Masaryk University
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The Effect of Qigong and Taijiquan Practice on the State of Optimal Experience – Flow
Dissertation Thesis

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I declare that I have completed the qualification work independently under the supervision of doc. PhDr. Bc. Zdenko Reguli, Ph.D., using the sources listed in the literature.
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Introduction

There are specific moments in life when we feel complete, fulfilled and satisfied with ourselves and our being. Our energy is endless and everything what we do in that moment is clear, light and makes sense to us. We feel blissful and we are longing to stay in this state as long as possible. These are the moments in life, when we feel the most happy. The emergence of these situations could be, from our perspective, completely random, however there is an increasing number of approaches and studies, particularly in fields of psychology, philosophy or sport science, examining the ways and conditions of how we can experience this state of peace and happiness intentionally.

Professor Mihaly Csikszentmihalyi is one of the leading representatives in the field of positive psychology. He dedicated significant part of his life to studying the states of happiness and optimal experience called flow. He describes flow as a state of mind when one is completely absorped by the activity he or she is just performing. This experience is connected with feelings of joy, happiness and deep motivation to experience the moment, activity or situation over and over again. Csikszentmihalyi studied this phenomenon in several different areas, particularly with people who were involved in an activity they prefered. It was in the fields of arts – painters, dancers, musicians; medicine – surgeons; sports – climbers, chess players; science – researches. He found that people experienced strong intrinsic motivation toward the activity they were just performing and that was also the thing, why they continued with the activity.

In our thesis we have chosen to examine the flow experience in an area of physical activity, particularly in disciplines connected to martial arts and health. Csikszentmihalyi suggests that martial arts could be one of a good form of how to experience specific kind of flow, due to strong attention to control mind, body and spirit of a practitioner. Based on Csikszzenmihalyi’s idea we examine the level of flow experience in Qigong and Taijiquan, which is part of a traditional Chinese culture and its martial art system.

We would like to bring to light that the process that leads to the specific outcome is just as important as outcome itself. This knowledge can be transormed to any are area of one’s interest, such as sport. Moreover, we understand that by cultivating the positive
experiences such as flow, and by creating conditions for experiencing this state, leads to improvement of our well-being in any area of our lives.
1 Optimal State – Flow

1.1 History of Optimal Experience

“There is within every soul a thirst for happiness and meaning.” (Thomas Aquinas)

Before we dive deep into the knowledge about optimal state called flow, we will look at what we know about happiness and meaning from historical point of view.

Discussions about happiness have been here since the beginning of the ages. In ancient Greek, Aristotle came up with the word *eudaimonia* which was used as description of highest degree of human happiness. The name was derived from daimon which means true nature. Aristotle stressed that not all desires are worth pursuing. Although some of them may produce pleasure, they would not produce wellness. Aristotle thought that we can achieve true happiness by leading a virtuous life and doing what is worth doing. He claimed that realising human potential is the ultimate human goal. This idea was further developed in history by thinkers, such as Stoics, who stressed the value of self-discipline, and John Locke, who argues that happiness is pursued through prudence (Boniwell, 2008). Modern commentators compare this theoretical concept to experiences similar to flow or being in the zone (Gilbert, 2015). However the problem might be more complex as we see later.

In the mid-20th century humanistic psychology has flourished. This approach is focused on human development and can be considered as following path to eudaimonistic approach. The effort is to be the best as one can be. It focuses on development of human potential in all its aspects. We can call it as holistic approach. Abraham Harold Maslow and Carl Ransom Rogers are the founders of the humanistic psychology. They claimed that a person develops his or her potential through so-called self – actualization and respecting his own experiences which is a necessary part of self-development. Maslow came to this conclusion on the basis of his own theory of needs. The need of self-actualization is hierarchically highest placed and it requires that all the other needs have to be met first. The most basic needs are 1) physiological, 2) a need of safety and security, 3) a need of love
acceptance and solidarity, 4) needs of recognition, appreciation and self-esteem and on the top is 5) a need of self-actualization (Fig. 1) (Jelínek, Jetmarová, 2014).

![Maslow hierarchy of needs](https://www.simplypsychology.org/maslow.html)

**Figure 1**: Maslow hierarchy of needs (www.simplypsychology.org/maslow.html)

Later, in the 70’s Mihalyi Csikszentmihalyi came up with a theory of Autotelic personality as part of flow concept. His first studies tried to understand how people felt when they most enjoyed themselves and what was the reason. At the really beginning he studied highly creative male painters and sculpturers. Every day they spent hours by painting or sculpting with great concentration. Yet the typical thing for them also was that as soon as they finished the work, they lost interest in what they were doing. Money and recognition seemed to play minimal part of their interest. Extrinsic motivation that usually motivates behavior did not seem to be present. This remark suggested that the reasons might be within the activity. The rewards for painting came from painting itself (Csikszentmihalyi, 1988, 1990).

Gradually, the studies of flow involved experts from different areas – artists, athletes, musicians, chess masters, and surgeons. It involved people who seemed to spend their time in activities they preferred. From their accounts was developed a theory of optimal experience which was based on the concept of flow. Later other researchers all over the world have started to investigate the phenomenon called flow. One of the most extensive collection outside of Chicago, where Csikszentmihalyi conducted his first research, is in the Institute of Psychology of the Medical School, the University of Milan, Italy (Csikszentmihalyi, 1990).
In the past several decades there have been a great amount of research with an interest in flow experience and some of the results have been applied in educational, clinical, and commercial settings in order to improve quality of life. Flow has become a term which is connected with intrinsic motivation (Csikszentmihalyi, 1988, 1990).

### 1.1.1 Flow - Hedonistic or Eudaimonistic Approach

Csikszentmihalyi (1990) tries to answer a question when people feel the happiest. He discovered that happiness is not something that happens and is not the result of good fortune or random chance. He says that it does not depend on outside events, but rather, on how we interpret them. Our society possesses much more knowledge, luxury, power than in times of Aristotle. We expect that all this possessions makes us happy, which lead us to hedonistic way of thinking where pleasure is considered as highest good and where is absence of pain (Taylor, 2012). However, people often think that they wasted their lives, that instead of being filled with happiness, they spent years in anxiety and boredom. „The best moments in our lives are not the passive, receptive, relaxing times…The best moments usually occur when a person’s body or mind is stretched to its limits in voluntary effort to accomplish something difficult and worthwhile“ (Csikszentmihalyi, 1990, p. 3).

Based on Csikszentmihalyi’s autotelic personality we might consider flow experience as eudaimonistic approach. However there could be one problem with allocating flow into the eudaimonic camp because some Csikszentmihalyi’s characteristics of flow such as losing track of time and forgetting personal problems seem to have more to do with hedonic enjoyment than with eudaimonic endeavours (Boniwell, 2008).
1.2 Origin and Definition of Flow

„If you bring forth what is within you, what you bring forth will save you. If you don’t bring forth what is within you, what you don’t bring forth will destroy you.“ (Gospel of Thomas)

Origin

What do we exactly know about the term flow and its author? The name flow was given by professor of psychology Mihaly Csikszentmihalyi. He was born in Hungary and moved to the United States in the late 1950s. He went to school at the University of Chicago where he also taught for many years before moving to the Claremont Graduate School (Peterson, 2006).

The term flow is included in the positive psychology. During Csikszentmihalyi’s interviews several people described their flow experiences as a metaphor of being carried by water current. That is how flow got its term (Csikszentmihalyi, 1975). Michael Jackson (1993) shares his experience how he creates his music and uses similar words: „People ask me, how I create music. I tell them that I enter the music. It is like enter to the river and connect with its current. Every moment has got its own song in the river. So I stay in the moment and listen...“(Jackson, 1993).

Definition

Csikszentmihalyi (1988) states that we experience the feeling of flow when we are fully alive, involved with what we do and in harmony with environment around us. He defines flow as: „The state in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at great cost, for the sheer sake of doing it“ Csikszentmihalyi 1990, p. 4).

Poet Dante Alighieri connects feelings of happiness with self-expression. His idea is that any living being feels most alive when he or she is able to express what they feel,
what they would like to feel and act that out (Henry, 2009). That is expression of life that we call happiness. It is something that happens most easily when people dance, sing, do sports, but it can happen when they work, read a book, or have a good conversation (Csikszentmihalyi, 1975).

One of the most natural way, how to experience flow is when we play. We probably remember the happy feelings, when we were children and got lost in the play and the present moment, either alone or with our friends (Fig.2). We created our own world using imagination that brought us into the moment even more. Play is clearly intrinsically motivated. People play because it is enjoyable (Piaget, 1951).

Figure 2: Children playing (https://thedoctormthesein.com/let-your-children-play-without-rules-to-boost-their-brain-development/)
Another strong instrument how to experience feelings of happiness and fulfillment is through **creative process** of any kind.

Michael Jackson about flow state in creativity:

„The consciousness is manifested through creativity. The world, we live in, is a dance of the creator. The dancers come and leave in the moment, but the dance lives on. I have many times felt a touch of something sacred in the dance. In these moments, it seems to me that my spirit is floating and merging in one with everything that exists. I become the stars and the moon. I become a lover and a loved one. I become the winner and the loser...I continue dancing and then it is the eternal dance of creation. The creator and the creation will merge in one joy. I continue dancing and I dance...and dance until there is only...dance“ (Jackson, 1993).

We all need activity that is beyond the every day routines which can take us out of our established and limiting roles in society (mother, employee, neighbor, brother, boss, etc.) We all need to forget ourselves for a while – forget our age, gender, socioeconomic background, duties, failures. We can help ourselves with prayer, community, sex, exercise. Creative living can do it by: „...completely absorbing our attention for a short and magical spell, it can relieve us temporality from the dreadful burden of being who we are“ (Gilbert, 2015, p. 172).

In term of the dissertation theme we can consider body is a great tool that helps us to experience flow within physical activity and in sport environment. This topic is discussed later in a separate chapter.

**1.3 How to achieve flow**

„*Happiness, in fact, is a condition that must be prepared for, cultivated, and defended privately by each person. People who learn to control inner experience will be able to determine the quality of their lives, which is as close as as any of us can come to being happy* (Csikzentmihalyi, 1990, p. 2).“
We can not achieve happiness by intentionally searching for it. The moment we ask ourselves if we are happy, the moment we loose it. The key is being fully involved with every detail of our lives, whether good or bad, not by trying look for it directly (Csikszentmihalyi, 1990). This idea shows a lot of similarities with philosophy of Taoism, which is discussed in Chapter 2.

Despite the fact that we often think that there are many things we can not change or decide, for example: how tall we will grow, where we will be born, what will happen in our country etc., we have all experienced times when, instead of being influenced by outside forces, we feel in control of our actions, master of our own fate (Csikszentmihalyi, 1990). The name for this kind of behaviour or way of thinking is called locus of control. We distinguish between internal and external locus of control. An internal locus of control is based on the personal perception that reinforcements are connected with personal factors and can be influenced by adjusting one’s behaviour (e.g. increasing level of effort, upskilling, etc.) An external locus of control is based on the personal perception that reinforcements are connected with external factors and are therefore not within the limits of personal control (e.g. luck, fate, circumstances etc.) (Pettersen, 1987).

One of the strongest examples of internal focus settings is when people who have survived concentration camps or who have lived through near-fatal physical dangers often testify that in the middle of their extreme situation they experienced „extraordinary rich epiphanies in response to such simple events as hearing the song of a bird in the forest, completing a hard task, or sharing a crust of bread with a friend“ (Csikszentmihalyi, 1990, p.3).

Therefore, one of the most efficient way, how to experience the elusive goal called flow is to take control over the contents of our consciousness non binding to our surroundings.
1.3.1 Disorder in mind vs. Order in mind

Disorder in mind also called psychic entropy or negentropy is one of the strongest strategies which unfavorably affect our consciousness by giving us information which take us away from our original intention. We can call it pain, fear, anger, anxiety or envy. All these variations of disorder are forcing our attention to divert us from our original plan. Psychic energy starts to be heavy and non-efficient. Whenever some information interrupt our consciousness by endanger our goals, psychic entropy state will occur. This disorganization negatively affects our performance. When it takes too long we are no longer able to pay attention to our primer intention and reach our goals (Csikzentmihalyi, 1990).

Order in mind, also what we understand as flow is the opposite state to psychic entropy. When information which enters to the consciousness is in alignment with its goal, psychic energy can flow effortlessly. There is no need to worry, no need to ask if the person is able to achieve his goals. Whenever he stops, there is always positive feedback which brings him back to the original intention. When the person is able to organize his consciousness in order to achieve flow regularly, the quality of his life will improve (Csikszentmihalyi, 1990). This can be reached through any activity we pay attention to. Physical activities where we connect body and mind aspects like yoga, or qigong are great methods which help us to cultivate order in consciousness. This knowledge can be transformed to any activity of everyday life, for example washing dishes, playing with children etc.

1.3.2 Emotional bond and Motivation

Although a flow state can be entered while performing any activity we focus on, it is most likely connected with the positive emotions and intrinsic motivation toward the activity one is just performing (Csikszentmihalyi, 1988).

Jelinek, Jetmarová (2014) discuss type of emotional bond and motivation of an individual from perspective of optimal performance in sport. In general, they divide individuals into two basic categories:
1) Those whose motivational relation to the role they represent (mother, sister, director, tennis player etc.) is mainly nourished by emotional bond to the outcome of their role. Here we talk about rational investment. Is the outcome of the role beneficial for me? Here the extrinsic motivation is in prevalence.

2) Those whose motivational relation to the role is mainly nourished by an emotional bond to the activity that the role is characterized by. Here we talk about emotional investment. Do I enjoy the activity? Here the intrinsic motivation is in prevalence.

In order to find the athlete’s motivation, we can simply ask: Do you want to play hockey or be a hockey player? Either the athlete is longing for the result and all the benefits it brings (e.g. to achieve glory, wealth, medals, appreciation from outside). Extrinsic motivation is in prevalence. This we might understand as needs of ego (the part of consciousness where people can recognize themselves). The activity is an instrument to reach satisfaction from the goal. One is dependent on his results.

On the other hand, there is a player who is primarily focused on the activity itself, in order to have a good feeling from the activity he performs. Csikszentmihalyi (1988) calls this experience as autotelic. The self-realization during the activity is more important than the goal itself. The outcome is a secondary product. The experience is fulfilling and there is a complete absorption in the activity one is just performing. From sport perspective there is a risk that if there is high emotional bond to the activity and no emotional bond to the outcome, it can happen that the athlete is not interested in winning. However, the positive side is that there is an absence of negative influences such as fear, aggression and worries which can occur in situation where one have strong emotional bond toward the outcome.

The emotional bond toward the activity in performance oriented environment is a dynamic process. The key is to find balance between these two aspects. To combine these two opposing energies in order to unfold the ultimate potential of an individual from perspective of the role he represents (Jelinek, Jetmarová, 2014).
1.3.3 Active approach and engagement

Another important fact is that individuals have to be active in order to experience flow. Passive activities such as watching TV or playing video games might bring us feelings of absorption and pleasure, however not feelings of fulfilment and happiness. The name for the experience when we are rather passive is junk flow or faux flow (Peterson, 2006).

Celeste et al. (2006, p. 64) say: „Pleasure is said to be an important part of quality of life but, in itself, cannot bring happiness. Engaging in a pleasurable experience does not lead to self-actualisation because an immediate (often superficial level) need is met without full mental and/or physical engagement‟.

1.3.4 Present moment and Honesty

Csikszentmihalyi (1990) says that happiness is not something outside which randomly appear in our life, but it is with us all the time and we are responsible for its cultivation. This idea might give us a feeling of strength.

