapy is also based on socio-economical and economical aspects. The goal is not merely a better physical health and the avoidance of diseases and injuries; it also improves your mental health and general sense of wellbeing, without using medicine, expensive equipment and/or treatment methods (Cameron & Parker, 2004, 275).

2.4 Motivation

The motives and emotions are considered to be the triggers of all human activity. A motive can be defined as an *inner incentive* that controls our activity. The motives are the

mental reasons and are perceived by the individual as will, lust or need (Maslow, 1943; Salo-Gunst & Vilkkö-Riihelä, 2000).

Things need to be meaningful and strongly connect with the personality in order to activate the individual. This can be further divided into inner and outer motivational factors. The *inner* factors can be described by personal gaining's; it's for a good cause, it does me well or it brings a good state of mind and positive feelings. *Outer* motivational things are factors like rewarding, reaching a goal or avoiding any kind of punishment or bad result. (Maslow, 1943; Salo-Gunst & Vilkkö-Riihelä, 2000).

2.4.1 A Theory of Human Motivation

One of the most well-known motivational theories through time is Maslow's Theory of Human Motivation. This theory was constructed in 1943 and is often visualized as a hierarchical pyramid where the most fundamental and basic needs are at the bottom. The three lowest levels in the pyramid are often described as *psychological needs*, *safety* and *belonging*, involving aspects such as food, sleep, homeostasis, body needs and absence of disease, health and the sense of belonging to a group and/or identification with other people. According to Maslow, the lower levels of the pyramid must be fulfilled and mastered until we can focus on the areas higher up in the hierarchy. If the motivational needs are not met, an individual may feel anxious and not well.

In health sciences, Maslow's hierarchy has, despite its somewhat limited construction, come to play a key role when creating a paradigm for professionals within various areas of the health sector. Benson and Dundis (2003) found that Maslow's theory could be used for better meeting individual needs and also in creating new opportunities for learning self-care strategies among health care clients. It has furthermore shown to be a useful model for understanding human wellbeing and perceived health from a holistic perspective, and it encourages health care professionals to assess individuals as a whole person.

2.4.2 Self-determination theory (SDT)

The self-determination theory (SDT) is a theory on human motivation and personality that focuses on self-motivated and self-determined behavior. The theory evolved from studies on intrinsic and extrinsic motivational factors. Ryan and Deci (1985) later proposed three psychological needs that are connected to self-determination; autonomy, competence and relatedness.

According to the SDT, *intrinsic motivation* plays a key role in motivating. Intrinsic motivation refers to doing something for its own purpose. Being intrinsically motivated means that activity itself represents the primary and only source of motivation. Results or greater goals are not important, the process in itself is. *Extrinsic motivation* is the other key element for motivation, which describes a certain behavior or activity carried out to gain something that is external to the activity itself.

To stay motivated and in order to sustain a certain health related behavior, processes of internalizing or integrating are essential. According to Ryan and Deci (2000), developing a sense of autonomy, competence and relatedness is critical. *Autonomy* means when an individual personally understands the value and importance of a behavior or health practice. *Competence* is when the client is not over challenged, but instead feels confident and capable of making a change or doing what it takes. This can be the practitioner helping to experience mastery. *Relatedness* is the third and final psychological need, which, in terms of health and rehabilitation, can be explained as an experience of being understood, listened to and cared for. This part explains the great importance of a good practitioner-patient relationship where the patient feels that he or she understands the how and why-aspects completely. (Ryan, Patrick, Deci & Williams, 2008).

2.4.3 Health belief and motivation

One of the most well-known and broadly used health belief models was developed by the US Public Health Service in the 1950s. The Health Belief Model (Fig. 1) describes how people show or do not show a health promoting behavior. The model explains how

perceived treats, benefits, barriers, self-efficacy and cues to action lead or may not lead to the likelihood of participating in health-promoting activities.