We just think that the way to achieve happiness is complicated, because our mind says so. We believe that we need to do something, in order to be happy (e.g., finish the school, get the work, raise the children etc.). We believe that only if we reach that goal, we will be happy. When we reach that goal we are probably happy, but just for short term of time. Then we start to chase ourselves for something else what makes us happy again. In Eastern culture and its philosophy as we will see later in chapter two the true happiness comes from within. The gate to reach happiness is to look and accept what we have here and now. The key is to connect ourselves with the present moment (Tolle, 1999). In any time when we feel upset, stressed, anxious, simply experincing any kind of disorder in mind, we can question ourselves. What do I have here, now, at this moment, what do I see when I look around and most importantly what do I feel. I might feel frustrated, when my mind wants me to be at home, as soon as possible, because it is late and I need to walk this huge hill before I get there. But when I ask myself, what is my truth at this moment, what do I see around me and what do I feel. At that moment, I stop to chase something my mind thinks makes me happy, as to be at home and make myself comfortable. At that moment I slow down, start to breath, realize the beauty of the nature around while walking up the
hill, when I am really connected with my feelings and present moment I might start to feel greatful that I can walk and have a bit more movement before I get home. I get in alignment with the present moment and enter the state of bliss and happiness. So the challenge according the concept of flow would be to bring my attention to the present moment which also requires specific skills. Qigong, Taijiquan and Yoga are all great instruments how to cultivate that kind of skills.

A friend of mine is a DJ. When I asked him, how he does it that any time he plays the music I feel ecstatic, totally involved in the moment, the rhythm, sounds and my dance. He simply answered that he is honest with himself when he creates the play list he is going to introduce to the audience. He rather chooses songs according to his mood than according the new trends. The music is based on his actual emotional state. It primary comes from within. The connection to our true feelings is also a skill that needs to be cultivated. Especially in current way of living where we are cluttered by demands of our surroundings, society, technology. When we feel overwhelmed we need to find the balance and reconnect with ourselves. Body and mind activities, spending time in nature, this all can do it for us.

Although, the truth might seem to be very simple, it is a process. It is an individual journey of every one of us. Seek and you will find.

1.3.5 Main Conditions

As we can see above, we can look at the flow state or happiness from different perspectives and states of our awareness. To keep the line with the concept of flow based on Csikszentmihalyi’s theory, passed research suggests three conditions of key importance (Csikszentmihalyi, Abuhamdeh & Nakamura, 2005, p. 601):

1) The activity has to have clear set of goals. These goals serve to add direction and purpose to behavior. Their value lies in their capacity to structure experience by channeling attention rather than being ends in themselves.
2) There must be *balance between perceived challenges and perceived skills*. When perceived challenges and skills are well matched (e.g. in a close game of tennis or a satisfying musical performance), attention is completely absorbed. In the moment when challenges begin to exceed skills, one typically becomes anxious. Contrary, if skills begin to exceed challenges, one relaxes and then becomes bored. These subjective states provide feedback about the shifting relationship to the environment, and help the individual to adjust behavior in order to escape the undesirable subjective state and re-enter flow.

3) Flow is dependent on *clear and immediate feedback*. Immediate feedback informs the individual how well he or she is progressing in the activity, and shows whether to adjust or maintain the present course of action in order to experience flow.

These characteristics are also part of 9 dimensional concept described in the following chapter.
1.4 Dimensions of Flow

So far phenomology of enjoyment has nine major components which are based on how people described their state of well-being we call flow (Csikszentmihalyi, 1990).

Here are nine dimensions of flow that have been supported by qualitative and quantitative research:

1) **A challenge – skill balance** - Balance between challenges and skills is a principal condition of the flow as we saw in previous chapter (fig.3). Tasks that require the investment of psychic energy can be achieved with the appropriate skills. Particularly, when there is a high challenge and one has enough skills to meet the challenge, flow experience can occur. When the challenge of the task is greater than the performer's skills, anxiety will appear. On the contrary, when skills are greater than the challenge, people experience boredom (Csikszentmihalyi, 1990).

2) **Merging of action and awareness** – We can achieve merging of action and awareness when all the attention is focused on one task. The merging of action is related to any kind of activity, whether physical (dance, doing sport) or mental (reading, writing). Through paying attention to one subject or activity, people start to feel unity with the activity they pay attention to. In everyday life, we are constantly interrupted by daily tasks. We need to switch from one task to another. (e.g., respond the phone, write an article, have a lunch…). When one achieve to merge action and awareness, his or her activity becomes automatic and effortless (Csikszentmihalyi, 1990).

3) **Clear goals** – person understands the goals of the activity or the goals are developed while one is engaged in the activity. Without having a clear goal, people might find it difficult to focus or concentrate on the task. However if our goal is too simple, the achievement does not bring us the experience of flow (Csikszentmihalyi, 1990).
4) **Unambiguous feedback** – One clearly understands how they are doing. The kind of feedback we create is often not important. What gives the information value is the symbolic content that one succeed in watching the goal. Almost every feedback related to the goal where one invested a psychic energy can bring feelings of joy. Feedback can differ in various activities. Some people are indifferent to things that other can not get enough of. (Csikszentmihalyi, 1990). The feedback could be internal (feeling) or external (teacher’s correction).

5) **Concentration on the task at hand** – all psychic energy is focused on one task. There is no other space in mind to think of anything else. This belongs to one of the most frequent experiences mentioned by people who are in a flow state (Jackson & Csikszentmihalyi, 1999).

6) **Sense of control** – One perceives this control especiaially over difficult situations. This can also be described as a sense of power, confidence, total composure, and positive thoughts based on believing in their skills and being free from worry in their performance (Jackson & Csikszentmihalyi, 1999).

7) **Loss of self-consciousness** – Loosing the feeling that our self is something separate from the world may be accompanied by feeling of unity with environment. For example, a mind of a sport team is united while playing. One is not worried about how he or she is perceived by others. He or she is in harmony with others like one organism (Csikszentmihalyi, 1990).

8) **Time transformation** – The transformation of time means that time feels different compared to normal. It etiher speeds up or slows down. For example, people lose the notion of real time and one hour of real time seems like only five minutes in the person’s experience. The transformation of time occurs when people are concentrating intensively, but it is not always present during flow experience (Jackson, 1996).
9) Autotelic (intrinsically rewarding) experience – Autotelic experience consists of the dimensions of flow already mentioned. Auto means the ‘self’ and telos means the ‘goal’; therefore, the autotelic experience is doing the activity for its own sake. There is no expectation of any reward coming from the future (Csikszentmihalyi, 1990). Csikszentmihalyi (1988) discuss the relationship between intrinsic motivation (Deci&Ryan, 2000), which is part of self-determination theory and autotelic personality. The name flow was chosen based on the responds of the people describing their autotelic activitis (Csikszentmihalyi, Abuhamdeh & Nakamura, 2005).

![Figure 3: A challenge-skill balance](https://commons.wikimedia.org/wiki/File:Challenge_vs_skill_Commons.jpg)

1.4.1 Dimension number 10 – Meaning

Scientists, coaches and other people around the world, who are interested in flow experience, dedicate their time to find the way how to enter the state of awareness intentionally and what the state facilitates. We can see the increase of popularity of flow in sport environment (Hurych et al., 2013) or business culture. Business companies or sport coaches use concept of flow as a tool to be more productive at work or to enhance athlete’s
performance. In our society, there is a great demand for performance, in general. Yet this approach can be shortsighted if those involved in the process, we call life, do not follow their inner individual motivation or calling and rather follow the demands of the society. According to Delle Fave (2009) there is still one import part missing in the concept of flow and it is meaning. As optimal state is part of positive psychology, it has been sometimes misunderstood as a state which automatically brings about well-being and development. Several studies are showing that the outcomes of optimal experience are not automatically positive. They vary according to the features of the associated activities and to the value system of the individual and the cultural environment (Delle Fave, 2009).

So although we can experience a state of consciousness called flow by simply focusing on the activity and we meet all the conditions it takes, it does not mean that from longer perspective we are happy and fulfilling our potential. On the other hand, people can commit themselves to the cultivation of activities or to the pursuit of goals that they perceive as valuable, but that undermine their quality of life in the short term (Sen, 1992). The relevance of life activities and goals is related to the meaning individuals attribute to them (Emmons, 2005), and these activities do not have to be valued or approved by the cultural context (Delle Fave, 2009).

To live meaningful life and fulfill the potential, one has to keep searching for what makes sense to him on an individual level. Not only what society demands from us (Csikszentmihaly, 1990). Meaning making is a dynamic process, throughout the life, individuals constantly revise their experiences, attribute new meanings to them, expand or narrow their own meaning system (Delle Fave, 2009). A famous novelist Elizabeth Gilbert (2015) says that in every one of us is a hidden treasure which is waiting to be discovered. So basically in our life journey we are looking for our hidden treasures. Once we find the trace, we should follow it and bring the treasure to the light. Express it to the world.

As the life of an individual and a community is a whole, we should find the way how to connect our purpose with the community. Individuals are responsible for their own future and subsequently for the future of society they live in. That is why it is important to consider meaning making as a core dimension. Optimal experience can help individuals to connect with their resources and cultivate their skills. It allows them to be engaged in meaningful activities through effortless concentration and intrinsic motivation (Delle Fave,
Providing opportunities for optimal experience on individual and collective level can lead to true happiness. That is where we live our potential, full and meaningful life. Goleman (2013) call lucky ones those who connect what they do with what they like. The ultimate goal is to realize our potential (Individual level) in order to serve others (Collective level).

1.5 Flow experience in Sport and Exercise

Our body is a perfect instrument, how to experience flow. When we are unhappy, bored, we can use our body to change this state. Nowdays, most of the people is aware of the importance of being healthy, and in a good physical condition. However, there is still a great potential of joy that remains unused. There is not many of us who master their movements as an acrobat, or perceives world with an eye of an artist. These opportunities are within reach, and best way how to improve our quality of life is that we learn how to control our body and its senses. The body itself does not induce flow state just thanks to the movement. The mind is always present as well. To experience joy in any activity, we need to cultivate a system of the right skills, which requires concentration of attention (Csikszentmihalyi, 1990).

1.5.1 Flow and Sport

„Overcoming is perfection…when we overcome our abilities, we instantly gain inner pleasure, inner tigling, which is different name for perfection. No perfection can be achieved without overcoming ourselves“(ChinMoy 2003, p. 186).

The ultimate goal of sport is to be the best as one can be, to do something better than anybody did before us. The purest form of athletics and sport in general is to overcome the limits of what the body can do (Csikszentmihalyi, 1990).

Flow experience seems to occur when we reach the border of our limits, when we are using all our potential and capacity. In order to reach the highest potential possible, athletes usually prepare their bodies with proper physical training and techniques, according the sport they are involved in. Another important part of the preparation process is a mental training. Mental state of an athlete can play crucial moment in his performance. Tennis is
the perfect example where we can see, how much it is important to master athlete’s mind. For example, we can sometimes see two players which achieved the similar technical and physical skills and therefore their match is equal. But the decisive moment in this situation is the mental state of the players. The one, who is calmer, more focused, and better mentally prepared, becomes the winner.

Athletes and their coaches are becoming more aware of the importance of the mental preparation in order to achieve optimal performance (Williams, 1993). They are also aware that optimal performance is related to optimal experience of an athlete (Schüler & Brunner, 2009). Concept of flow has recently become an instrument for coaches and their athletes of how to achieve the optimal performance (Hurych et al., 2013). "Although today’s elite athletes maybe achieved current physical limits of the human body, the spiritual wealth hidden inside is still untouched and unused“ (Chinmoy, 2003, p. 5).

Jelínek, Jetmarová (2014) found that it is a certain state of mind that succesfull athletes have in common. It does not depend on the character of the athlete, for example if he is flegmatic or choleric. The difference is in the way of how each of the athletes reach the goal – flow. The ways how to get there are all different and it all depends on differences in mental and spiritual processes of each person. "The state is the final product of our work with mind of an elite athlete“ (Jelínek & Jetmarová, 2014, p. 21).

1.5.1.1 Zone and similar states of mind

The term flow is known among athletes as “being in the zone“. The zone was described as feeling of combination of inner peace and readiness for dynamic action accompanied by feelings of lightness (Jelínek, Jetmarová, 2014). Maslow (1968) used term “peak experience“, which is also often included in sport terminology. Flow shows similarities with peak experience and “peak performance“ (Eklund, 1994). There was a discussion on the relationship between peak experience, peak performance and flow in elite sport. The term peak experience is connected with feelings of highest happiness and fulfilment. Peak performance is performing at an optimal level and is objectively measured in terms of scoring. Flow is perceived as enjoyment, an intrinsically rewarding, or autotelic experience (Privette,1983; Jackson,1992).
Although there is a hidden assumption that all these terms are the same state under different names (Hurych et. al, 2013), flow might differ from the physical state of being in the zone, as an individual can enter a state of flow at various levels of performance (within the boundaries of his or her abilities at any given time), while the zone is only entered when an individual is performing at the highest level possible and for longer periods of time (Hanin, 2000). Flow state has been also described as being a mental process, while being in the zone has been linked more clearly to a set of physiological (hormonal) characteristics (Sears & Lawren, 1995). It is still possible that we are talking about the same state of mind. But the difference is in the path of how to get to this state, as well as in the intensity of the experience, which can vary.

Athlete Olivier Bernhard brings us this phenomenon closer by describing his own experience in the book Sport and meditation. Athletes experience a certain state of flowing energy when their mind and body are in complete harmony. It is a state where is no pain or feeling of being tired.

He brings up a memory from one of his world competition in duathlon: „I got off my bike and took on my running shoes. The fact that I am running I realized after 10 km of my run. I felt like my body is not touching the ground. I was sure I am dreaming. There were tears in my eyes. There was no effort in what I was doing and I was not even aware of how important the race is. I felt like I am out of my body, like it was not me who is doing the race“ (Bernhard in ChinMoy, 2013, p.1).

1.5.1.2 Flow enhancement in sport

Sport and meditation

Sport helps us to develop qualities like determination, confidence and concentration. Meditation helps us to improve perception of ourselves. It intensifies the will and inner peace. The experience in sport can be deeply meditative. If we concentrate enough during the training, it is a form of meditation. The repetative movements and regular breathing in sports such as running, swimming or cycling help to induce quite and contemplative mind.
The disorder in mind leaves us and we feel unity with ourselves and with our surrounding. In sport we experience pure state of being with no worries or anxiety. The joy and satisfaction coming from sport is similar to joy and satisfaction coming from meditation. In the past, there existed a link between physical activity and meditation. Physical activity like was used like spiritual practice leading to enlightenment. Good example are monks who every week run hundreds of kilometres in inhospitable mountains (Chinmoy, 2003).

**The Ultimate goal – Ultimate happiness**

When an athlete participates in any form of competition, he has an unique opportunity to improve his own skills. This is the most important and main factor of competing – not to defeat others. In unity with others we feel joy in joy of others, and sadness of others is also our sadness. But not every athlete is aware of that. For any athlete is good to know that he competes with his own record not for his own fame, but for improving the world. There exists higher perspective how athlete can perceive sport (Chinmoy, 2003).

„If the only goal is to win, then athletes never find the happiness, because even if they win today, tomorrow somebody else will come to take them their fame. We will not find the real happiness by separating ourselves from others. The real happiness comes from the feeling of unity with others, despite the fact they defeat us“ (Chinmoy, 2003, p. 168).

So the ultimate goal in sport, which supports the concept of flow and experience of happiness is to use sport as an instrument for overcoming mental and physical limits of an individual, but not for athlete’s own benefit, but for the good for all people to show others the possibilities of body and mind, to unfold the human potential.

**1.5.2 Flow and exercise**

In this chapter we describe 2 ancient systems, whose essence is based on interconnection of body and mind aspects, and therefore they might be considered as a good precondition or tool for experiencing flow.

**1.5.2.1 Yoga**

Eastern civilizations are far more in the knowledge of how to gain control over the body and its experiences. To the contrary, western approach is too much focused on
materialism. A perfect society should be able to create a healthy balance between spiritual and material world. With no need to achieve perfection, we can get inspired by eastern religions and learn how to control our consciousness (Csikszentmihalyi, 1990).

Hatha yoga is considered as one of the oldest and the most widespread eastern methods how to exercise the body. In several aspects it corresponds with what we know about psychology of flow. So it serves as a good model for those who wish to learn how to treat the psychic energy. In sanskrit yoga means unity with God and that is also the highest goal of its practice. First, it unify different parts of the body and then let the body as a whole cooperate with consciousness as a part of organized system. Yoga consists of several phases and the final one is called Samadhi where the meditator reaches unity with the object of meditation. Those who experienced Samadhi describe it as one of the most joyful experience in their life (Csikszentmihalyi, 1990). The experience of Samadhi is connected with feelings of pure existence, not to be someone (in sense of role), but just be. Some athletes compare their peak experiences to experience of Samadhi (Jelinek&Jetmarová, 2014).

We can actually consider yoga as a very thoroughly thoughtful activity to enable flow. It tries to reach joyful experience where one forgets about himself/herself thanks to concentration, breathing and disciplined body (Csikszentmihalyi, 1990).

1.5.2.2 Martial Arts

There exist a lot of variations of martial art. It includes judo, jiu-jitsu, kug-fu, taekwondo, aikido, taijiquan, kendo etc. These martial arts were influenced by Taoism and Zen Buddhism and therefore also emphasize control over the consciousness. They focus on physical performance as well as on improving mental and spiritual state of an individual. The fighter tries to achieve a state where he is able to meet with the opponents with no hesitation, and where he need not to think about the best movements in order to fight. Those who achieve that state claim that the fight becomes joyful artistic performance in which everyday experience of duality of body and soul transform to harmonious concentration of the mind. Therefore we can consider martial art as specific form of flow experience (Csikszentmihalyi, 1990).
Summary: So what we can understand from previous knowledge about yoga and martial art is that both systems have a goal to unify body, mind and spirit. Physical bodies, their cultivation and interconnection with spirit and soul is often perceived as a basis of the path to create conditions for achieving higher state of consciousness (Jelínek, Jetmarová, 2014).

1.6 Measurement of Flow

Flow is a subjective, psychological experience, therefore to measure it accurately and objectively is very challenging. Several types of measurement have been used to measure flow in life in general and in sport specifically.

Csikszentmihalyi (1992) warns that it would be easy to develop a test or questionnaire that would make it possible to assign some score to one’s intensity and frequency of experiencing flow. But he always resisted to doing it as history of psychology is full of examples of how barren important ideas become as soon as they are precisely measured. He emphasize that any measure of flow that we create will only be a part of the reality.

First, there were qualitative methods used to investigate the flow in the physical activity context (Csikszentmihaly, 1975; Jackson 1992, 1995). The retrospective element could be the limitation to qualitative methods (Kimiecik&Jackson, 2002). However qualitative approaches to study flow are important to provide foundation for the development of psychometric instruments in order to examine flow from quantitative perspective.

Experience Sampling Method (ESM)

ESM was developed by Csikszentmihalyi and Larson (1987) to examine the subjective experience of flow using interview and questionnaires in every day life. It involved people to wear an electronic paging device for a week and to write down how they felt and what they were thinking about whenever the pager signaled. The pager was activated by a radio transmitter about 8 times each day, at random intervals. Their mood was scored on 7-point bipolar scale and intensity of concentration, self-consciousness, and sense of control were rated on 10-point scales. The details about the location and activity being done were reported using open-ended questions. The ESM is difficult to apply to
some activities, such as sport and physical activity. During performance, the athletes can not stop to record their individual experience on paper and keep the equipment with them on the stage. This approach interrupt the performance as well as flow state in order to describe their experience.

**Qualitative Approach Using In-Depth Interview**

Csikszentmihalyi (1975) used in-depth interview with surgeons, music composers, rock climbers, rock dancers, chess players, and basketball players. Csikszentmihalyi came up with the positive experience called flow and identified characteristics of flow experience based on variety of information (Csikszentmihalyi, 1990).

**Quantitative Approach Using Questionnaires for Flow State and Dispositional Flow**

Jackson and Marsh (1996) developed the Flow State Scale (FSS) based on Csikszemihalyi’s theory and previous qualitative research (Jackson 1992, 1995) to measure flow experience in sport and physical activity. The FSS assess intensity of flow experience connected to specific event and is administrated after specific activity. Marsh and Jackson (1999) developed the Flow Trait Scale (FTS) to measure the frequency with which the respondents experience the flow, in general, in relation to specific event. So the FSS is considered as a “state measure“ and the FTS provides a measure of possible “trait“ characteristic of flow with the assumption that individuals may differ in their propensity to experience flow on regular basis. Both scales consists of 36 items with 4 items corresponding to each of the nine dimensions of flow: Challenge-skill balance, action-awareness merging, clear goals, unambiguous feedback, concentration on the task at hand, sense of control, loss of self-consciousness, transformation of time, and autotelic experience. Respondents answer on 5-point Likert Scale where 1 means strongly disagree and 5 means strongly agree with the statement.

Jackson and Eklund (2002) later developed new scales Flow State Scale – 2 (FSS-2) and Dispositional Flow Scale (DFS-2) within the sport context. These versions are revised version of FSS and FTS scales. The main reason for the revision was that Vlachopoulos, Karageorghis and Terry (2000) determined that the dimensions loss of self-consciousness and transformation of time were weak in their intercorrelations with the other flow
dimensions and the global flow factor. Jackson and Eklund (2002) acknowledged the weakness of two of the flow dimensions (loss of self-consciousness and transformation of time) on the original FSS and FTS scale. There was made item modification in these two dimensions by reviewing the related literature describing the flow experience as well through a discussion with M. Csikzentmihalyi.

1.7 Flow research in sport and exercise

To understand this psychological state, flow has been studied through qualitative and quantitative research.

One of the first qualitative research done to examine flow experience in physical activity was with a group of rock climbers and conducted by Csikszentmihalyi (1975). A great number of research have been done among elite athletes by Jackson (1992, 1995).

One of the first research among elite athletes included 16 national champion figure skaters who were interviewed to examine flow experience (Jackson, 1992). The results showed that the athletes experienced remarkable flow state on the basis of dimensions of flow that were similar to those presented by Csikszentmihalyi (1990). The factors that seemed to be the most important in order to get to the flow state were: positive mental attitude, positive pre-competitive and competitive affect, maintaining appropriate focus, physical readiness, for pair skaters, unity with partner. The factors perceived as disrupt flow were: physical problems, inability to maintain focus, a negative mental attitude, lack of audience response.

Jackson (1995) did similar research with athletes from seven different sports: track & field, rowing, swimming, cycling, triathlon, rugby, and field hockey about what facilitated, disrupted and prevented flow. Factors that helped to experience flow were: preparation (physical and mental), confidence, focus, how the performance felt and progressed and optimal motivation and arousal level. Another qualitative study done by Jackson (1996) examined the flow experience of elite athletes from seven different sports and using Csikszentmihalyi’s dimensional model as the base.

More recent research include Aherne, Moran & Lonsdale (2011) studying the effect of mindfulness training on athlete’s flow experience using FSS-2 before and after intervention.
Significant interaction effects were observed for the flow dimensions Clear goals and sense of control.

Kee & Wang (2008) studied relationships between mindfulness, flow dispositions and mental skills adoption in student athletes. For assessing flow DFS-2 was used. This study suggests that athlete’s flow dispositions and mental skills adoption could be differentiated using mindfulness. High mindfulness cluster scored significantly higher than the low mindfulness clusters in challenge–skill balance, merging of action and awareness, clear goals, concentration and loss of self-consciousness scores of the DFS-2.

Yeong (2012) studied the application of imagery to enhance flow state in dancers using FSS-2 and DFS-2. Results showed that autotelic experience was the flow dimension most strongly involved in dancers’ flow experience, whereas, loss of self-consciousness demonstrated the weakest association.

Phillips (2005) examines flow states and motivational perspectives of ashtanga yoga practitioners. FSS-2 DFS-2 was used and participants reported experiencing flow during ashtanga yoga practice and at least moderately endorsed all nine dimensions of flow state.

Nedeljkovic et. al (2011) observe flow experience in taiji using FSS and coming to endings that there is high potential of intrinsic motivation in Taiji practice based on comparing flow experience during practice in the centre and home.
2 Qigong and Taiji

2.1 Qigong Roots

In order to understand Qigong we need to understand its roots first. Qigong is deeply connected with Chinese philosophy of Taoism which greatly influenced Chinese culture and everything which came out from it.

2.1.1 Taoism – The philosophy of healthy and happy life

„Tao that can be told is not the eternal Tao. The name that can be named is not the eternal name.“ Lao Tzu, Tao-Te-Ching

Taoism is 5000 years old Chinese philosophy, which had deep impact on Chinese culture. It concentrates mainly on how to live long, happy and productive life, which would be in harmony with nature, and which would be beneficial to humanity and led to spiritual growth. The principles of Taoism are described in the book Tao-Te-Ching written by Lao Tzu. (6th century B.C.). Qigong and Chinese medicine are practical branches of Taoism. Both systems have goal to purify, harmonize and enhance life energy in order to achieve maximal health, happiness, creativity, longevity and spiritual growth. There is one small branch, which functions as organized religion. However, Taoism in its principle is opposite of hierarchy and rigid structure (Chia, 2012).

Although, Tao is beyond all its definitions, it is good to have an idea what it means. We can understand the Chinese word tao as “way“ or “path“. Tao then could represent natural way, natural order of the Universe; the source of everything that exists, Divinity (Chia, 2012).

Chia (2012, p.7) describes Tao:

„It is never ending, eternal, changing. It is present within us and beyond us. It is the unity of all beings and all things. Tao means direct experiencing of God. Its essence is unconditional love, harmony and balance. Its expression is intuitive knowledge and
spontaneous action. Tao is not a religion, as only force controlling whole Universe involves all religions. “

Yin an Yang

One of the basic principles of Taoism is theory yin and yang. The original meaning for yin was “the shadow side of the hill“, and for Yang “the sunny side of the hill“. Yin is female aspect and yang is male aspect. Yin is dark, silence, contraction. Earth and water represent yin characteristics. Yang is light, activity and expansion. Sky, the sun and fire represent yang characteristics (Chia, 2012). According the theory the nature tries to harmonize its complements, so that everything is neutral and in balance. Since people are part of the nature, they should also maintain the balance (Jwing-ming, 1995). The symbol in the picture (Fig.4): the black color represents yin and white yang. These two energies are interdependent and react on each other all the time. One can not exist without the other. Each has got in its centre the seed of its contrast.

![Symbol Yin and Yang](https://commons.wikimedia.org/wiki/File:Yin_yang.svg)

Figure 4 : Symbol Yin and Yang

(https://commons.wikimedia.org/wiki/File:Yin_yang.svg)
2.1.2 Other philosophical influences and schools

There are 4 main branches or schools of Qigong practice and theory:

1) **Confucians** – They are more interested in function of human society, than in self-observing and self-development. Their goal of Qigong is to make people more capable of doing their work. There many artists and scholars who express their opinions about Qigong through poems (for example, Li-Po)

2) **Doctors** – They are not primary included in any philosophical group, however the traits of Taoism can be found in their work. They work emphasize the balance of Qi.

3) **Buddhist monks** – They emphasize getting rid of suffering through awareness. Their main method was calm meditation with breathing, focusing on calming down the mind. Although it led to significant circulation of Qi, it was not their primar intent.

4) **Taoists** – They are connected with separation from the society in order to improve their own self and get immortality.

These groups do not eliminate each other. (Jwing-ming, 1995)

2.1.3 A brief overview of history of Qigong

The history of Qigong is very comprehensive, thus we mention just few facts we found important to state:

- The origin of theory of Qi is connected with the beginnig of Chinese medicine under the rule of Yellow Emperor (2690-2590 BC)

- Book I-Ting comes from the period of 2400 B.C. and talks about compact form and about all changes in nature. The forces of nature are pictured in 8 trigrams which are combined to 64 hexagrams. These pictures are mirrored in all aspects of Chinese culture. The 8 trigrams are used to illustrate circulation of Qi in the body.
- In 6th century B.C. Lao-Tzu (Li Er) described in his book Tao-Te-Ting techniques of breathing, which suppose to prolong life. It was the first written mention about using breathing for improving of Qi circulation and so prolonging of life.

- In 3rd century B.C., doctor Ke Chung mentions using the mind for improving Qi.

- Under the rule of Liang (502-557 A.C.) a Buddhist monk Ta-mo came to Shaolin Temple. When he saw that the monks are weak and not capable of any intense activity, he was so touched that he went to isolation for 9 years to think about it. When he came out from isolation, he brought 2 books. One is I-Tin-Ting (about development of muscles). Monks used these methods and found out that their strength increased. This training was involved among forms of martial art training.

- Under the rule of Sung (960-1279) Zhang san feng should create taijiquan on the Wu-tang mountain. Taiji is martial form of internal Qigong, which develops energy from dan-tien. It starts with little circulation in chest and head and then move to big circulation in entire body and then the energy is applied for fight purpose. (Jwing-ming, 1995)

- Currently, Qigong is examined by several scientific institutes and medical clinics in China. Since 1911 the teachings of Qigong have opened to general public. A lot of previously secret documents have been published (Fojtík, 2003).

### 2.2 Eastern vs. Western view of man

There is a difference in perceiving human by Eastern and Western tradition.

The Far East – China, Korea, Japan and other countries are influenced by Chinese way of thinking. Human being is understood as psycho-physical connection, as a whole entity, and also as a part of the Universe. He is equivalent to other elements. Any living beings are understood as transient form, which functions well, only if the omnipresent energy is there in balanced relations (Fojtík, 2003). In Chinese medicine, it used introspective approach. One observes his own body and feelings, and based on his findings, develop his medicine knowledge. It is called internal way (Jwing-ming, 1995).
In Europe we have not left a tradition dated from Neoplatonism (3rd century), highlighted by Descartes, that defines human as body and soul. In medicine, it includes anatomical exploration, exact description of physical and physiological details. The western world have been primarily focusing on external way, and considered internal way as unscientific. However, in recent years the attitude of general public and even medicine community start to be more open to other approaches, such as Chinese medicine (Jwing-ming, 1995).

Eastern and Western, or holistic and analytic approach can complement each other without being put in a contrast (Fojtík, 2003). The problem is that Chinese philosophy presents many opinions that have not been verified by methods of western science (Clavo in Fojtík, 2003). But maybe it is just matter of time when western methods will be as sophisticated to confirm or disprove, what was found by Eastern civilization.

2.3 Qigong

2.3.1 Definition of Qi

Qi – in Greek it means pneuma, in Sanskrit prana, in Hawaiian mana, in Japanese ki. Qi is considered as life force and flow of energy in all living. There is no western definition for term Qi, but some representatives of western medicine describe inner energy of human body as biomagnetic energy. According the experience of those who practice Qigong, it is like electricity which flows through body of people and animals. Qi is energy which activates all movement in the Universe. It is a life force of all being and things (Chia, 2012). When the circulation is stagnant or stops, the person or animal get sick or die (Jwing-ming, 1995). Old Taoists distinguish between two main forms of Qi, internal and external. These two forms create and maintain life (Chia, 2012).

Portocarrero (1997, p. 26 in Fojtík 2003): „In the immense space of cosmos, there exist one basic and default energy that gives rise to all the elements and unites them.“

We could understand that this conception expresses that the energy and the matter, sky and earth, human and his environment are just different expressions for one and the same thing in eternal transformation (Fojtík, 2003).
Master Gao (1999) divides Qi into two categories:

1) Prenatal Qi – internal factor of life force, which is created in moment of conception (inherited), internal Qi in human body

2) Postnatal Qi – internal factor of life force, which is obtained from space sources – atmosphere, air, water and nutrients – using organs of the human body (obtained)

Prenatal factors are foundation on which postnatal factors can be developed.