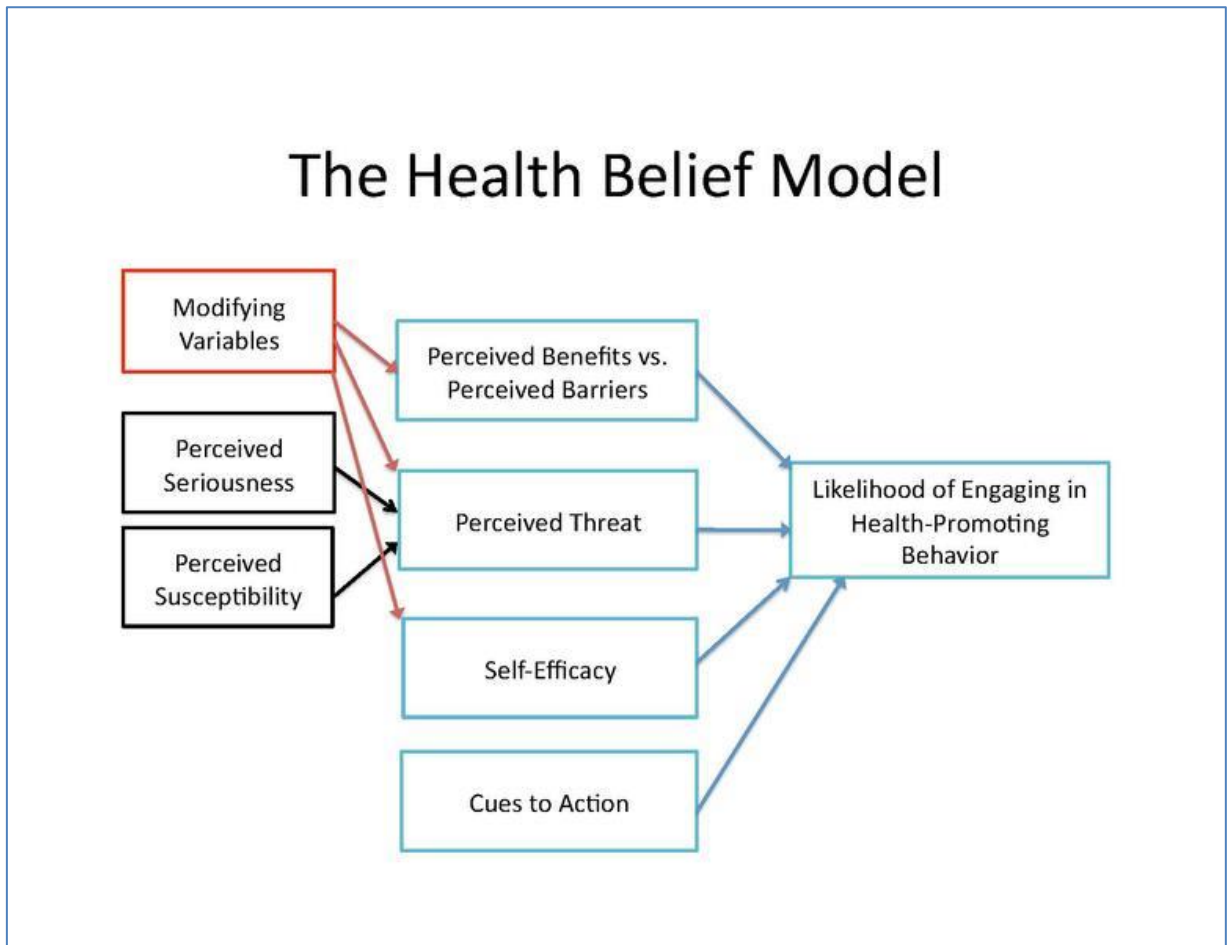


Fig. 2.4.3. The Health Belief Model. (US Public Health Service, 1950).

According to WCPT (2012) physiotherapists should use this model in their work with the clients to help them identify their own personal cues and barriers to implement a healthier lifestyle. WCPT also further state that it is essential that the physiotherapist assists the clients in trying to find motivational factors for health promoting behavior and helps them overcome the barriers dragging down the motivation.

3 PREVIOUS RESEARCHES

In this chapter the reader is led into a more narrow aspect of the area. Background information on related studies from the field are presented and the reader can create a broader understanding for what an integration of physiotherapy and yoga literally means.

3.1 Physio-yoga

PhysiYoga, physio-yoga or Physio-yoga Therapy are all concepts that quite recently have become a popular kind of treatment. Because of its relatively young age and nature, being a product of the integration between two wellness related areas, it is difficult to find a concrete definition to what physio-yoga really is. Physio-yoga combines evidence-based physiotherapy and yoga in order to provide a more holistic treatment, which aims at empowering the client in order to engage in health promoting behavior. Physio-yoga is conducted by physiotherapists and differs from yoga in the way that it is instructed by a licensed health care professional. In opposite to traditional yoga, physio-yoga uses both physiotherapy knowledge and yoga philosophy in the treatment (Prosko, 2013; IYAT, 2012).

Thus, the difference between the therapists conducting yoga therapy and physio-yoga can be understood by the following; the visible differences seem to be close to non-existing, because the practicing is quite the same. The difference lies on an educational level. Yoga therapists are educated by IYAT (International Association of Yoga Therapists) and the name of the degree is professional yoga therapist, PYT.

Physiotherapy is a health care profession with strong heritage and well documented, evidence based benefits (Nicholls & Larmer, 2005). The physiotherapy studies usually take three and a half to five years, ranging from bachelor to master's level, depending on the countries. Physiotherapy results in a license to conduct physiotherapy treatment (WCPT, 2012). These studies are more comprehensive and thorough going and medically linked compared to the yoga therapist courses.

3.1.1 Previous researches on physio-yoga

Since the area of physio-yoga is relatively young, there aren't many scientific researches made on the subject. It seems that the therapy form is quite commonly used by private physiotherapy clinics and offered along with other, at this moment, popular treatment methods like neurological training, Sherbourne and Feldenkreis, also accompanied by similar training forms like taichi and pilates.

The benefits of physio-yoga that are reported are the same as the ones gained from physiotherapy and/or yoga (see chapter 2), ranging from pain- and stress relief to better posture, reduced back- and neck pain, to better muscle and joint function and increased ROM. Posadzki and Parekh (2009) summarize the physical, psychological and neuropsychological benefits from yoga in their research *Yoga and Physiotherapy; a speculative review and conceptual synthesis* concluding that a combination of these two would be beneficial in several ways.

Theoretical advantages from physio-yoga

As earlier mentioned several body structures can benefit from yoga exercises combined with the physiotherapeutic interventions. Posadzki and Parekh (2009) suggest that clients with neurological, orthopedic, metabolic and psychosomatic disorders can benefit from this combination, but they also point out that, more importantly, all dimensions of the body can be positively influenced concurrently.

Self-mobilization techniques like McKenzie's static procedures are similar to the "Cobra" asana and would according to Posadzki and Parekh (2009) provide clients the possibility to continue practicing and training even after leaving the clinic. This could also help the client to find positions of ease, possibly leading to enhanced wellbeing and self-efficacy. This could also be a motivational factor for clients having a hard time motivating themselves or to those who want to participate more actively in the physiotherapy process. This would perhaps also empower the clients in a wider range than traditional physiotherapy, since the poses are rather easy to carry out and widely used all over the world.

Posadzki and Parekh (2009) further suggest that yoga should be part of the curriculum in the studies of physiotherapy as it could be a way of combining and their current knowledge and enhancing the professional development.

4 METHODOLOGY

In this chapter, the author will account for the purpose of the study and the research questions. The research method and data collection tool will be presented, the course of action will be described in detail and the method for analyzing data and the ethical considerations of the study will be introduced.

This research is based on a qualitative method, using semi structured interview as data collecting method. The number of participants is small and the approach is inductive. The purpose is to grasp and understand the subjective experiences and opinions of the respondents.

The main purpose of this study is to understand *why* the respondents have chosen yoga as their primary exercise form and *how* yoga could be combined in a wider range within physiotherapy.

The research questions are the following:

1. What are the overall experienced health benefits from yoga?
2. How does yoga contribute to the respondents' subjective perception of health?

The themes and questions in the interview guide are constructed based on the research questions and the theme *health perception*. The question and theme-constructing course of action will be described in detail further ahead.

4.1 Qualitative research

This study has an inductive character, which means that the aim is to explain and understand certain observations and phenomena, in this case, subjective experiences. The researcher tries to find patterns and regularities within the data provided and aims at creating a hypothesis or theory that explains the observations, and grasps the essence of a phenomenon. (Lester, 1999). This research builds on a phenomenological research approach.

A qualitative method aims at defining things that are vague, undefined or subjective, like feelings or experiences. Quality is described as a characteristic or attribute and this research method is useful when the aim is to understand and describe subjective experiences of a phenomenon. The results from a qualitative study do not explain or provide answers to a problem, rather it provides understanding (Olsson & Sörensen, 2007, 37, 63; Patel & Davidson, 2003, 102–104).

Since numerous quantitative researches on the effects of yoga have been made, it is natural to also study yoga on a more personal and individual level. When talking about health and personal health, it is natural to make choices in relation to one's health. This phenomenological approach is chosen, to better understand in what way yoga can provide feelings and perceptions of health and wellbeing on a personal, subjective level.

4.2 Data collection method

When researching people's experiences and subjective opinions, the best way is giving them the opportunity to tell about them (Jacobsen, 2012; Kvale, 1997). Semi structured interview was chosen as a data collection method for this research. Interview is a suitable method when understanding the reality of the respondent is the most important thing for the researcher. A semi-structured interview can provide a very rich and extensive material. (Trost, 2004, 7; Ryen, 2004, 62).

An interview guide with the theme *health perception* was constructed. The theme was divided into categories according to the WHO-definition of the concept health. The three categories were the following: Physical health, mental/psychological health and social wellbeing. Interview questions were later on created for each category.

In addition to the interview, the respondents were also asked to make a body drawing and mark their problem areas, where they usually experience pain and discomfort.

4.3 Sample and design of the study

Since the study is made for Little Yoga Space, the sample consists of persons participating in the classes at the studio. Each week a total of 10–15 yoga classes are offered, all based on the flow movement created when combining different asanas from Hatha yoga combined with breathing exercises. Each class is 1,5h of duration and the participants can choose between a more relaxing hatha yoga class, or a more advanced and physically challenging. These classes are structured like normal yoga classes, but the instructor is, thanks to her physiotherapist background, able to pay attention to individual needs and differences and also to provide alternative exercises or adapt the asanas and exercises to better fit the clients personal need.

All participants interested were invited to take part. After this participants were excluded or included based on two criteria's; Persons who have some kind of health related problems (physical or psychological factors) and have participated in the yoga classes for more than three months were included in the study, meanwhile persons with no health related problems, who only participate sporadically or just started taking classes, were excluded from the study. The participants in this study have all been taking yoga classes at Little Yoga Space for at least six months.

The yoga instructor/physiotherapist at Little Yoga Space provided the contacts needed for the respondents who matched the inclusion criteria of the study. A total of 6 interviews were made. All interviews were recorded while the interviewer took notes at the same time. The interviews took place in different public places, like quiet cafes, gardens and libraries.

All participants were asked to do a body drawing to better be able to explain both pain and discomfort areas in their body, but also their body awareness and -perception. The drawing was not further analyzed, just used as a tool for description and specification. Body mapping or body drawings have been used in research and therapies in various settings where the aim is to create a wider understanding about how people perceive their body. It has often been used as a tool for completing narratives for indentifying subjective and objective potential indicators related to health risks, and can also be useful as a supplement with interviews and writings (Solomon, 2002).

A pilot interview was done in October 2013 before the actual interviews took place. Ejlertsson (2005, 35) emphasizes the importance of the pilot study for getting information about how the respondents might perceive and interpret the questions. No questions needed to be rephrased or changed after the pilot interview. Since this study is based on a semi structured interview the approach is more free and unrestrained. The interviewer has the possibility of following up and asking further questions freely whenever needed.

4.4 Analyzing data

When analyzing data using a phenomenological research approach, the most common way is to read and reread the data provided. After this, similarities and meaningful units are identified and grouped into categories or comprehensive themes (Fade, 2004). The purpose is, as earlier mentioned, to find the essence in the data, the answers to *how* and *why*.

Since the research questions in this study are based on the three themes in the WHO definition of health, the study also has a deductive character. This is because all data is arranged into already existing groups and themes, according to the similarities and meaningful units identified.

In this research, the data was read and reread together with an outside examiner. The use of an outside examiner increases the reliability and validity of a research, and can minimize the risk of bias, over interpreting or over emphasizing details (called the halo effect), seeing patterns where there are none etc. (Kvale, 1997).

Meaningful units and similarities in the data were highlighted and put onto post-it notes, and further put into categories; the themes provided by WHO definition of health, according to their relatedness to physical or mental health, or social wellbeing. In the final step, the researcher tries to grasp the essence of the results in order to make a conclusion and explanation.

4.5 Reliability and validity

Reliability describes the usability and accuracy of a measure tool and its unit of measure. (Ejvegård, 2003, 70). A high reliability means that the level of random errors is low. A high reliability also means that repeated measures should give the same result, and that the test should be repeatable whenever. (Ejlertsson, 2005, 99).

Validity is when a tool or a researcher is measuring what is supposed to be measured. If the reliability of a tool is high, it doesn't necessarily apply for the validity too. If the reliability contrariwise is low, the validity is also automatically low (Ejvegård, 2003, 73).

4.6 Ethical considerations

According to Holme & Solvang (1997, 32) respect for other humans is a fundamental starting point in every research. In extension this means, that the researcher is responsible for the physical and mental integrity of the respondents. There are a number of criteria are related to ethics of research that should be fulfilled, among others the criterion of:

Informed consent

Approval to participate is a fundamental component in every research, and should always be valid, informed and voluntary. The fact that the participant is competent and has the capacity to make a justified decision to participate or not, is also of great importance.

It is necessary that the researcher provide enough information about the research to make the consent valid. The participants need to know the purpose of the research, how the data will be used and where it will be published. They agree to participate freely, and no form of pressure or coercion has taken place.

The respondents in this research have all been informed about the research and its purpose, and they have signed an agreement.

Confidentiality

The requirement of confidentiality has been considered, and the participants are aware of that no one but the researcher will have access to the collected data. They are also aware of that no names, personal facts or attributes will appear in the research, and that the data will be erased after the research is done. The identities of the respondents will be kept confidential by simulating fictitious names or codes when analyzing.

Responsibility and correctness

Another important aspect regarding research ethics is that the researcher presents the results correctly, not trying to falsify data. This is essential when analyzing the results and trying to make categories from the data collected, or trying to put the data into already existing categories.

To fulfill this criterion the author used an outsider, a non-involved person, for organizing the data into categories.

Etix

Before sending the informed consent letter to the respondents, the letter and the interview guide has been reviewed by the ethical counsel of Arcada University of Applied Sciences, Etix. This procedure ensures that ethical considerations are taken by the researcher in the initial step of the study and that neither research nor results will have a harmful impact on, or harms the respondents in any way.

4.7 Limitations

Every research has its limitations, and it is important that the researcher is aware of his or her own limitations when it comes to being objective.