**Variations of Qi**

Nature includes periodical cycles such as seasons, direction of the wind, humidity. It also includes geographical data such as height above sea level etc. These empirical observations led to the conclusion that the circulation of Qi is connected with the nature and that there was a search for people of how to get in the alignment with nature changes. Moreover, it was found that Qi closely connected with personal relationships. It includes relation of Qi to sounds, emotions and diet. Since the Qi is controlled by brain, any emotional arousal will affect circulation of Qi. The sounds that people make were observed in different situations. It was also observed how too much alcohol and overeating can affect circulation of Qi in liver channel. After long period of observing, people started to understand that Qi is important for health of an individual and started to look for ways how to improve circulation of it. These methods were found and proved to be effective (Jwing-ming, 1995).

**2.3.1.1 Doubts about existence of Qi**

A lot of people doubt about possibility of development of internal energy as well as they doubt about existence of Qi. The reason is that until recent time, most of the masters were willing to teach only their sons or a few people they trusted, so the knowledge was not so widespread. A lot of technical skill and approaches were developed by Buddhist or Taoist monks, who did not want to spread the knowledge beyond their temples. Because most of the people did not know much about Qigong, it was perceived as sortilege. Other reason for confusion around Qigong is that some people did not learn the practice properly, so their knowledge was not efficient or even lead to injuries. The result was that many people were
afraid to try qigong, when they heard about the injuries, or they despised it, when they heard about the failure of those who practiced it (Jwing-ming, 1995).

2.3.2 Definition of Qigong

When we consider the diversity of schools, theories, and methods of Qigong, it is a practice, which is not easy to define. There exist different connotation, and hundreds of schools still contend over the proper meaning. However, the definition of Qigong in Chinese medical context starts to be more clear (Tianjun & Qiang, 2013).

Qigong also known as neigong (internal kung-fu) is a practice which Chinese people use for thousands years. People use it either for improving and maintaining health or for gaining more strength in martial arts. Exercise for health is usually slower and more fluent than in martial art environment (Fojtik, 2003).

In Chinese, Gong means work and Qi means energy which circulates in the body. Qigong means cultivating energy circulation of the body in order to increase it and for better control of the energy. There exist 12 main channels (meridians) in the body through which the energy is flowing. Along the channels are “cavities“, which are known as acupuncture spots and they can be used for stimulation of whole system (Jwing-ming, 1995). The meridians distribute energy to whole body and are named after the organs and systems they belong to. The place where all the meridians meet is called dan-tien and is located 2 or 3 fingers under the belly buttom. Dan-tien is consider as a center and source of vital energy, and it is claimed that training of dan-tien positively influences the strength of the body. An important aspect of internal system of Qigong is to have a visualization of energy flowing in meridians. (Gao, 1999).

Qigong is considered as „the skill of body-mind exercise that integrates the three adjustments of body, breath and mind into one“ (Xun in Tianjun & Qiang, 2013, p.17).

The purpose of the three adjustments is to achieve a state of harmonious unity-integrating these adjustments into one. The three adjustments can not exist independently. Instead, body, mind and breath are unity. This state of Oneness is the criterion that
distinguishes Qigong from common physical exercises. For example, conventional exercises such as calisthenics also include three adjustments of body, breath and state of mind (mental focus and concentration). But the difference is that they are practiced independently, not unified. The exercise requires mastery of skills, it is not just theoretical, but also practical (Tianjun&Qiang, 2013).

When we want to express Qigong in modern science – it consists of both physical and mental training, it belongs to physiology and psychology-mind body medicine (Tianjun&Qiang, 2013). It consists of physical postures (movements) and visualization (mental control). All this is combined with proper breathing techniques that are used for self-regulation of internal organs. Qigong is different from other practices, such as taiji, which focus on body movements. Qigong is primarily focused on mind (Gao, 2012). Qigong practice relaxes and develops the body and mind equally. Nowadays, it is very important to find balance in stressful situations, which are created by demands of our consuming society and hectic way of living (Fojtík, 2003).

2.3.2.1 Several schools and methods of Qigong

Baduanjin (8 pieces of Brocade)

Baduanjin is one of the most common forms of Qigong (Kuei, 1993). The exercise consists of 8 individual movements which lead to silken quality of the body and its energy. The Baduanjin is considered as medical form of Qigong, meant to improve health (Yang&Jwing-Ming, 2000).

Zhan zhuang

Zhan zhuang is also known as Standing Qigong or Standing like a tree. It belongs to static standing method. It was original practice for martial arts. The aim of Zhan zhuang in martial arts has always been to develop a materially capable body structure, but nowadays most practitioners have returned to a promoting health orientation in their training (Bluestein, 2014).
Wu qin xi

Wu qin xi is based on imitating of 5 animals tiger, deer, bear, monkey and crane. There exist many different versions of Wu qin xi (Fojtík, 2003).

Daoyin Yangsheng Gong

The founder of Daoyin Yangsheng Gong is professor Zhang who worked at University of Physical Education of Beijing. Daoyin exercises consist of many postures and movements, but the main goal is to achieve a state of harmony between body and mind. Yangsheng, translated as ‘nourishing life’, consists of various self-cultivation practices, which are directed to promote health and longevity. Life (sheng) can be supported, cultivated and nourished (yang) by taking care of the Three Treasures: Jing (Essence), Qi (Energy) and Shen (Spirit).

Zhineng Qigong

Zhineng Qigong was developed in the 1980s by a Chinese scientist Dr. Ming Pang, who dedicated his life to Qi Gong research and healing. He wanted to help and cure people without any medication. He connected ancient Eastern knowledge about exercise and healing with the knowledge of Western medicine and with the knowledge of modern science and philosophy (Liu, 2008).
2.3.3 Benefits of Qigong

Qigong was traditionally used to support physical condition, cure illnesses and prolong life. The benefits of qigong also include the mental level. For example, athletes use the relaxation techniques to overcome fear, decrease the level of stress and weakness, and increase their performance (Gao, 1999).

Other benefits of Qigong according to Fojtík (2003):

- Deeper perception of one’s own body
- Optimal regulation of mind processes
- It contributes to overall well-being, and specific level of spiritual growth that deepens the awareness of the practitioner, and reveals the new dimensions of his being.

There is an assumption that by practicing self-control and self-regulation, one can restore primar energy Qi and induce a state of good physical and mental state.

2.3.4 Principles of Qigong

Master Gao (1999) presents 2 basic principles of Qigong. Regulation of Qi, and regulation of mind.

2.3.4.1 Regulation of Qi – Breathing

Breathing connects the body and mind. There are dozens of ways of breathing. Each of them can affect the organism in different way. The exhale activates parasympaticus, so concentration on exhaling calms down the organism. On the contrary, the inhale activates sympaticus, therefore accent on inhale activates the organism (Fojtík, 2003). Research showed that the deeper breathing is, the fewer thoughts appear, so our mind is calmer (Behnke et al., 1935; Grossman, Wientjes 2001). It also has positive influence on decrease of anxiety symptoms (Goldin&Gross, 2010).
The way of breathing in Qigong can vary from common way of breathing. Different kind of exercise in Qigong can influence the way of breathing of an individual (Gao, 1999).

2.3.4.2 Regulation of Mind

The word concentration is very common for Qigong practise. To concentrate means to lead all the attention to specific part of the body, certain visualization or idea. The regulation of mind is necessary aspect in Qigong. It means that in Qigong practice, one is aware of his thoughts. The aim of regulation of mind is to relax from stress, so the mind stay calm and relaxed. The body will follow in the moment, when one gets his unwanted emotions under control (Gao, 1999).

There are many approaches how to regulate mind. One can concentrate his mind on beautiful scenery, on certain part of the body or on any visualization that is calming down the mind (Gao, 1999). One of the most common ways how to regulate mind in Qigong is to concentrate on the centre of the body – dan-tien. In East tradition abdomen is considered as the centre of a human. Paying attention to the abdomen, instead to the heart or head, leads to the fact that the center of gravity is moved closer to the ground, so the person is more grounded and more stable (Fojtík, 2003).

Western science proved that, that we use only 30-40% our brain capacity. The science believes that we can achieve to use more capacity by practicing meditation and by training of concentration. It is proved that hypnotised person can do things, which are far beyond his posibilities in normal state. Meditation is certain kind of autohypnosis that can lead us to this kind of heightened performance (Fojtík, 2003).

Meditation

The relaxation of muscles, lead to the relaxation of mind. In relaxed body, Qi can flow easily. The body relaxation and focusing on breathing are the two main conditons of how to achieve the state of meditation. Meditation helps to concentrate and calming down the mind. Researchers have found that meditation have positive influence on stress reduction and immune functions (Yang, Su, Huang, 2009). Sifu Korahais (2014) presents that the aspect of meditation influence 60% of the practice. Meditation leads in its highest levels to state of Samadhi, in Zen Satori, when one experience the unity with the Universe. Samadhi and
Satori means awakening, enlightenment, the state of radical change in perception of the world (Fojtik, 2003).

Qigong state of mind

Entering the quite state is another name for Qigong state of mind. It is a quite meditative state, the mind is free of thoughts. Awareness of external stimuli is reduced until one reaches the state where the person is conscious yet not conscious, aware yet not aware. It is a state between being awake and being asleep. The cerebral cortex is in quiet condition.

2.3.5 Qigong practice in martial art

We divide martial arts into two basic groups: External martial arts and internal martial arts. The most popular external martial arts involve box, judo, fencing, jiu-jitsu, karate, taekwondo, Thai box.

Taijiquan, Baguazhang and Xing Yi Quan are considered as the main Taoist internal martial arts. These martial arts are part of tradition of Chinese medicine, and are derived from tradition of cultivating internal energy such as Taoist meditation. Internal martial arts are considered as finest, most complex and the most sophisticated systems in the world of Chinese martial arts.

In internal martial art, health and therapeutic body treatment is considered as main criterion, comparing the external systems, where the priority is to improve the technique of the fighter. Those who practiced Taoist meditation were mainly interested in health and well-being, not in warfare or self-defence. Fighting was considered as a useful byproduct.

The main direction of Taoist internal martial arts is focused on development of Qi and calming down the mind. The millions of people in China practice internal martial art purely for preventive preservation of health, for treatment of injuries and diseases and as a form of meditation and stress management (Frantzis, 2010)
2.3.5.1 Taijiquan

The internal martial art is usual shortened to “tai-chi”, also known as taiji, where “tai” means supreme and “chi” means ultimate. Taiji is Taoist philosophical term for place, where is no duality. Where opposing principles yin and yang exist together before they split to opposing dualistic form such as day and night, the sun and the moon. Taiji points to philosophical idea of the nature of the existence, and moreover it refers to health, based on cultivation of Qi and internal strength. “Quan“means fist, in broader sense everything related to techniques, tactics, philosophies, or strategies of fight. As a martial art, Taijiquan connects these two individual aspects to one whole (Frantzis, 2010). Taijiquan is also translated as Shadow boxing or boxing style.

Taijiquan is characterized by slow, relaxed movements which could rather look like dance than martial art. In these combat movements is implemented the philosophy of yin and yang. It is characterized by “empty“and “full“movements. Taijiquan includes training with sword, saber, spear and stick (Jwing-ming). Chen Style Taijiquan uses thought to quide energy, and uses energy to move the body (Zhenglei, 1998).

Taijiquan was passed by Chen family and as a whole system is built on these fragments (Zhenglei, 1998, p. 1):

1) The theory of Book of Changes or Yi Jing, the traditional Chinese medical theories and practices of Jingluo (channels through which internal energy of body passes)

2) Daoyin (gymnastics for guiding and harmonizing the energy in body)

3) Tuina (breathing exercise or qigong)

4) Principles of dynamics
Styles of taiji

Chen style Taijiquan is the origin of the other main styles of Taijiquan. It has subsequently developed into the Yang style, the Wu (Jianquan) style, the Wu (Yuxiang) style and the Sun style of Taijiquan (Zhenglei, 1998). Taijiquan Chen and Taijiquan Yang are considered as the most important styles. The yang style is the most practiced style in China and in the world among older population (Fig.5). The difference between those two styles is that Chen style consists of gentle, slow movements as well as fast and vigorous ones, whereas in yang style, all the movements are basically at one speed, relaxed and graceful (Koh in Snyder&Lindquist, 2010).

Figure 5: Elderly people practicing Taiji (http://www.dreampositive.info/the-psychological-benefits-of-tai-chi-and-qigong-practice/)

2.3.5.2 Flow experience in Qigong and Taijiquan

Here we define an example of how a practitioner of Qigong or Taiji can contribute to experience of flow during his practice. The structure is based on the concept of flow (Csikszentmihalyi et al. 2005).
1) One need to **define the clear task** before training starts, e.g. to relax shoulders

2) **Challenge-skill balance.** One need to choose forms or movements which fit to his current physical and mental situation as well as to level of experience of the student

3) **Feedback.** When practicing individual movements, one has to be aware of the movements and the feelings in order to correct them if necessary. Depth of correction needs to fit to the skills of the practitioner. Correction of movement must be clearly defined by teacher or inner feeling

(Boedicker, 2014)

**How can Qigong and Taijiquan practice positively influence flow experience**

Based on the knowledge introduced in previous chapters about Qigong and Taiji practice we can suggest that these types of exercise are good instruments how to prepare conditions for experiencing flow state. The goal of Taoist exercise such as Qigong or Taiji is the same as the definition of flow state – to achieve harmonious state and Oneness which brings feelings of happiness and peace.

We understand Qigong as a good instrument which equally cultivate mental and physical components of an individual. For these reasons Qigong contributes to overall well-being of an individual. Research show that Qigong and Taiji have positive impact on reduction of stress and anxiety disorder of an individual (Hasegawa-Ohira et al, 2010; Yin&Dishman, 2014; Wang et al., 2009; Song et al., 2014). In one study examining genetic predisposition for flow proneness was found negative correlation between anxious behaviour and flow proneness. It means that people who had genetic predisposition for anxious kind of behaviour showed less proneness in experiencing flow. They were more likely afraid to perform activities which would promote flow experience (Mosing et al., 2012). For this reason practicing Qigong could help to reduce anxiety in people and thus help to support an individual in experiencing flow state.
3 Objectives and Tasks

3.1 Objective of the work

The main objective is to determine the level of flow experience in Qigong and Taijiquan practitioners.

Partial objectives

1. To compare the level of flow experience between Qigong and Taijiquan practitioners in general.

2. To compare the level of flow experience in Qigong and Taijiquan practitioners between the Czech republic and Italy.

3. To compare the level of flow experience in Qigong and Taijiquan according the age of the practitioners.

4. To compare the level of flow experience in Qigong and Taijiquan according the length of practice of the practitioners.

5. To compare the level of flow experience in Qigong and Taijiquan between males and females.

6. To determine if Qigong and Taijiquan practice has consequent impact on flow experience in every day life of the practitioners.

3.2 Research tasks

a) Determining the research task

b) Preparation of information for research

c) Preparation of research methods

d) Selection of a suitable test file

e) Collection and processing of data

f) Gathering and statistical processing of results
g) Analysis of results

h) Assessment of results, conclusions and their presentation
4 Research Question, Hypotheses of the work

4.1 Research Question
In consideration of the main research objective, the following research question has been determined.

**What is the level of flow experience in Qigong and Taijiquan practice?**

We have set the following partial questions to achieve the goal:

Q1 Is there a difference in the level of flow experience between Qigong and Taijiquan practitioners?

Q2 Is there a difference in the level of flow experience in Qigong and Taijiquan between practitioners in the Czech republic and Italy?

Q3 Is there a difference in the level of flow experience in Qigong and Taijiquan practice according the age of the practitioners?

Q4 Is there a difference in the level of flow experience in Qigong and Taijiquan practice according the length of practice?

Q5 Is there a difference in the level of flow experience in Qigong and Taijiquan practice between males and females?

Q6 Does practice of Qigong and Taijiquan have consequent impact on flow experience in every day life?

4.2 Hypotheses

When creating hypotheses we used theoretical knowledge about the principles of Qigong and Taijiquan.

H1 We assume that there is no difference in the level of flow experience between Qigong and Taijiquan practitioners.

H2 We assume that there is no difference in the level of flow experience in Qigong and Taijiquan between practitioners in the Czech republic and Italy.

H3 We assume that there is no difference in the level of flow experience in Qigong and Taijiquan practice according the age.
H4 We assume that there is a difference in the level of flow experience in Qigong and Taijiquan according the length of practice.

H5 We assume that there is no difference in the level of flow experience in Qigong and Taijiquan practice between males and females.

H6 We assume that practice of Qigong and Taijiquan has a consequent impact on flow experience in every day life of the practitioners.
5 Methodology

In this descriptive, exploratory study, a mixed-method design was used to examine the flow experience in Qigong and Taijiquan practitioners. This chapter presents the sample, settings, measures, data collection procedures and statistical analysis strategy for this investigation.

5.1 Settings
The participants were recruited from various Qigong and Taijiquan schools around the Czech republic and Italy, including Brno and its surroundings in the Czech republic; Rome, Torino, Lerici, Arcidosso, Milano in Italy. The sites were chosen based on their emphasis on Qigong and Taijiquan practice as well as convenience and accessibility for the investigator. The larger sample of practitioners was collected in Italy due to better accessibility to schools.

5.2 Sample
The sample was comprised of 184 Qigong and Taijiquan practitioners who volunteered for the study. The criteria for inclusion in the questionnaire survey, was some prior experience with Qigong or Taijiquan practice (as little as one class). The criteria for conducting in-depth interviews and focus group, was at least one year of practice.

5.3 Measures
Demographics

Data were gathered on age, gender, length of practice, experience with other activities and practice location. This information was used for descriptive purposes and some of them for analyzing associations between Qigong and Taijiquan variables and flow experiences.
Flow experience

Flow Scales

For measuring and describing the state and trait flow experiences in Qigong and Taijiquan practitioners there were used questionnaires FSS-2 and DFS-2 in the Czech republic and FSS and DFS - 2 in Italy. In the Czech republic we used original version of the questionnaires and in Italy we used translated version of the questionnaires which were validated (Muzio et al., 1999).

Two assesments of flow were collected from Qigong and Taijiquan practitioners: a) flow associated with a specific Qigong or Taijiquan session; b) flow associated with Qigong and Taijiquan, in general. The Flow State Scales (FSS, FSS-2) were used to measure flow associated with Qigong or Taijiquan session that the participants just completed and Dispositional Flow Scale -2 (DFS-2) was used to asses flow associated with Qigong or Taijiquan in general. Both scales contain 4 items for each of the 9 dimensions: 1) Challenge-skill balance, 2) Merging of action and awareness, 3) Clear Goals, 4) Unambiguous feedback, 5) Concentration on the task at hand, 6) Sense of control, 7) Loss of self-consciousness, 8) Transformation of time, and 9) Autotelic experience. The responses on all scales indicate the degree (1=Strongly disagree, 5=Strongly agree). The four items corresponding to each factor were averaged in order to obtain the 9 flow factor scores ranging from a possible score of 1 to 5.

In-depth interview and focus group

In order to provide deeper knowledge about the experience of the practitioners during the Qigong and Taijiquan class, the in-depth interviews and focus groups were conducted. The investigator divided the interview into 4 parts:

1) History – How the practititioners got involved to the practice of Qigong or Taijiquan.


3) Experience – How the participants feel during the class on mental, emotional and physical level.

4) Quality of life – What does practice of Qigong and Taijiqun brings to the practitioners in everyday life. Each of the sections was consisted of several questions related to the topic.
5.4 Procedure

Data collection

Qigong and Taijiquan centres and schools were briefed regarding the study. The investigator attended classes at the various Qigong and Taijiquan schools and centres in order to request the participation of Qigong and Taijiquan practitioners. When individuals agreed to participate they were assured that their confidentiality would be protected and received a packet including Demographics, Event Experience Scale (FSS or FSS-2; in relation to Qigong and Taijiquan session just completed and Activity Experience Scale (DFS-2; in relation to Qigong or Taijiquan in general. Subjects who met the study criteria were asked to complete the first two questionnaires (FSS or FSS-2) after the class they just attended. The subjects were then asked to complete the remaining questionnaire till the next class. After the investigator came back and collected the questionnaires.

The in-depth interviews and focus groups were conducted after the agreement of several participants who volunteered for the interview session. The teacher of the class helped to the investigator to arrange date and time for the interview session. All interviews were done in the Czech republic. In one school investigator collected data from two different groups practicing Qigong and Taijiquan during one class. Each of the groups consisted of 6-7 participants. Data were collected by using method focus group. **Focus group 1** consisted of 7 participants (6 males and 1 female). **Focus group 2** consisted of 6 participants (4 females and 2 males). In other two schools data were collected individually with each of the participants using in-depth interviews. One of the schools focused on Qigong practice (2 participants interviewed) and the other one on Taijiquan practice (3 participants interviewed). There was one interview done by phone.

5.5 Statistical analysis

In quantitative part software Statistika Statsoft 12 was used. Descriptive statistics was used to describe basic characteristics about the sample. Data were processed at a 5% level of statistical significance. At the beginning 3 tests were done determining normality of data (Kolmogorov-Smirnov, Liliefors, Shapiro-Wilk). For determining statistically significant differences were used 2 tests:
1) Mann Whitney U test (for two groups, e.g. Qigong vs. Taijiquan or Italy vs. the Czech republic, males vs. females)

2) Kruskal-Wallis analysis of variance (for more than two groups, e.g. according the age or length of the practice). Where K-S ANOAV indicated statistically significant differences, multiple comparison of p-values has to be done.

Coefficient of effect size:

- Cohen’s d
- $\eta^2$ (eta$^2$) Kruskal-Wallis analysis of variance
- interpretation of coefficients of effect size:

<table>
<thead>
<tr>
<th>$d$</th>
<th>$\eta^2$</th>
<th>Interpretation Cohen (1988)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 0</td>
<td>-</td>
<td>Adverse Effect</td>
</tr>
<tr>
<td>0.0</td>
<td>.000</td>
<td>No Effect</td>
</tr>
<tr>
<td>0.1</td>
<td>.003</td>
<td></td>
</tr>
<tr>
<td>0.2</td>
<td>.010</td>
<td>Small Effect</td>
</tr>
<tr>
<td>0.3</td>
<td>.022</td>
<td></td>
</tr>
<tr>
<td>0.4</td>
<td>.039</td>
<td></td>
</tr>
<tr>
<td>0.5</td>
<td>.060</td>
<td>Intermediate Effect</td>
</tr>
<tr>
<td>0.6</td>
<td>.083</td>
<td></td>
</tr>
<tr>
<td>0.7</td>
<td>.110</td>
<td></td>
</tr>
<tr>
<td>0.8</td>
<td>.140</td>
<td>Large Effect</td>
</tr>
</tbody>
</table>

In qualitative part, responses were obtained by 3-level open, axial and selective coding (Corbin & Strauss, 2008). Method of hand coding was used for data analysis. There was a code assigned to each of the units in order to describe the unit. In the end there was created the structure presenting relations and contexts between the codes.
6 Results

6.1 Demographics

In this part we present basic characteristics of the sample.

There were 184 participants involved in the study for examining flow experience in Qigong and Taijiquan. The selected sample consisted of 108 women and 76 men (fig. 6). The minimum age of participants was 20 years and maximum age was 76 years. For our purpose of study we divided the age into 3 categories (Fig. 7). The majority of the participants involved in the study were from Italy (Fig.8). The majority of sample practiced Taijiquan (fig.9). We divided the length of practice into 3 major groups (fig.10). Most of the participants emphasize physical and spiritual adjustments at the same time (fig.11)

![Gender Chart](image-url)

Figure 6: Gender
Figure 7: Age

Figure 8: Country

Figure 9: Type of practice
6.2 Comparison of research samples

In the beginning there were done tests assessing normality of data. Based on the results of 3 different tests (Kolmogorov-Smirnov, Liliefors and Shapiro-Wilk), hypothesis of normality of data was rejected. Therefore the non-parametric methods were used during the statistical analysis.
Here we present basic statistic characteristics of whole sample (Tab.1).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Descriptive Statistics</th>
<th>Valid N</th>
<th>Mean</th>
<th>Median</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Std.Dev.</th>
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<td>FSS(2):Challenge-skill balance</td>
<td></td>
<td>184</td>
<td>3.312047</td>
<td>3.250000</td>
<td>1.000000</td>
<td>5.000000</td>
<td>0.667321</td>
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<td>3.058424</td>
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<td>1.000000</td>
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<td>FSS(2):Unambiguous feedback</td>
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<td><strong>Total score</strong></td>
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<td></td>
<td></td>
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<td>DFS-2:Challenge-skill balance</td>
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<td><strong>Total score</strong></td>
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<td><strong>3.61</strong></td>
<td></td>
<td></td>
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<td></td>
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</tbody>
</table>

The mean flow subscale scores showed at least moderate endorsement of all the items on both scales for the Qigong and Taijiquan practitioners as a whole. The item endorsed most strongly by the Qigong and Taijiquan practitioners was autotelic experience with mean scores of 4.10 for FSS(2) and 4.25 for the DFS-2. The loss of self-consciousness and concentration on the task subscale were also among the top three subscales endorsed in both scales.
6.2.1 Comparison between Flow experience in Qigong and Taijiquan

We used Mann-Whitney U pair test to find out if there exists statistically significant difference between flow experience in Qigong and Taijiquan (Tab.2).

Table 2: Comparison of flow between Qigong and Taijiquan

<table>
<thead>
<tr>
<th>variable</th>
<th>Mann-Whitney U Test (w/ continuity correction)</th>
<th>Marked tests are significant at p &lt; 0.05000</th>
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</thead>
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<tr>
<td></td>
<td>Rank Sum Q</td>
<td>Rank Sum T</td>
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<tr>
<td>FSS(2): Challenge-skill balance</td>
<td>5627, 5</td>
<td>11392, 5</td>
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<td>5407, 0</td>
<td>11613, 0</td>
</tr>
<tr>
<td>FSS(2): Clear goals on the task at hand</td>
<td>5511, 0</td>
<td>11509, 0</td>
</tr>
<tr>
<td>FSS(2): Unambiguous feedback</td>
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<td>10837, 0</td>
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<td>FSS(2): Concentration of control</td>
<td>5406, 5</td>
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<td>10480, 0</td>
</tr>
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<td>FSS(2): Time transformation</td>
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<td>FSS(2): Autotelic experience</td>
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<td>DFS(2): Clear goals</td>
<td>4250, 0</td>
<td>11326, 0</td>
</tr>
<tr>
<td>DFS(2): Unambiguous feedback</td>
<td>4322, 5</td>
<td>11344, 5</td>
</tr>
<tr>
<td>DFS(2): Concentration of control on the task at hand</td>
<td>4774, 5</td>
<td>10801, 5</td>
</tr>
<tr>
<td>DFS(2): Sense of control</td>
<td>4714, 5</td>
<td>10861, 5</td>
</tr>
<tr>
<td>DFS(2): Loss of self-consciousness</td>
<td>5069, 5</td>
<td>10506, 5</td>
</tr>
<tr>
<td>DFS(2): Time transformation</td>
<td>5298, 5</td>
<td>10277, 5</td>
</tr>
<tr>
<td>DFS(2): Autotelic experience</td>
<td>4696, 5</td>
<td>10879, 5</td>
</tr>
</tbody>
</table>
Only in one case we can reject the hypothesis indicating equivalence of mean values and it is in FSS(2): Loss of self-consciousness (fig. 12). We marked with violet color those variables where the difference was almost statistically significant. In FSS(2) it was autotelic experience (fig.13), in DFS-2: Clear Goals (fig.14), Unambiguous feedback (fig.15), Time transformation (fig.16).
Figure 13: Boxplot of differences between Qigong and Taijiquan, FSS(2), Autotelic experience.
Figure 14: Boxplot of differences between Qigong and Taijiquan, DFS-2, Clear Goals
Figure 15: Boxplot of differences between Qigong and Taijiquan, DFS-2, Unambiguous feedback
6.2.2 Comparison of Flow experience between Czech republic and Italy

We used Mann-Whitney U pair test to find out if there exists statistically significant difference in flow experience between the Czech republic and Italy. Table 3 displays the findings.

<table>
<thead>
<tr>
<th>variable</th>
<th>Mann-Whitney U Test (w/ continuity correction)</th>
<th>By variable Country</th>
<th>Marked tests are significant at p &lt; 0.05000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rank Sum Italian</td>
<td>Rank Sum Czech republi c</td>
<td>U</td>
</tr>
<tr>
<td>FSS(2):Challenge-</td>
<td>12991, 5</td>
<td>4028,5</td>
<td>2947, 5</td>
</tr>
<tr>
<td>skill balance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>variable</td>
<td>Mann-Whitney U Test (w/ continuity correction)</td>
<td>By variable Country</td>
<td>Marked tests are significant at p &lt; .05000</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-----------------------------------------------</td>
<td>---------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>Rank Sum</td>
<td>Rank Sum Czech republic</td>
<td>U</td>
<td>Z</td>
</tr>
<tr>
<td>Italy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12944, 0</td>
<td>4076, 0</td>
<td>2995, 0</td>
<td>0.57</td>
</tr>
<tr>
<td>12604, 0</td>
<td>4416, 0</td>
<td>3013, 0</td>
<td>0.51</td>
</tr>
<tr>
<td>12077, 5</td>
<td>4942.5</td>
<td>2486, 5</td>
<td>-</td>
</tr>
<tr>
<td>13397, 0</td>
<td>3323.0</td>
<td>2242, 0</td>
<td>2.97</td>
</tr>
<tr>
<td>12900, 5</td>
<td>4119.5</td>
<td>3038, 5</td>
<td>0.43</td>
</tr>
<tr>
<td>12020, 5</td>
<td>4999.5</td>
<td>2429, 5</td>
<td>-</td>
</tr>
<tr>
<td>12945, 0</td>
<td>4075, 0</td>
<td>2994, 0</td>
<td>0.57</td>
</tr>
<tr>
<td>12616, 5</td>
<td>4403.5</td>
<td>3025, 5</td>
<td>-</td>
</tr>
<tr>
<td>13245, 0</td>
<td>2331.0</td>
<td>1665, 0</td>
<td>3.13</td>
</tr>
<tr>
<td>12623, 5</td>
<td>2952.5</td>
<td>2286, 5</td>
<td>0.85</td>
</tr>
<tr>
<td>12810, 0</td>
<td>2766.0</td>
<td>2100, 0</td>
<td>1.53</td>
</tr>
<tr>
<td>12596, 5</td>
<td>2979.5</td>
<td>2313, 5</td>
<td>0.75</td>
</tr>
<tr>
<td>12672, 0</td>
<td>2904.0</td>
<td>2238, 0</td>
<td>1.03</td>
</tr>
<tr>
<td>12608, 5</td>
<td>2967.5</td>
<td>2301, 5</td>
<td>0.80</td>
</tr>
<tr>
<td>11860, 5</td>
<td>3715.5</td>
<td>1990, 5</td>
<td>1.94</td>
</tr>
<tr>
<td>12385, 5</td>
<td>3190.5</td>
<td>2515, 5</td>
<td>0.01</td>
</tr>
<tr>
<td>12443, 0</td>
<td>3133.0</td>
<td>2467, 0</td>
<td>0.19</td>
</tr>
</tbody>
</table>
We can state that in 4 variables the difference between Italy and Czech republic is statistically significant. The variables are 3 in FSS(2): Unambiguous feedback, Concentration on the task at hand, Loss of self-consciousness; 1 in DFS-2: Challenge-skill balance (fig.17). The loss of self-consciousness in DFS-2 was almost statistically significant.