In this study, the researchers own interest in the subject might be a limitation, as well as the participants' interests. Having interest in a particular subject might lead to focusing more on the good parts and the positive aspects, and being somewhat blind to the negative ones.

Another limitation is that the participants all know the physiotherapist/yoga teacher well, which can result in a certain mindset when answering questions. The sample is also very small and only consists of female respondents, but since the objective of the study is to analyze subjective experiences it doesn't necessarily have to be considered a limitation. Although, it is important to keep in mind, that it is difficult to draw conclusions and generalize results when conducting a qualitative research.

The researcher was not involved in planning or conducting the yoga therapy, but did take part in yoga classes together with the respondents at several occasions. This might on one hand provide a broader understanding for the answers in the study, but might also affect or judge some of the statements given by the respondents. In this case, the researcher took part in the classes to get a clearer picture of the exercises and poses used and how the yoga classes were conducted.

5 RESULTS

In the following chapter the results will be presented. The reporting of the results will follow the order of the research questions presented in chapter 4.1. The statements of the respondents have been analyzed and categorized, and quotes from the interview are provided for exemplification. A short summary of the results in general can be found in the end of this chapter.

The main purpose of this study is to understand *why* the respondents have chosen yoga as their primary exercise form and *how* yoga could be combined in a wider range within physiotherapy.

The research questions are the following:

1. What are the overall experienced health benefits from yoga?
2. How does yoga contribute to the respondents' subjective perception of health?

5.1 What are the overall experienced health benefits from yoga?

The scientifically proven health and wellbeing benefits related with yoga are presented in chapter two. The results gained from this research are supported by findings from earlier researches. When analyzing the results of the interviews regarding the question about why the respondents chose yoga in the first place, the three most frequent words used by the respondents are *feel*, *health* and *wellbeing*.

The benefits can be summarized and categorized according to the three dimensions of health, physical health, mental health and social wellbeing. Yoga is regarded as a multi-dimensional intervention that affects all areas of health by all of the respondents; they all mention that they feel a need to go back to doing yoga if they have had a break, and they claim to notice this both on a mental and a strictly physical level.

All of the respondents would (or did already) recommend yoga to a friend and several of them think that doing yoga contributes to a healthier and more health concerned life style in general.

I feel like I'm truly doing this for me. It's an investment in myself, an insurance. By working out, eating healthier and taking care of my body, I feel that I'm preventing diseases and pain also when I get older.

5.1.1 Why yoga?

As mentioned earlier, motivation and motivational factors play a key role when making life style related choices as well as types of exercises and training forms to participate in. When first trying yoga, all of the respondents but one had some kind of physical pain or discomfort they were dealing with and wanted to get rid of. One of the respondents mentions having been recommended to try yoga by friends.

"I have problems with flexibility and neck pain, so I thought yoga would be a good choice for me..."

"Yoga is low impact, which is good for my scoliosis related problems."

"I just heard of all the benefits, body wise, mind wise and well, I just wanted to try and got completely hooked [laughter]."

Even while in general leading an active lifestyle and doing other sports, yoga is considered helpful on a psychological and mental level. It is reported to provide a different kind of extortion and tiredness compared to regular sports, which the respondents experience as a positive factor.

"When I do sports, I think about things I need to plan or organize. My mind is still at work, or solving some personal problems while the body is running. But with yoga, I stop thinking completely. I focus on my body, the breathing, the

joints and the muscles, and it's so good to just listen to and feel the body sometimes."

Several of the respondents answered that doing yoga helps them let out pressure, to be calmer, to focus and concentrate, and also that it makes them feel better with themselves and that they are happier and more positive.

It is also interesting to notice, that there are both social and security aspects involved when choosing the type of exercise preferred. The environment, the teacher, time and space matters, and also there is also a need of understanding and gaining knowledge involved in the choice.

"With [yoga teacher's name], I feel safe and cared for. I learn how to better perceive my body, how to correct my breathing when stressed and help my headaches that I get at times."

"... and you feel welcome as you are. You don't have to prove anything, not deliver, there's no competition. You can be yourself."

"... but this yoga is different. I actually understand why I'm doing the movements and how they can help me."

Even though these yoga classes are not directly linked with, or conducted in relation to, conventional physiotherapy, the same aspects of educating, advocating and helping the client understand the how's and why's, are still involved.

"[Yoga teacher's name] has a physiotherapist degree, and of course it's beneficial in a lot of ways. She teaches me how to prevent more pain and stiffness and I can actually do exercises at home or even at work if I feel the need to."

"At other yoga places I feel it has been a bit about pushing yourself further all the time, aiming for a goal and often pushing maybe a bit too far. This, I feel I'm doing for me. ... And I've become aware of how much I need it. My body tells

me, it's actually the body, not the mind that tells me how much I need to become more in touch with myself."

5.2 How does yoga contribute to the respondent's subjective perception of health?

When analyzing the answers deeper, categorizing them into the paradigm of health, we can study them based on the three aspects of health. Even though yoga is considered to be overall beneficial for the respondents, it seems to affect different aspects of their perceived health in different ways. As concluded in previous researches, yoga has a holistic approach and serves the whole human body and mind.

5.2.1 Subjective experiences related to physical health

Among the subjective experiences related to the physical health and wellbeing, the respondents report several different benefits. Like other exercise forms, yoga enhances their flexibility and strength, reduces tensions and stiffness, helps postural problems, corrects movement patterns and helps the respondents to use better and more ergonomic positions in their work life and daily life.

"I have more strength in my muscles now and I am not as stiff and tense as I used to be."

"When I feel less tense, I can better correct how I'm seated at work, and I remember to control my head and neck in front of the computer."

The respondents report that pain and discomfort experienced from incorrect positions and bad posture are relieved, like headaches, joint pain and also pain and discomfort inside the body and the organs. Improved breathing techniques and blood circulation are also mentioned, like improved metabolism. Sleeping better and feeling more energetic are also described as benefits from yoga, like increased endurance in the muscles.

When living with pain and discomfort, it is easy to remain in this circle without having the energy to go out and exercise. This feeling might also grow stronger if the pain experienced after working out is even worse, or doesn't reduce. This was the case for two of the respondents.

“Later I realized that afterwards I feel tired and I have sore muscles, but in a good way. This was a different experience from comparing with sports like running or contact sports.”

Also on a strictly physical and noticeable level several of the respondents claim to notice body wise differences. The skin feels tighter, the muscles are more visible as there has been a reduction of body fat, and the respondents consider themselves more toned and with less cellulite problems. Three of the respondents also mentioned that they don't only feel stronger and healthier, they even look healthier.