![Box Plot of multiple variables grouped by Country](image)

Figure 17: Boxplot of difference in multiple variables between Italy and Czech republic

### 6.2.3 Comparison of Flow experience according the age

We used Kruskal-Wallis analysis of variance to find if there exists statistically significant difference between selected age groups. We divided the age into three categories: 1) <41, 2) 41-60, 3) 61-80.

Although there are differences between the categories, they are not that big to be statistically significant. Table 4 presents the summary of the results (p-values).
Table 4: Summery of results (flow according the age)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Kruskal-Wallis test</th>
<th>$\eta^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>FSS(2):Challenge-skill balance</td>
<td>H (2, N=181) = 0.004</td>
<td></td>
</tr>
<tr>
<td>FSS(2):Merging of action and awareness</td>
<td>H (2, N=181) = 0.014</td>
<td></td>
</tr>
<tr>
<td>FSS(2):Clear goals</td>
<td>H (2, N=181) = 0.018</td>
<td></td>
</tr>
<tr>
<td>FSS(2):Unambiguous feedback</td>
<td>H (2, N=181) = 0.010</td>
<td></td>
</tr>
<tr>
<td>FSS(2):Concentration on the task at hand</td>
<td>H (2, N=181) = 0.001</td>
<td></td>
</tr>
<tr>
<td>FSS(2):Sense of control</td>
<td>H (2, N=181) = 0.001</td>
<td></td>
</tr>
<tr>
<td>FSS(2):Loss of self-consciousness</td>
<td>H (2, N=181) = 0.010</td>
<td></td>
</tr>
<tr>
<td>FSS(2):Time transformation</td>
<td>H (2, N=181) = 0.002</td>
<td></td>
</tr>
<tr>
<td>FSS(2):Autotelic experience</td>
<td>H (2, N=181) = 0.005</td>
<td></td>
</tr>
<tr>
<td>DFS-2:Challenge-skill balance</td>
<td>H (2, N=181) = 0.007</td>
<td></td>
</tr>
<tr>
<td>DFS-2:Clear goals</td>
<td>H (2, N=181) = 0.004</td>
<td></td>
</tr>
<tr>
<td>DFS-2:Unambiguous feedback</td>
<td>H (2, N=181) = 0.011</td>
<td></td>
</tr>
<tr>
<td>DFS-2:Concentration on the task at hand</td>
<td>H (2, N=181) = 0.013</td>
<td></td>
</tr>
<tr>
<td>DFS-2:Sense of control</td>
<td>H (2, N=181) = 0.016</td>
<td></td>
</tr>
<tr>
<td>DFS-2:Loss of self-consciousness</td>
<td>H (2, N=181) = 0.007</td>
<td></td>
</tr>
<tr>
<td>DFS-2:Time transformation</td>
<td>H (2, N=181) = 0.019</td>
<td></td>
</tr>
<tr>
<td>DFS-2:Autotelic experience</td>
<td>H (2, N=181) = 0.001</td>
<td></td>
</tr>
</tbody>
</table>

6.2.4 Comparison of flow experience according the length of practice

We used Kruskal-Wallis analysis of variance to find out if there exists statistically significant difference in Qigong and Taijiquan practice according the length of practice. We divided length of the practice into three categories: 1) <2 years, 2) 2-8 years, 3) 8+. The summery of statistically significant differences is presented in the Table 5.

Table 5: Comparison of flow according the length of practice

<table>
<thead>
<tr>
<th>Variable</th>
<th>Kruskal-Wallis test</th>
<th>$\eta^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>FSS(2):Challenge-skill balance</td>
<td>H (2, N=175) = 0.016</td>
<td></td>
</tr>
<tr>
<td>FSS(2):Merging of action and awareness</td>
<td>H (2, N=175) = 0.039</td>
<td></td>
</tr>
<tr>
<td>FSS(2):Clear goals</td>
<td>H (2, N=175) = 0.035</td>
<td></td>
</tr>
<tr>
<td>FSS(2):Unambiguous feedback</td>
<td>H (2, N=175) = 0.028</td>
<td></td>
</tr>
<tr>
<td>FSS(2):Concentration on the task at hand</td>
<td>H (2, N=175) = 0.027</td>
<td></td>
</tr>
<tr>
<td>FSS(2):Sense of control</td>
<td>H (2, N=175) = 0.007</td>
<td></td>
</tr>
<tr>
<td>FSS(2):Loss of self-consciousness</td>
<td>H (2, N=175) = 0.039</td>
<td></td>
</tr>
<tr>
<td>FSS(2):Time transformation</td>
<td>H (2, N=175) = 0.016</td>
<td></td>
</tr>
<tr>
<td>FSS(2):Autotelic experience</td>
<td>H (2, N=175) = 0.006</td>
<td></td>
</tr>
<tr>
<td>DFS-2:Challenge-skill balance</td>
<td>H (2, N=175) = 0.028</td>
<td></td>
</tr>
<tr>
<td>DFS-2:Clear goals</td>
<td>H (2, N=175) = 0.070</td>
<td></td>
</tr>
<tr>
<td>DFS-2:Unambiguous feedback</td>
<td>H (2, N=175) = 0.037</td>
<td></td>
</tr>
<tr>
<td>DFS-2:Concentration on the task at hand</td>
<td>H (2, N=175) = 0.009</td>
<td></td>
</tr>
<tr>
<td>DFS-2:Sense of control</td>
<td>H (2, N=175) = 0.039</td>
<td></td>
</tr>
<tr>
<td>DFS-2:Loss of self-consciousness</td>
<td>H (2, N=175) = 0.002</td>
<td></td>
</tr>
</tbody>
</table>
We can state that in 7 variables exist statistically significant differences. The variables are 3 in FSS(2): Merging of action and awareness (tab. 6, fig.18), Clear goals (tab.7, fig.19), Time transformation (tab.8, fig.20); 4 in DFS-2: Clear goals (tab.9, fig.21), Unambiguous feedback (tab.10, fig.22), Sense of control (tab.11, fig.23), Time transformation (tab.12, fig.24). The variables almost statistically significant are in FSS(2): Concentration on the task at hand and Sense of control, and in DFS-2: Merging of action and awareness.

Table 6: Multiple Comparisons of p-values (Merging of action and awareness)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Kruskal-Wallis test</th>
<th>$\eta^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFS-2:Time transformation</td>
<td>$H (2, N= 167) =6,620352 p =,0365$</td>
<td>0,040</td>
</tr>
<tr>
<td>DFS-2:Autotelic experience</td>
<td>$H (2, N= 167) =1,047124 p =,5924$</td>
<td>0,006</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depend.:</th>
<th>Multiple Comparisons p values (2-tailed); FSS:Merging of action and awareness</th>
</tr>
</thead>
<tbody>
<tr>
<td>FSS(2):Merging of action and awareness</td>
<td>Independent (grouping) variable: Lenght of practice/Y</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>&lt; 2 R:84,146</th>
<th>2-8 R:79,147</th>
<th>8+ R:102,02</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 2</td>
<td></td>
<td>1,000000</td>
<td>0,157664</td>
</tr>
<tr>
<td>2-8</td>
<td>1,000000</td>
<td></td>
<td>0,065922</td>
</tr>
<tr>
<td>8+</td>
<td>0,157664</td>
<td>0,065922</td>
<td></td>
</tr>
</tbody>
</table>
Figure 18: Boxplot of differences in flow according the length of practice, FSS(2), Merging of action and awareness

Table 7: Multiple comparisons of p-values, FSS(2), Clear goals

<table>
<thead>
<tr>
<th>Depend.</th>
<th>FSS(2):Clear goals</th>
<th>Multiple Comparisons p values (2-tailed); FSS:Clear goals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Independent (grouping) variable: Lenght of practice/Y</td>
<td>Kruskal-Wallis test: H (2, N=175) =11.69609 p =.0029</td>
</tr>
<tr>
<td></td>
<td>&lt; 2</td>
<td>2-8</td>
</tr>
<tr>
<td>&lt; 2</td>
<td>R:73.097</td>
<td>0.084011</td>
</tr>
<tr>
<td>2-8</td>
<td>0.084011</td>
<td>R:93.471</td>
</tr>
<tr>
<td>8+</td>
<td>0.003198</td>
<td>0.979176</td>
</tr>
</tbody>
</table>
Figure 19: Boxplot of differences in flow according the length of practice, FSS(2), Clear Goals

Table 8: Multiple Comparison of p-values, FSS(2), Time transformation

<table>
<thead>
<tr>
<th>Depend.: FSS(2):Time transformation</th>
<th>Multiple Comparisons p values (2-tailed); FSS:Time transformation Independent (grouping) variable: Length of practice/Y Kruskal-Wallis test: H (2, N= 175) =6.759158 p =.0341</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 2</td>
<td>R:99,188</td>
</tr>
<tr>
<td>2-8</td>
<td>R:84,451</td>
</tr>
<tr>
<td>8+</td>
<td>R:75,990</td>
</tr>
<tr>
<td>&lt; 2</td>
<td>0.335970</td>
</tr>
<tr>
<td>2-8</td>
<td>0.035611</td>
</tr>
<tr>
<td>8+</td>
<td>1.000000</td>
</tr>
</tbody>
</table>
Boxplot by Group
Variable: FSS:Time transformation

Median 
25%-75% 
Min-Max 
< 2 2-8 8+

Figure 20: Boxplot of difference in flow according the length, FSS(2), Time transformation

Table 9: Multiple Comparisons of p-values, DFS-2, Clear goals

<table>
<thead>
<tr>
<th>Depend.: DFS-2:Clear goals</th>
<th>Multiple Comparisons p values (2-tailed); DFS-2:Clear goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent (grouping) variable: Lenght of practice/Y</td>
<td></td>
</tr>
<tr>
<td>Kruskal-Wallis test: H (2, N=167) =11.65042 p =.0030</td>
<td></td>
</tr>
<tr>
<td>&lt; 2</td>
<td>2-8</td>
</tr>
<tr>
<td>R:66,983</td>
<td>R:90,307</td>
</tr>
<tr>
<td>&lt; 2</td>
<td>0.029099</td>
</tr>
<tr>
<td>2-8</td>
<td>0.029099</td>
</tr>
<tr>
<td>8+</td>
<td>0.004904</td>
</tr>
</tbody>
</table>
Boxplot by Group
Variable: DFS:Clear goals
Median
25%-75%
Min-Max
< 2 2-8 8+
Lenght of practice/Y
1,0
1,5
2,0
2,5
3,0
3,5
4,0
4,5
5,0
5,5

Figure 21: Boxplot of differences in flow according the length, DFS-2, Clear goals

Table 10: Multiple Comparisons of p-values, DFS-2 (Unambiguous feedback)

<table>
<thead>
<tr>
<th>Depend.: DFS-2:Unambiguous feedback</th>
<th>Multiple Comparisons p values (2-tailed); DFS-2:Unambiguous feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Independent (grouping) variable: Lenght of practice/Y</td>
</tr>
<tr>
<td></td>
<td>Kruskal-Wallis test: H ( 2, N= 167) =6.079561 p =,.0478</td>
</tr>
<tr>
<td></td>
<td>&lt; 2 2-8 8+</td>
</tr>
<tr>
<td></td>
<td>R:73.078 R:84.491 R:95.644</td>
</tr>
<tr>
<td>&lt; 2</td>
<td>0,616944 0,043602 0,043602</td>
</tr>
<tr>
<td>2-8</td>
<td>0,616944 0,687155 0,687155</td>
</tr>
<tr>
<td>8+</td>
<td>0,043602 0,687155 0,687155</td>
</tr>
</tbody>
</table>

73
Figure 22: Boxplot of difference in flow according the length of practice, DFS-2, Unambiguous feedback

Table 11: Multiple Comparisons of p-values, DFS-2, Sense of control

<table>
<thead>
<tr>
<th>Depend.: DFS-2:Sense of control</th>
<th>Multiple Comparisons p values (2-tailed); DFS-2:Sense of control Independent (grouping) variable: Lenght of practice/Y</th>
<th>Kruskal-Wallis test: H ( 2, N= 167) =6,443034 p =.0399</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt; 2 - 2-8: 1,000000, 2-8-8+: 0,111457</td>
<td>2-8 - 8+: 0,064946, 8+&lt; 2: 0,111457</td>
</tr>
<tr>
<td></td>
<td>2-8 - 8+: 0,111457</td>
<td>8+ - 8+: 0,064946, 8+&lt; 2: 0,111457</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8+ - 8+: 0,064946, 8+&lt; 2: 0,111457</td>
</tr>
</tbody>
</table>
Figure 23: Boxplot of differences in flow according the length of practice, DFS-2, Sense of control

Table 12: Multiple Comparisons of p-values, DFS-2, Time transformation

<table>
<thead>
<tr>
<th>Depend.: DFS-2:Time transformation</th>
<th>Independent (grouping) variable: Lenght of practice/Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kruskal-Wallis test: H (2, N= 167) =6.620352 p =.0365</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>&lt; 2</th>
<th>2-8</th>
<th>8+</th>
</tr>
</thead>
<tbody>
<tr>
<td>R:97,069</td>
<td>0.064960</td>
<td>0.064960</td>
<td>0.110695</td>
</tr>
<tr>
<td>R:76,360</td>
<td>0.064960</td>
<td>1.000000</td>
<td></td>
</tr>
<tr>
<td>R:77,798</td>
<td>0.110695</td>
<td>1.000000</td>
<td></td>
</tr>
</tbody>
</table>
6.2.5 Comparison of flow experience according the gender

We used Mann-Whitney U test to compare flow experience according the gender (Table 13).

Table 13: Comparison of flow experience according the gender

<table>
<thead>
<tr>
<th>variable</th>
<th>Mann-Whitney U Test (w/ continuity correction)</th>
<th>Rank Sum man</th>
<th>Rank Sum woman</th>
<th>U</th>
<th>Z</th>
<th>p-value</th>
<th>Valid N man</th>
<th>Valid N woman</th>
<th>Cohen d</th>
</tr>
</thead>
<tbody>
<tr>
<td>FSS(2):Challenge-skill balance</td>
<td></td>
<td>7297,0</td>
<td>9723,0</td>
<td>3837,0</td>
<td>0,74</td>
<td>0,45</td>
<td>76</td>
<td>108</td>
<td>0,11</td>
</tr>
<tr>
<td>FSS(2):Merging of action and awareness</td>
<td></td>
<td>7479,0</td>
<td>9541,0</td>
<td>3655,0</td>
<td>1,26</td>
<td>0,20</td>
<td>76</td>
<td>108</td>
<td>0,16</td>
</tr>
<tr>
<td>FSS(2):Clear goals</td>
<td></td>
<td>6964,0</td>
<td>10056,0</td>
<td>4038,0</td>
<td>0,18</td>
<td>0,85</td>
<td>76</td>
<td>108</td>
<td>0,07</td>
</tr>
<tr>
<td>FSS(2):Unambiguous feedback</td>
<td></td>
<td>6792,5</td>
<td>10227,5</td>
<td>3866,5</td>
<td>0,66</td>
<td>0,50</td>
<td>76</td>
<td>108</td>
<td>0,09</td>
</tr>
</tbody>
</table>
We can state that there are statistically significant differences between man and woman in 4 of the variables. The variables are 2 in FSS(2): Time transformation, Autotelic experience; DFS – 2: Merging of action and awareness, Autotelic experience. Another almost statistically significant item was in DFS-2: Unambiguous feedback.
Figure 25: Box plot of difference in flow according the gender

6.3 Qualitative part

Here we present the results of qualitative part. In the beginning we show analysis of 4 parts of the interview (history, motivation, experience, quality of life), then we look at differences between Qigong and Taijiquan. Finally we introduce a link between responses of the participants and individual flow dimensions based on Csikszentmihaly’s theory.

6.3.1 History

The first part history was investigating information about the first contact with Qigong or Taijiquan practice. The main question was:

*What was the first impuls to start the practice?*

We present the collection of the answers according the specific group interviewed. Each of the responses of participants is divided by slash (/). This structure is valid for other parts of the qualitative analysis.
Focus group 1 - I like it since I was child (martial art)/ I was looking for a way to calm myself down/ I wanted to try different kind of movement/through my first teacher who mainly practiced yoga/ I always enjoyed physical activity, I liked Jackie Chan and I wanted to try martial art, I was looking for something more energetic (such as martial art)/ through negative experience - I was beaten, I wanted to be able to protect myself/ when I was child - inner impulse- I enjoyed the peace (night meditation), I was interested in the philosophy

Focus group 2 - I study Chinese medicine-we did some exercise in the class/ Chinese doctor recommended/ doctor enforced Qigong/ problem with spine-I searched for appropriate exercise/ always interested in Eastern culture/ for health.

Qigong school (individual interviews) - it was a process from external forms of martial art to internal forms of exercise which recharge the energy/ yoga festival where was a workshop of Qigong

Taijiquan school (individual interviews) – through yoga stay with taiji class/ looking for something like yoga, it was about calming down/ pure curiosity/ my back was hurting

Phone interview - always attracted to Far East, it was new to feel the body, energy in the body

The first meeting with Qigong or Taijiquan varied according the intention of the practitioners. Some of them already had experience with activities of body and mind character such as yoga or martial art. So the first impulse to start the practise of Qigong or Taijiquan came from this background. In martial art those who had experience with external form of martial art were gradually introduced to internal forms of exercise such as Qigong or Taijiquan. Several people reported interest in Eastern culture since the young age. The first inspiration came from movies with martial art theme. They were fascinated by the extraordinary skills of the martial artists such as work with energy. One man found the interest in taiji for learning the skills which would be applied in different discipline of performative character. Two people reported to start the practice of taiji for self-defence reasons.

Most of the participants in focus group 1 were interested in the practice of martial art, whereas in the focus group 2 most of the participants started to practice Taijiquan and Qigong for health reasons, from the mental health point of view the most common reason to start Taijiquan or Qigong was to achieve harmonization, relaxation or calming down of the mind.
Fig. 26 below displayes responses to question how were participants introduced to Qigong or Taijiquan practice.

Figure 26: First meeting with Qigong and Taijiquan

6.3.2 Motivation
In second part of the interview we asked the participants, what is their motivation to practice Qigong or Taijiquan. The main question was:

*Why do you practice?*

Here we present several statements of the participant’s motivation:

**Focus group 1** – *I have sedentary job, people sit most of the time/ I have good feeling from practicing Qigong/ I feel energy in the body/ for health/ I enjoy it/ not to be stiff*

**Focus group 2** - *I totally shut off my brain/ relax from everyday stereotype – a person feels good and it also brings health benefits/ It is only way I can disconnect from everything and*
concentrate on exercise/ it brings me a great peace of mind/calming after work – balancing aggressiveness (from self-defence class)/ stretching-relaxation-calming

**Qigong school** (individual interviews) To feel good mentally and physically – it makes me feel good/ it energizes life energy, later you can meditate well, training of concentration, coordination of movement ,I enjoy it, it helps me/ It makes sense to me

**Taijiquan school** (individual interviews) I need to stretch and relax mentally/ It is a time reserved for me/ I feel more relaxed – positive impact on mental and physical state

Several participants reported that they practice for health reasons in general. From emotional perspective, the participants reported that they practice because it brings them good feeling, they also describe it as a form of addiction on the emotional state they experience when they practice Qigong or Taijiquan. This emotional state could be connected with **intrinsic motivation** toward the activity.

Many other reports were related to mental health. A lot of participants reported that they practice because they can **rest their mind from everyday worries**. The exercise helps them to **relax**. They also practice because it **brings them peace** in everyday life and **more energy**. They want to develop **skills such as meditation and concentration**.

They also reported the role of physical aspect as they want to **be physically** active, flexible and have coordinated movements. Some of them also mentioned motivation to **gain knowledge** about the body.

From social perspective their motivation is supported as they found some **friends among the practitioners** or created a good collective. Fig. 27 below shows the basic motivation structure.
Another question related to motivation was asking about the goal in the practice of Qigong or Taijiquan.

*Is there anything you would like to achieve in your practice?*

Here are the statements connected to the goals of the participants of Qigong and Taijiquan:

**Focus group 1** – *Persist/ to live for 150 years/ to reach retirement in a good health/harmony/ be mobile even in old age/ to feel good/ keep in good shape*

**Qigong school** (individual interviews) - *to practice as long as possible-develop internal forms of exercise/ I want to remember the moves*
Taijiquan school (individual interviews) – *To maintain the best physical and mental condition, I am trying to do the best, inner peace – larger perspective to support my health and mental state in order to be helpful for others*

We divided the goals into 2 categories internal and external. External goals involved statements such as **keep practicing to high age**, to be **mentaly and physically active**, and to be **independent on others**. There was also the goal to **remember the movements**. Internal goals were more related to the emotional state of the participants such as to **feel good and reach harmony**. For some was important to cultivate internal skills such as concentration, meditation and perception of the energy. Fig. 28 presents the results.

![Figure 28: Goals in the Qigong and Taijiquan practice](image)

**6.3.3 Experience**

The third part of the interview consisted of questions asking about experience in Qigong and Taijiquan. The main question was:
How do you feel in Qigong or Taijiquan practice on mental, emotional and physical level?

Here we present the statements of the participants:

Focus group 1

physically: relaxation of muscles
emotionally: relaxation, serenity/I feel good/I feel peace, happiness, feeling of well-being, particular feeling-like when a baby is born/the experience of the movement is positive, very good/ based on the mental state it always brought different kind of experience from relaxation to joy and euphoria, very pleasant feeling
mentally: I think on the movement and experience of the movement/mind is not always calm/for first 10 minutes my mind is worried after the work, then I start to concentrate on all aspects of the movement and then comes the peace/I try to think on the next movement, but then I bring my thoughts back to other things/I had to concentrate on the movements in taijiquan as the movements are very complex, I closed myself to my world, when I concentrated on the movement (it felt good)

Focus group 2

Mentally: I think on the exercise, I do not think on anything else/In the beginning thought are running, later it is better I just concentrate on the exercise/in taijiquan we only concentrate on what is going next
Emotionally: calming down, peace/good mood, comfort/relaxation
Physically: depends on what I can bear

Qigong school

physically: I try to perceive the energies in the body, flowing in my hands or back depends on the exercise
emotionally: I feel good if I am not in pain that time/it depends in what state I come – when I feel stable balanced I feel good
mentally: I think on the practice, in static positions thoughts are running/I am not able to focus just on the practice, thoughts are running
Taijiquan school

Emotionally: *I feel joy from exercise and from my body flowing, presence of non-substantial internal force*

Mentally: *I try to think of regular breathing/I am praying, I pay attention to my body and my spirit*

Phone interview

Emotionally: *I feel good when the spine is upright energy is flowing.*

Mentally: *It depends on the state before I start to practice, if there is any difficult situation in my life, the concentration on the practice is also more difficult, when I am in resting phase, it is easier I concentrate on the movements, concentration on breathing*

When answering how participants feel during the practice, they most often stated that when practicing, they think on the movements or exercise itself, focus on breathing and some of them are praying. Based on the responds the quality of the training was influenced by the previous situation, before they came to the class. If they were worried or experienced some disorder in mind before the class, it took them a while to start to think on the exercise. On the emotional level they often experienced feelings of peace, happiness, joy to euphoria, they also reported that they felt the movement. There were fewer answers responding to physical level. They reported that they muscles were relaxed and could feel the energy flowing in their body.

The answers are displayed in the fig. 29 below:
Other questions were asking about the perception of others and the environment.

**Perception of others**

*How do you perceive others when practicing?*

We can understand the group perception from two different perspectives:

a) how participants feel in the group when they practice (internal feelings)

b) role of the group training, e.g. what are the benefits when practicing in the group, here we compare group practice vs. Solo practice more in picture
a) We present the statements:

*When we all practicing the same form, we are tuning to each other/ we look at each other in order to unify/ I do not perceive others/ depends on the people, sometimes I feel good as I feel if I practice alone, but if someone is nervous so I am, when people practice together it is as one whole/ I do not perceive others, sometimes I change the group and it is the same for me/ when we mastered the routine very well and there were a lot of people, the energy was wonderful, something extraordinary/living organism, one organism*

b) We present the advantages and disadvantages of solo and group practice in a table 14 below:

Table 14: Comparison of solo and group practice

<table>
<thead>
<tr>
<th>Solo practice</th>
<th>Group practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>• I have my own pace</td>
<td>• control of movements by looking at others</td>
</tr>
<tr>
<td>• I experiment more</td>
<td>• experience of spartakiad</td>
</tr>
<tr>
<td>• I concentrate more on myself</td>
<td>• I can’t relax, I am distracted by looking at others</td>
</tr>
<tr>
<td>• I create atmosphere</td>
<td>• support for not enough skilled practitioners</td>
</tr>
<tr>
<td>• The energy flowing is not that strong</td>
<td>• support if you do not feel good</td>
</tr>
<tr>
<td>• It is harder for me to keep practicing</td>
<td>• everybody is on the same boat</td>
</tr>
<tr>
<td></td>
<td>• the influence of others works</td>
</tr>
<tr>
<td></td>
<td>• It is stronger for me</td>
</tr>
</tbody>
</table>

Based on the responses above we can see that there comes a particular positive feeling of unity when practicing in a group. One of the main conditions to experience this feeling is mastery of the practiced form and tuning on other participants. Some practitioners perceive group as a support when they are not sure about the movements, whereas others can perceive it distracts their attention. The advantages to exercise solo are that one can practice in his own pace, create special atmosphere, get rid of the distractions more easily.
Advantages of group practice are, e.g. control of the movement, the experience is stronger when the group is skilled, support of the group when one feels weak.

**Perception of environment**

**Focus group 2** – *I do not care, where I practice, I practiced at the toilet before the exams, I would feel embarrassed to exercise on public/ the environment plays a role/ It does not depend on the environment when I was stressed in work and needed to relax, I went to practice on the toilet.*

**Qigong school** *in the beginning I had block to exercise outside on public (in nature), by the time (when I felt more secure in the movements) I could detach from perception of surroundings*

**Phone interview** – *Environment is important to me, cold and dark space did not suit me*

From the responses above we can see that the environment can influence practitioners from long-term perspective. People primary tend to choose places where they feel comfortable, then it can complement their practice. On the other hand, when it is necessary, in some stressful situation, one can feel comfortable even in places which are not primary intended for the practice.

**Similar state**
To find out more information about the particular feeling in Qigong or Taijiquan practice, we asked them:

*Have you ever experienced similar feeling in other activity or situation, except of Qigong or Taijiquan?*

Here we present the statements of the participants:

**Focus group 1** - *In the sport, in the movement the states arrive/, in nature, when I am travelling/ in running/ in yoga, the same feeling but induced by different way/ swimming/ from certain moment you can experience the feeling in any activity-when you dive into it*
Focus group 2 – sauna/ engaging in a game with a child (one has universe around him), massage, yoga brings me something similar

Qigong school – in meditation/ I started to practice ashtanga yoga again and in some aspects it is similar

Taijiquan school - when I sit in front of our cottage on the stone by the river and I see how the water flows and the leaves on the trees wave/ I think we can achieve the quit mind with any activity one fully focuses on and when he is willing to experience joy of life.

Phone interview – in yoga, authentic movement, in intuitive dance with slow music

The figure 30 below summarizes the answers:

Figure 30: Similar state

6.3.4 Quality of life
In order to find out more information about the benefits of Qigong and Taijiquan practice, we asked the participants:

What is the impact of your practice in everyday life?

Here we present the statements of the participants:
Focus group 1 – Back pain disappeared/ better lifestyle, nothing hurts me like it used to/ I am more balanced, I try to percieve myself more, As I am closer to myself I can forgive myself/perception of myself, ability to calm down in stress situatuations, one is aware of the situation and that the reaction is not automatic/better control over situation, change of insights of certain experiences/greater sensitivity and adaptability/one is more grounded, has larger perspective and learn to perceive his own body, finds his own limits

Focus group 2 – Great peace/ one is looking forward the training/ it brings me peace/it always attracted me because it brought me something what I needed, one takes everything with greater insight/ I try to transfer the positive feeling from Qigong to everyday life/ when I practice yoga and I concentrate on the energy in the same way as in Qigong - the yoga seems to be more intensive

Qigong school – It keeps me in a good shape energetically, physically and mentaly, one is calmer/my reflexes and reactions have improved, it definitely strengthens my body when one practice regularly

Taijiquan school – As long as I practice I live/ I calmed down, I let go of some things, I believe more in myself, in my own strength, I am more thouthful of my common movements in everyday life

Phone interview – When I exercise in the morning I feel more vitality, the day is fuller and more joyful, when I practiced every day I felt the addiction on it.

From the answers above we can see that the exercise works in multiple levels and the skills learned in the class can be transferred into context of everyday life. Overall it brings participants a great peace in life, they can master some difficult situation with better insight. They have better control over their mind and emotional processes. They become more capable of perceiving what is happening inside of them and around. When they practice regularly, they feel also physically and mentally stronger, vital and joyful.
We pictured the benefits in figure 31 below:

Figure 31: Benefits of Qigong and Taijiquan in every day life
6.3.5 Difference between Qigong and Taijiquan

In order to find out if there exists a difference between these two forms of exercise, we support the quantitative research by question in qualitative part:

Do you perceive difference between Qigong and Taijiquan?

Participants in the focus groups usually experience Qigong and Taijiquan practice within one class. The class usually starts with Qigong movements in the beginning and in the other part Taijiquan form is practiced. Here we present the answers:

Focus group 1 – Qigong is the most boring thing in martial art, the less important for me/ in the beginnig Qigong was the worst thing, I could not calm down, by the time I started to feel it differently, one starts to concentrate and finds what is there/ my daughter told me after 20 minutes of Qigong: Dad it was boring/the relationship to Qigong varies – the more experienced I am and used to the movements or depend on the state of mind or if I practice alone or in the group Qigong brings me different states, feelings/ Qigong is the line between the stress at work and next practice, mind restart/Qigong is easier because there are sequences of simple movements which repeat/In the beginning I did not perceive difference between Taijiquan and Qigong, in Qigong I should concentrate more on breathing, movements were repeated, movements in both forms were slow, now I perceive it better/Qigong is for relaxation and Taijiquan is martial art/ In Qigong I focus on Qi leading the movement, in taijiquan is about the movement, about martial art, but I also practice it as a Qigong/ in Qigong I concentrate on breathing and energy, in taijiquan I mainly percieve the movements/when I practice Qigong it is much easier to concentrate on energy, the movements are easier, they are not that complicated as in taijiquan, the principle is the same

Focus group 2 – I feel that the taijiquan is more complex, one belongs to another, in qigong movements are separated, the awareness that it belongs to each other brings me more harmony/I perceive taijiquan as a goal, whereas qigong is preparation/Taiquian is one whole consisted of many different skills and knowledge/in Qigong I feel more the energies, when practitioner is advanced he can feel it in Taijiquan in the same way as in Qigong
As we can see from the reports above, in both forms the same principle is used: slow movements, concentration on breath, cultivation of Qi. The difference is in the intention of the exercise, Qigong can be understood as an instrument for cultivating Qi in martial art or as an instrument for achieving overall well-being of a practitioner.

Qigong is in the most cases perceived as a preparation, kind of warm up before taijiquan session. It is consisted of short sequences of the movements which are repetitive, whereas in taijiquan there are movements which are connected together and are practiced as one long form.