“I know it sounds silly and superficial, but I like myself better now. I have less cellulite, I have a tighter body and, well, I look healthier and happier. I think...! [laughter]”

One of the respondents mentions her arrhythmia and asthma related problems as risk factors for doing sports. Psychological factors, such as fear and avoidance of risk situations, have been former issues when considering working out or training, but when using the breathing techniques adapted from yoga, she feels calmer and experiences that she is more in control also regarding her inner organs and self.

Endometriosis and problems with the reproductive organs have also decreased while doing yoga on a regular basis according to two of the respondents.

“I think my breathing helps me to calm down the whole body, and outer causes do not affect me that much anymore.”

“I use to be in a lot of pain sometimes because of my endometriosis, but I feel it has been getting a lot better. Especially thanks to the breathing and relaxation

exercises. I also read that exercise might relief the pain, and I really think my deep abdominals are helping a lot these days.”

5.2.2 Experiences related to mental and psychological health

Also on a mental and psychological level, yoga is reported to be contributive. The answers derived from this research state the same.

In relation to making the body drawings the respondents were asked about how they perceive their body and if the perceptions have changed while doing yoga. All of the respondents answered in favor; they claim to now have a better awareness of their own posture, of the body's positions, controlling the movements and the muscles, and they also feel that they can better adjust their posture and ergonomic positions in order to avoid pain and damages.

“With yoga, I’ve noticed muscles I didn’t know I had before. And I’ve learned how to think about them, how to control them and be in contact with them.”

“I think my whole body perception is a lot better nowadays. I can tell when I’m not in position, if my posture is bad or if I’m carrying things in a bad way. I’m more in touch with myself.”

“Now I notice how I pull my shoulders up when I’m stressed or cold and how that affects the muscles and create stiffness and pain.”

All of the respondents report a reduction in stress level, moodiness and irritability compared to before starting yoga classes. Several of them mention that they have learned to control themselves and nowadays they don’t get stressed as easily as before, even if they’re under great pressure and need to perform and deliver. One of them states that she uses the breathing techniques every day in the morning to set the mind for the day, and that this helps her to not feel stressed at all.

Even the feelings and mood in general is affected positively according to several of the respondents. A more even personality with fewer ups and downs, feeling better in general, feeling happier and more thankful, and also a more positive look on life is reported.

“I’ve learned to treat my headaches with poses and stretches, I feel more calm and relaxed all day around.”

“Well, apart from all the feeling related benefits I mentioned, people tell me I’m calmer. When I get upset, my husband tends to ask me if I missed my yoga classes this week. [laugh]”

“It’s like an abandonment of the bad things and embracing the right, correct and good.”

A majority of the respondents mention that going to yoga classes makes them think about what is good for them and for their health. Health related decisions are preferred and their rhythm of life is more stable and even.

“I eat a lot better because I take time to listen to what my body really needs. I choose healthier products because I know they are good for me, and I really prioritize my sleep.”

“My digestion seems to be better. I don’t eat like it’s a competition anymore, you know. I take time to taste and enjoy.”

On an educational level, yoga has shown to be a learning experience for many of the respondents. The poses, *asanas*, are frequently used as self-help when experiencing pain or discomfort, stress or unpleasant feelings. They appreciate the style of yoga, the repeating pattern and the time given to experience and feel the body and body parts.

“And it’s amazing, because I can do the exercises on my own, and I don’t need a mirror to tell me if it is correct. I can feel it.”

“[...] ...like the link between body and brain actually works. The signal goes through.”

All of the respondents claim that yoga is one of the best ways for them to improve their concentration and help them to be more focused. For one of the respondents it also fills a more spiritual purpose that provides relaxation and happiness after working out.

“I feel strong on the inside. [...] I’ve realized how seldom I actually feel free. From all have-to-do’s and must’s, you know. I’ve become so aware of the importance of being present, feeling and sensing. I think I’ve learned how to free my mind.”

5.2.3 Experiences related to social well being and daily life activities

On a daily life basis, participating in yoga classes have affected the respondents life. Several of the psychological and mental benefits are reported to enhance and improve their daily lives. Factors like looking and feeling healthier, being calmer, more relaxed and happier are some of these.

“A lot of my relationships are affected, simply because I feel better. It just shows.”

Since the classes are carried out in groups, the social aspect is also present. A feeling of belonging, doing things together, exchanging opinions and sharing matters are reported to be positive experiences that the respondents look forward to during the days before and after the classes.

“And when I first got here [moved to Lisbon], I didn’t know anyone, so this naturally became a way of getting to know people, making friends and getting tips. And now, I need these people...”

“... to share a moment of peace and calmness with others, instead of always being surrounded by noise and chaos. It’s nice...”

The educational aspects mentioned regarding the psychological and mental benefits also have impact on the respondents’ daily life. Some use it as self-treatment and others are even teaching family members or friends how to use the *asanas* and stretches for pain- or stress relief.

“Because now, when I feel that I control it, I can use it on my own if I’m traveling or out of town.”

“My husband always has shoulder problems and sore neck, so I showed him some of the poses that [yoga teacher’s name] taught me. And now he actually uses them a lot. He even bought a yoga DVD! [chuckle]”

Participating in yoga classes has also become a motivational factor for many of the respondents as well as they experience control and being in charge of themselves.

The majority of the respondents also state that doing yoga has gotten an important role in their life. An overall more health concerned attitude and approach is reported and also a growing interest for other sports and training forms.

“One of the best things is that I get a feeling that I know what I’m doing. Maybe I’m not good at it, but at least I handle it pretty well.”

“For me, it’s not just exercise anymore. It has become a lifestyle.”

5.3 Review of results

To summarize, the results gained from this research are highly positive and in favor of yoga. The respondents all have very positive experiences of the classes and they consider yoga to be an important part of their daily life. The results also show that yoga appears to be a suitable form of workout for many people, fully healthy or with various conditions. It also, as previous researches state, has a preventing character.

Yoga is chosen for its many benefits on various different levels of the human experience of wellness. According to these statements, all aspects of human health concept benefit from yoga in various ways, and the fact that yoga takes an holistic whole person approach can be seen in the subjective experiences as well. There are numerous physical, psychological and wellbeing enhancing benefits reported, and even on a daily life basis, yoga is reported to be beneficial. These are the achievements and goals that the clients are looking for when choosing their preferable kind of physical activity, and naturally also the factors important for the service provider, therapist or yoga teacher.

The increased body awareness and internal locus of control seems to play a key role when trying to answer the question *why yoga?* The inner involvement, increased feeling of control and mastering of the own body described by the respondents seems to result in coping strategies used to both prevent and treat pain, discomfort and stress. Also on a social level, participating in a yoga class group brings advantages to the respondents.

Practicing yoga leads to a greater satisfaction with life in general according to the results from this research. Improvements in interpersonal relationships are described, as well as greater satisfaction and happiness on a personal level. Yoga is not merely working out or relaxing; it is seen as a life style, creating interest to engage in health promoting activities, healthier nutritional choices and experienced of an improved quality of life.

6 DISCUSSION

In this chapter the choice of method is discussed and suggestions for improvement are given. The results gained from this research are discussed in relation to previous results and related theories that are presented in chapter two. Finally, conclusions are made and implications for further research are given.

6.1 Choice of method

When doing a research about opinions and experiences, a qualitative research method is the natural choice. It aims at grasping the very essence of something, getting to the core and trying to understand and explain what happens and why.

Interviewing is a good way of collecting a large amount of qualitative data, not least when the interview guide is semi structured, which means it leaves possibilities to follow up, ask further questions, and ask for explanations and more background information. If possible, it would have been very interesting to have more background information on the respondents and to observe them during the yoga classes for a time period. This would have possibly provided different aspects and thoughts for setting up the research, as well as resulted in a broader understanding for the answers given.

Like with any qualitative research, it is difficult to generalize and draw conclusions from the answers provided, not least since the sample is small. This is because interview answers are subjective and personal. On the other hand, to fully understand what motivates and drives a person, we need to look on a personal, subjective level to gain information about the opinions of the mass, and this is why a qualitative research was a good option in this particular case. It is therefore possible to conclude that the study fills its purpose since the target is to investigate the experiences in this very group of yoga class participants and their opinions about the classes they are going to.

Considering that the interview guideline is attached and provided, the research might be redone and retested. This improves the reliability. As for the validity, the research questions have been answered and the answers are applicable to the questions and themes.

In this type of research, where the respondents all are close to the person the study is made for, it is essential to be aware of that the answers might be somewhat colored and not completely honest. On the other hand, the respondents are all paying customers, participating in the classes of free will, and they considered this research an opportunity to give feedback. The answers might also differ because both the yoga instructor and the researcher are professionals within the field of physiotherapy.

It is also interesting to notice that there were only female respondents participating. The answers could be different if there were male respondents as well.

Thus can be concluded that this research fulfills its purpose and answers the research questions set up for the study. The results are similar to, and comparable with results from other international researches.

6.2 Discussion about results

The World Confederation of Physiotherapy defines the physiotherapist profession as holistic and multidimensional. Taking a holistic, whole-person approach while teaching, advocating and educating the client is important, and we should be aiming at generating an active and healthy life style (WCPT, 2011b; CSP, 2013). Depending on the situation, physiotherapists may choose different approaches to reach the goals set at the therapy planning stage. The paths chosen might vary, but the main goals are always the same; restore or if possible improve function, eliminate or reduce pain and discomfort, prevent further injuries and encourage health promoting behavior. This leads us on to the client perspective and the question about motivating and making the physiotherapy attractive.

As concluded from the results in the study made by Ryan and Deci (2000) internalization and integration processes are necessary in order to sustain a health related behavior.

Our physiotherapy clients need to feel autonomy, competence and relatedness, the *why* and *how* aspects, to be able to fully engage in the therapy and experience it as meaningful. This is what the respondents claim to experience from doing yoga, they get the feeling that they understand it, master it and that they have the know-how needed. This is what leads them on to undertaking the healthier and active lifestyle described in the US Government Health Belief Model.

The results further show the importance of good counseling and advocating, and how significant a good therapist-client relation is. By feeling cared for and understood, the clients feel safe and in good care. They experience mastering and control by being taught various coping strategies for pain or stress relief, poses and techniques for breathing correction and relaxing, and finally get the feeling of autonomy when being able to prevent and manage states of discomfort on their own.

Several of the respondents mentioned the increased body awareness and increased locus control resulting in self-treatment at home or outside the classes. This could be yet another benefit when trying to make the physiotherapy treatment more attractive and understandable to the client. Posadzki and Parekh (2009) describe that this behavior can lead to a higher rate of self-efficacy, not least if used as self-treatment such as automobilization, formerly acknowledged from the Maitland and Mulligan concepts among others.

The overall experiences of yoga described in this research have similarity with earlier reported findings (Malathi & Damodaran, 1999; Rautaparta 2005; Manjunath et. al, 2003, among others), just like the statements about the physical and psychological advantages and the benefits experienced on a daily life basis. It is interesting to notice that not a single negative aspect was brought up by the respondents. However, consistently practicing yoga did not make the respondents feel completely pain free. This very positive feedback could of course be due to the fact that the group is small and that the respondents all know the yoga teacher personally. Nevertheless, this could be an important aspect, considering the fact that these respondents have gotten past any “fear-avoidance-pain” circles, and are now developing more positive attitudes towards other training forms, sports and a health related life style in general. Leading a healthier life

and engaging in health promoting behavior is one of the overall goals in physiotherapy and if yoga could be one of the means helping physiotherapists and clients to reach their goals, it is worth noticing.

Yoga can be conducted in different styles and with various impact and pace and it is possible to create the kind of exercise that a certain group needs. The mentioned positive effects on metabolic rates, arrhythmia and asthmatic problems are the same to the ones discovered as positive impacts of physiotherapy treatment, and it might be interesting to speculate whether these benefits motivate clients even more to maintain a healthy lifestyle.

Conducting physiotherapy in a group setting is common throughout the world today and it is interesting to think about the theoretical benefits physio-yoga conducted in groups could bring. Not only are we here looking at economic benefits for the clients, but also social and motivational. Being part of a group might be just enough of a motivational kick one needs to engage more in the therapy and to feel a need to go there, to perform and exercise in order to promote one's own health and wellbeing. Conducting physio-yoga could also be beneficial for the physiotherapist in a work ergonomic aspect. Doing yoga, teaching asanas and auto-mobilization exercises takes off some of the physical workload put on the therapist and could be very beneficial in the long run.

Results gained from this research strengthen the theoretical advantages presumed to result from a combination of physiotherapy and yoga. They also support earlier research findings concerning health benefits derived from yoga.

6.3 Summary and implications

This research was made for Little Yoga Space in Lisbon, Portugal, and is completely free from competing financial interests. The highly positive feedback of the experiences from yoga is noticeable and should be considered usable in a broader aspect than it is today.

Speaking in terms of redefining the physiotherapy practice, combining physiotherapy and yoga practice could be one of the many options a physiotherapist could consider. The motivational aspects are important regarding whatever choice we make in life, not least the health related ones. Like Posadzki and Parekh (2009) suggest, integrating yoga practice in the physiotherapy studies might be an interesting option. This suggestion is supported by the report made by Nicholls and Larmer (2005) stating that physiotherapy needs to evolve and integrate with other health- and wellness related areas in order to face future challenges.

Stress tolerance and stress management are words frequently brought up, both in this study and in previous yoga related researches. Perhaps physio-yoga could be a useful treatment in psychophysical physiotherapy, or perhaps stress management, physio-yoga and similar exercises forms could be functional groups within the physiotherapy practice.

Further research could involve economic aspects regarding the conduction of physio-yoga and what kind of benefits there could be on a society level. Group therapy could be both highly motivating for social reasons and also for the individual in an economical aspect, like studying mixed gender groups' experiences of yoga. Investigating the experiences of the physiotherapists conducting physio-yoga could also be of interest when thinking about reassuring the quality of the treatment. A research studying mixed gender groups' experiences of yoga or physio-yoga could be interesting, since this research did not contain any male respondents.

Physiotherapists have a comprehensive anatomical and physiological knowledge and know-how needed to choose asanas and positions to best fit the purpose and the client's need. These asanas could be taught and trained together with the client individually or in groups. Perhaps prescribing specific yoga asanas and physiotherapy on medical description along with physical activity recommendations for clients experiencing stress, pain and discomfort could be what the future holds?

REFERENCES

Angner, E. (2008). The philosophical foundations of subjective measures of wellbeing. *Capabilities and Happiness*, 286–298.

Australian Physiotherapy Association, APA. (2013). *In Practice 2025: Final Report*. [Online]:

http://physiotherapy.asn.au/DocumentsFolder/APAWCM/Resources/InPractice_2025.pdf

Benson, S. G. & Dundis, S. P. (2003). Understanding and motivating health care employees: integrating Maslow's hierarchy of needs, training and technology. *Journal of Nursing management*, 11, 5, 315–320.

Cameron, M. E., & Parker, S. A. (2004). The Ethical Foundation of Yoga. Legal and ethical Issues from our Columnists. *Journal of professional nursing*, 20, 5, 275–276.

CSP, Chartered Society of Physiotherapy. (2013). *What is physiotherapy?* [Online]: <http://www.csp.org.uk/your-health/what-physiotherapy>

Deci, E. L., & Ryan, R. M. (1985a). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227–268.

Deci, E. L., & Ryan, R. M. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and wellbeing. *American Psychologist*, 55, 68–78.

Ejlertsson, G. (2005). *Enkäten i praktiken: en handbok i enkätmetodik*. Lund: Studentlitteratur.

Ejvegård, R. (2003). *Vetenskaplig analys*. Lund: Studentlitteratur.

Engvig, J. P. (2010). Self-perceived health effect from hatha yoga. [Online]: <http://www.stressreduction.wordpress.com/poster/>

Fade, S. (2009). *Using interpretative phenomenological analysis for public health nutrition and dietetic research: a practical guide*. Proceedings of the Nutrition Society (2004), 63, 647–653.

Folkhälsomyndigheten. (2001). Metoden Fysisk Aktivitet på Recept – FAR. [Online]: <http://www.folkhalsomyndigheten.se/far/historik/>

Food Navigator USA. (2014). *Dietitians Say Anti-Wheat, Pro-Nutrition info sentiments will top 2014 Trends*. [Online]: <http://www.foodnavigator-usa.com/Markets/Dietitians-say-anti-wheat-pro-nutrition-info-sentiments-will-top-2014-trends> .

Harinath, K., Malhotra, A. S., Pal, K., Prasad, R., Kumar, R. & Kain, T. C. (2004). Effects of Hatha yoga and Omkar meditation on cardiorespiratory performance, psychologic profile, and melatonin secretion. *Journal of Alternative Complementary Medicine*, 10, 261–268.

Herva, I-M. & Pehkonen, M. (2010). Voimaa ikääntyvälle joogaajalle. *Joogalehti*, 4, 2010.

Holme, I. M. & Solvang, B. K. (1997). *Forskningsmetodik. Om kvalitativa och kvantitativa metoder*. Lund: Studentlitteratur.

International Association of Yoga Therapists, IAYT. (2012). What is Yoga Therapy? An IAYT Definition. *Yoga Therapy In Practice*, 12, 3.

Idler, E. L. & Kasl, S.V. (1995). Self-ratings of health: do they also predict change in functional ability? *Journal of Gerontology: Social Science* 1995, 50B, 6, 344–353.

Jacobsen, D. I. (2012). *Förståelse, beskrivning och förklaring. Introduktion till samhällsvetenskaplig metod för hälsovård och socialt arbete*. Lund: Studentlitteratur.

Kvale, S. (1997). *Den kvalitativa forskningsintervjun*. Lund: Studentlitteratur.

Larson, J. (1991). *The measurement of health. Concepts and indicators*. Westport: Greenwood print.

- Larson, J. (1993). The measurement of social wellbeing. *Social Indicators Research*, 28, 285–296
- Lester, S. (1999). *An introduction to phenomenological research*. Taunton UK: Stan Lester Developments. [Online]: <http://www.sld.demon.co.uk/resmethy.pdf>
- Malathi, A., & Damodaran, A. (1999). Stress due to exams in medical students-role of yoga. *Indian Journal of Physiology and Pharmacology*, 43, 218–224.
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50, 4, 370–396. [Online]: <http://psychclassics.yorku.ca/Maslow/motivation.htm>
- Moadel, A. B., Shah, C., Wylie-Rosett, J., Harris, M. S., Patel, S. R., & Hall, C. B. (2007). Randomized controlled trial of yoga among a multiethnic sample of breast cancer patients: effects on quality of life. *Journal of Clinical Oncology*, 25, 4387–4395.
- NHIS, National Health Interview Survey, (2007). *Yoga for health*. [Online]: <http://nccam.nih.gov/health/yoga/introduction.htm>
- Nicholls, D. A. & Larmer, P. (2005). Possible futures for physiotherapy: an exploration of the New Zealand context. *NZ Journal of Physiotherapy*, 33, 2, 55–60.
- Niemelä, S. & Rintala, P. (2002). *Liikuntamuotojen soveltaminen*. Helsinki: Liikuntatieteellinen seura.
- Olsson, & Sörensen, (2007). *Forskningsprocessen. Kvalitativa och kvantitativa perspektiv*. Stockholm: Liber.
- Patel, R & Davidsson, B. (2003). *Forskningsmetodikens grunder. Att planera, genomföra och rapportera en undersökning*. Lund: Studentlitteratur.
- Posadzki, P. & Parekh, S. (2009). Yoga and Physiotherapy: A Speculative Review and Conceptual Synthesis. *Chinese Journal of Integrative Medicine*, 15, 1, 66–72.
- Prosko, S. (2013). *Physio-yoga. A New Approach to Your Rehab Experience*. [Online]: <http://www.physio-yogatherapy.com/1/category/physiyoga/1.html>
- Rautaparta, M. (2005). Joogan keinot ovat monet. *Fysioterapia*, 52, 8, 21–23.

Ryan, M. R, Patrick, H., Deci, E. L. & Williams, G. C. (2008). Facilitating health behavior change and its maintenance. Interventions based on Self-determination Theory. *The European Health Psychologist*, 10, 2–5.

Ryen, A. (2004). *Kvalitativ intervju. Från vetenskapsteori till fältstudier*. Malmö: Studentlitteratur.

Salo-Gunst, L. & Vilkkio-Riihelä, A. (2000). *Repetitionsbok i psykologi*. Helsingfors: Söderströms.

Shields M. & Shooshtari S. (2001). Determinants of self-perceived health. *Health Reports Statistics Canada*, Catalogue 82-003 13, 1, 5–52.

Solomon, J. (2002). “Living with X”: A body mapping journey in time of HIV and AIDS. *Facilitator’s Guide*. Psychosocial Wellbeing Series. Johannesburg: REPSSI. [Online]:

http://www.repssi.org/index.php?option=com_content&view=article&id=46&Itemid=37

Suomen fysioterapeutit. (2010). *Fysioterapeutin eettiset ohjeet*. [Online]: http://www.suomenfysioterapeutit.fi/index.php?option=com_content&view=article&id=58&Itemid=58

Ther, J. M. M. (2007). Roots of Physical Medicine, Physical Therapy and Mechanotherapy in the Netherlands in the 19th century: A disputed area within the healthcare domain. *The Journal of Manual and Manipulative Therapy*, 15, 2, E23 – E41.

Thompson, W. R. (2013). Now Trending: Worldwide Survey of Fitness Trends for 2014. *ACSM’s Health & Fitness Journal*, 17, 6.

Trost, J. (2004). *Kvalitativa intervjuer*. Lund: Studentlitteratur.

Waelde, L. C., Thompson, L. & Gallagher-Thompson, D. (2004). A pilot study of a yoga and meditation intervention for dementia caregiver stress. *Journal of Clinical Psychology*, 60, 677–687.

WCPT, World Confederation for Physical Therapy. (2011a). *Policy statement. Descrip-*

tion of Physical Therapy. [Online]:
http://www.wcpt.org/sites/wcpt.org/files/files/PS_Description_PT_Sept2011_FORMATTED_edit2013.pdf

WCPT. World Confederation for Physical Therapy. (2011b). *WCPT guideline for curricula for physical therapists delivering quality exercise programmes across the life span*. [Online]:
http://www.wcpt.org/sites/wcpt.org/files/files/Guideline_Exercise_Experts_complete.pdf

WCPT, World Confederation for Physical Therapy. (2012). *Active and Healthy The role of the Physiotherapist In Physical Activity*. General Meeting of the European Region of the WCPT 2012.

World Health Organization, WHO. (1948). *Definition of health*. Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19–22 June.

World Health Organization, WHO. (2013). *Obesity and overweight. Fact sheet n.311*. [Online]: <http://www.who.int/mediacentre/factsheets/fs311/en/> .

APPENDICES

A Interview Guide

B Letter of Informed Consent

Why have you chosen yoga as a therapy form?

If you compare the benefits you experience from yoga to the benefits of other forms of exercise, what are the differences?

Psychological/emotional/body perception

- Tell me about your perception of health, how does yoga therapy influence on your psychological and emotional health?
- Tell me about your perception of wellbeing, how does yoga therapy influence on your psychological and emotional wellbeing?
- Tell me about the body drawing you made. How has your body awareness been affected?
- In your opinion, what kind of emotional or psychological benefits do you experience from yoga?

Physical

- Tell me about how the yoga therapy influences your physical wellbeing
- How does yoga affect the pain and discomforts you've been experiencing
- In your opinion, what are the physical benefits you experience from yoga?
- Tell me about the body drawing you made. How have the feelings of pain/discomfort changed?

General, daily life

- Tell me about how yoga therapy influences your general wellbeing
- Tell me about the benefits from yoga that you can experience in your daily life
- In your opinion, what are the general benefits from yoga

Lisbon 14.6.2013

WHY YOGA? – PERCEIVED HEALTH BENEFITS OF YOGA AS A THERAPY FORM

Dear respondent,

You are being invited to participate in a research about the subjectively perceived health benefits from yoga as a therapy form. The study is a Bachelor's degree thesis made by Maria Wiik from Arcada University of Applied Sciences in Helsinki, Finland for Arina Joenssen and Little Yoga Space in Lisbon. The results of the study will be presented in a report at Arcada Univeristy in Helsinki, Finland.

The purpose of the study is to, from subjective experiences, gain information and understanding about how yoga as a therapy form is influencing the perceived wellbeing and health, how the experiences of yoga differs from other exercise forms, and to evaluate the possibility of using yoga in physiotherapy practice in a wider range.

The study will be made using interview based on open questions regarding the personal experiences about yoga. The interviews will, with your permission, be taped and takes approximately 45 minutes. Data material will be transcribed and stored only during the time the research is done, afterwards all data will be destroyed. Participation in this study is optional and free of risks. The research is confidential; at no time will your actual identity be revealed.

Agreement:

The nature and purpose of this research have been sufficiently explained to me and I agree to participate in this study. I understand that participations is completely voluntary and I am free to withdraw at any time if I so wish.

Signature: _____ Date: _____

Name (print): _____

If you have any questions or considerations regarding this research,
please contact:

Maria Wiik maria.wiik@live.com or 91 588 0627

Arina Joenssen thelittleyogaspace@gmail.com or 93 8274449