Qigong is cultivation of Qi, which is controlled by mind. Qi in body in order to be healed. Taijiquan also leads Qi in body, but it is focused on the combat component.

6.3.6 Dimensions of flow from qualitative perspective

In this section we present responses which help us to indicate individual dimensions of flow. The dimensions correspond to Csikszentmihalyi’s concept of flow (1990).

D1) A challenge – skill balance

First we need to understand what participants of Qigong or Taijiquan perceive as a challenge. Based on the responses we found:

- The biggest challenge either in yoga or here is to rest my mind, the challenge for me is that the brain shuts off and is not solving anything.
- It has always been the problem for me to quite my mind when nothing is happening, when there are many things happening it is much easier.
- To learn to be just with myself and find the peace within myself.
- One is not doing anything, not running, jumping...
- In the beginning one is learning the moves and can not relax that much.

To quit mind is perceived as the biggest challenge for most of the beginners of Qigong practice. In the beginning when mind is running, one needs to find a way how to calm down the mental processes. There are several instruments how to meet the challenge such as concentration on breath or on the movement.
D2) Merging of action and awareness

- It is primary about immersion yourself in.
- You become the movement, you are there, you do not think of anything else.
- The person and the movement is the one.

D4) Unambiguous feedback

The feedback for the practitioners could be a presence of interuptive thoughts when one is out of the class rhythm and positive feeling from the exercise when one follows the class. When one is experiencing active mind, not paying attention to the exercise, but other things such as work, he is losing the steps.

- I try to think on the next movement, but then my thoughts are turned to other things, I get lost...then I tell myself that I should start to concentrate on the exercise again.

D5) Concentration on the task at hand

- One starts to concentrate and finds what is there.
- When I concentrated on the movements I did not think on anything else (taiji).
- Sometimes one knows about the problem (in exercise), so he pays more attention to it.
- When one detach from everyday worries and concentrates on all aspects of the movement, it has to come from inside, not from muscles, then the feeling is nice.
- When I concentrated on the movement, it was very nice feeling.
- I shut off the brain by concentrating on breathing.
- I do not have to think of anything else I concentrate just on the movement.

D7) Loss of self-consciousness

- I do not percieve others.
- When people practice together it is as one whole.
- Group as living organism, one organism.
D9) Autotelic experience

- In the beginning I had a good feeling, if I did not have that feeling, I would not be here.
- There is something more.
- It is addictive, the more one practices, the more attached he is (bigger taste).
- When I kept practicing everyday, I felt healthy addiction because it made me feel good.

Conditions of happiness

- When one is relaxed and knows the movements the state arrives

Finally we present a response of one of the teachers of Qigong and Taijiquan. He shares his experience with the exercise and state of mind we call flow.

It can not be forced, you grow it as a tree, you create conditions for it in your life and it happens. Then you constantly experience peace, happiness and harmony. You do things in way that it is pleasant, it can not be forced. It comes from within, not from outside. It can not be achieved from outside. When someone does it artificially, that he says to himself I will sit in meditation and then it happens, it will stay artificial. But in the moment, when your body feels to do some exercise, when you listen and do it, it is natural.
7 Discussion

Currently we have not found any study examining the flow experience in Qigong. There was one study found examining the level of flow in Taijiquan. Nedeljkovic et. al (2011) observe flow experience in taiji using FSS and coming to endings that there is high potential of intrinsic motivation in Taiji practice based on comparison of flow experience between practice in the centre and home. Another similar study was found in yoga, which is considered as a body and mind system as well as Taijiquan and Qigong.

Phillips (2005) examines flow states and motivational perspectives of ashtanga yoga practitioners where FSS-2 DFS-2 was used. Participants reported flow experience during ashatanga yoga practice. They endorsed at least moderately all nine dimensions of flow state with the average being 3,86 in FSS-2 and 3,78 DFS-2. In our study the total score for all dimensions was 3,51 for FSS(2) and 3,61 for DFS-2. The results are very close to the score in the study of yoga. The most endorsed items in both studies were autotelic experience for both scales. Second most endorsed item was loss of self-consciousness in both studies. The third was clear goals for yoga and concentration on the task at hand in Qigong and Taijiquan.

We could consider studies examining mindfullnes and flow experience as close ones to our research theme as Qigong and Taijiquan work with mindfull techniques. Aherne, Moran & Lonsdale (2011) studied the effect of mindfulness training on athlete’s flow experience using FSS-2 before and after intervention. Significant interaction effects were observed for the flow dimensions Clear goals and sense of control. Kee&Wang (2008) studied relationships between mindfullness, flow dispositions and mental skills adoption in student athletes. For assesing flow DFS-2 was used. This study suggests that athlete’s flow dispositions and mental skills adoption could be differentiated using mindfullness. High mindfulness cluster scored significantly higher than the low mindfulness clusters in challenge–skill balance, merging of action and awareness, clear goals, concentration on the task at hand and loss of self-consciousness scores of the DFS-2.

In following lines we discuss the research questions and results of the study which are related to the partial objectives of our research.
Q1 Is there a difference in the level of flow experience between Qigong and Taijiquan practitioners

Most of the data about flow experience in Qigong and Taijiquan practice were collected from Taijiquan class. The reason is that there were less groups involved in the study focusing merely on Qigong practice. It is common that Qigong practice is usually part of the Taijiquan class as it is its foundation for Qi cultivation and mind regulation. In qualitative part we have found that Qigong, when it is a part of Taijiquan session, is considered as warm up or certain kind of tuning into the practice. For our study we achieved to collect 61 questionnaires from Qigong class and 123 questionnaires from Taijiquan class.

We assume that there is no difference between those two forms of exercise as the principle of both is the same, cultivation of Qi, (Franzis, 2010). The difference is in the intention of the practice (health, martial art).

For comparison of flow experience between Qigong and Taijiquan practice we used Mann-Whitney U test. Only in one dimension in FSS(2) – Loss of self-consciousness was found statistical significant difference with p – value = 0,008. The mean value in Qigong was 4,06 and mean value in Taijiquan was 3,74. We suppose that this difference might be caused by the fact that the movements in Qigong are simpler than in Taijiquan and therefore are easier to follow. This finding might be caused by the fact that practitioners of Qigong can more easily unify in their movements with others comparing Taijiquan practitioners where the form is longer and contain more difficult movements so they need to have more skills in order to master the form and get in unity with others.

From overall perspective we can state that in most of the dimension was not found statistically significant difference between Qigong and Taijiquan practise in experiencig flow state.

Q2 Is there a difference in the level of flow experience in Qigong and Taijiquan between practitioners in the Czech republic and Italy?

We achieved to collect larger sample of data in Italy due to easier approach to the participants. For comparison of flow experience between the Czech republic and Italy we used also Mann-Whitney U test. We assumed that there is no difference in flow experience between the Czech republic and Italy as the exercise is built on Chinese philosophy and it has its specific structure where the theory and forms are given.
The statistically significant difference was found in 4 items out of 18. From an overall perspective we can consider that there is no difference in Qigong and Taijiquan practice between the Czech republic and Italy.

From more detailed perspective we found statistically significant differences in FSS(2):

- **unambiguous feedback** (p=0.028), where the mean values were in 3.09 (Italy); 3.35 (Czech republic).

- **concentration on the task at hand** (p=0.003), where the mean values were 3.91 (Italy); 3.57 (Czech republic).

- **loss of self-consciousness** (p=0.017), where the mean values were 3.78 (Italy); 4.05 (Czech republic).

One statistically significant difference was found in trait scale (DFS-2) in **challenge-skill balance** where the mean values were: Italy 3.61; the Czech republic 3.20.

In order to find out why there are statistically significant differences in those dimensions, there would need to be more detailed study done investigating other factors such as the teacher’s approach in every of the class, number of people in each of the class which can affect the dimension of loss of self-consciousness. Based on the responses in qualitative part the level of flow experience might increase with the increase of number of student, the class level of the students and overall environment etc.

**Q3 Is there a difference in the level of flow experience in Qigong and Taijiquan practice according the age of the practitioners?**

For examining if there exists statistically significant difference in flow experience according the age we used Kruskal-Wallis analysis of variance. We divided the age into 3 categories <41, 41-60, 61-80. We assumed that there will not be difference in flow experience according the age of the practitioners. We suppose that the important aspect for experience of flow is the length of the practice rather then the age of the practitioners. We found a study investigating connection between flow experience and chronological age in adolescence (Leibovich et al., 2013). There were found significant differences in the period between 12 and 18 years. This could be caused by strong changes in the personality due to development of an individual. Another study reveals the correlation between happiness and age of people (Sahoo&Xavier, 2009). It shows that in every day life the intensity of flow experiences increases with increase in age.
Based on the results where no significant difference according the age have been found in any of the dimensions, we can assume that the exercise itself help to create condition for experiencing flow in specific moment independently on age of the participants. The participants influence each other in the given moment and strive for the same goal. The age does not play an important role at that moment.

**Q4 Is there a difference in the level of flow experience in Qigong and Taijiquan practice according the length of practice?**

For examining if there exists difference in flow experience according the length of the practice we used Kruskal – Wallis analysis of variance. We divided the length of practice into 3 groups: < 2 years, 2-8 years and 8 year and more.

There were found 7 statistically significant difference out of 18. In FSS(2) it involved dimensions:

- **Merging of action and awareness** *(p=0,0491)*,
- **Clear Goals** *(p=0,0029)*,
- **Time transformation** *(p=0,0341)*.

In DFS-2 it involved dimensions:

- **Clear goals** *(0,0030)*,
- **Unambiguous feedback** *(p=0,0478)*,
- **Sense of control** *(p=0,0399)*,
- **Time transformation**(p=0,0365).

The significant difference were found mainly between groups - <2 years and 8 years and more (8+), in item **clear goals** group 8+ had higher endorsement in mean level of flow experience in both scales. The more advanced practitioners in length of practice proved significantly higher score comparing those who practice up to two years. It is possible that with increasing length of practice the practitioners are more aware of the goals in their practice due to mastering of most of the theoretical and practical aims whereas in the beginning it takes some time to take in what the practice is about as it works on multiple levels.

**In FSS (2) dimension time transformation, < 2 years group scored higher level than 8 + whereas in DFS-2 in the same dimension group < 2 years scored higer level than group 2-**
8. Based on the results we can see that in dimension time and transformation practitioners with lesser experience tend to achieve higher level of flow experience than those more advanced in the length of practice.

In the dimension **unambiguous feedback 8+ scored higher level** than < 2 years. This also can be related to the fact, that with an increase of length of the practice, participants become more aware of their inner feelings as we could see in qualitative part (benefits of Qigong and Taijiquan). When practicing Qigong, one is more aware of himself and his inner feeling. That inner feeling can serve as a good feedback for the practitioner.

We can see that with increase of length of the practice there is increase of level of flow experience. Although it was not confirmed for all the dimensions, we can state that there is the difference in flow experience according the length of the practice.

**Q5 Is there a difference in the level of flow experience in Qigong and Taijiquan practice between males and females?**

For examining if there exists difference in flow experience between men and women we used Mann Whitney-U test. The statistical difference was found in 4 dimensions out of 18.

In FSS(2) it involved dimensions:

- **time transformation**
- **autotelic experience**

and in DFS-2:

- **merging of awareness**
- **autotelic experience**

**Women** confirmed higher endorsement for **autotelic experience** in both scales. **Men** proved higher score in merging action and awareness than women in trait scale (DFS-2). **Women scored higher** level of flow experience in **time transformation** only in FSS(2).

Overall we can state there is no difference in flow experience between males and females. There was a study investigating relation between flow experience and personality (Bonaiuto et al., 2016), it also involved a study investigating flow state according the gender and no statistically significant differences were found as well.

**Q6 Does practice of Qigong and Taijiquan have consequent impact on flow experience in everyday life?**
This question was discussed in the qualitative part of the research. Based on the responses of the practitioners it was found that Qigong and Taijiquan can contribute to flow experience in everyday life due to its focus on cultivation of mental skills which are important to maintain the order in mind which is considered as a precondition of flow experience. In the practice of Qigong and Taijiquan is strong emphasis on conscious work with body and mind through instruments such as concentration on breathing or meditation. Moreover, the participants reported that they tend to transfer the positive experience they have in the class of Qigong or Taijiquan to other activities out of the Qigong or Taijiquan class. They have better control over their mind process and can maintain calm even in difficult situations.

Limitation of the study

For some practitioners of Qigong and Taijiquan was difficult to follow the structure of the questionnaire. They were not able to connect their practice with the given statements and felt frustrated or annoyed by answering the questions. This might be caused that most of the participants perceive Qigong and Taijiquan rather as a philosophy or connection of physical, mental and spiritual adjustments than act of physical activity of performative character. They are sometimes not able to determine what their goal is in the practice or what challenge means to them. For clarification of these terms a short discussion would help to ease the situation. It might also help to change the word performing as it is used throughout the questionnaire to practicing. That would be easier to follow by any participants which are involved in body and mind character activities where the emphasis on performance might seem to be contraproducive.
8 Conclusions

The main purpose of the study was to examine the flow experience in Qigong and Taijiquan practice. We were also interested if Qigong and Taijiquan practice has consequent impact on flow experience in every day life. To answer these questions we conducted several research measurements involving quantitative and qualitative approaches.

The first chapter was dedicated to theoretical backround of optimal experience we call flow. We studied the origin, definition and flow dimensions which are part of the research tool to examine flow experience. In the second chapter we studied the theoretical backround of Qigong and Taijiquan. We clarified the historical origin of the exercise and brought closer its role in context of flow experience.

In order to understand the nature of flow we formulated partial goals:

1. To determine the difference in flow experience between Qigong and Taijiquan practitioners.
2. To determine the difference in flow experience between practitioners in the Czech republic and Italy.
3. To determine the difference in flow experience according the age of the practitioners.
4. To determine the difference in flow experience according the length of practice of the practitioners.
5. To determine the difference in flow experience between males and females.
6. To determine consequent impact of Qigong and Taijiquan practice on flow experience in everyday life.

The results showed that there was at least moderate endorsement in all dimensions determining flow experience in Qigong and Taiji practitioners. The results were comparable with other studies investigating similar field such as flow experience in yoga practitioners. The most strongly endorsed item was autotelic experience which also coinsides with other studies. The second most endorsed item was loss of self-consciousness and right after concentration on the task at hand. These three items were discussed by the participants in
Conclusions to hypotheses

H1 We assume that there is no difference in the level of flow experience between Qigong and Taijiquan practitioners.

With regard to the results to H1 we state:

On the basis of lack of statistically significant differences between the dimensions of flow in Qigong and Taijiquan practitioners, we accept the hypothesis.

There is no difference in the level of flow experience between Qigong and Taijiquan practitioners.

H2 We assume that there is no difference in the level of flow experience in Qigong and Taijiquan between practitioners in the Czech republic and Italy.

With regard to the results to H2 we state:

On the basis of small number of significant difference between the dimensions of flow in the Czech republic and Italy, we accept the hypothesis.

There is no difference in the level of flow experience between the Czech republic and Italy.

H3 We assume that there is no difference in the level of flow experience in Qigong and Taijiquan practice according the age.
With regard to the results to H3 we state:

On the basis there is no any statistically significant difference between the dimensions of flow in given age groups, we accept the hypothesis.

*There is no statistically significant difference in the level of flow experience according the age.*

H4 We assume that there is a difference in the level of flow experience in Qigong and Taijiquan according the length of practice.

With regard to the results to H4 we state:

On the basis that there are enough statistically significant difference between the dimensions of flow in given groups according the length of practice, we accept the hypothesis.

*There is a difference in the level of flow experience according the length of practice.*

H5 We assume that there is no difference in the level of flow experience in Qigong and Taijiquan practice between males and females.

With regard to the results to H5 we state:

On the basis that there are not enough statistical significant differences between the dimensions of flow according the gender, we accept the hypothesis.

*There is no difference in flow experience in Qigong and Taijiquan practice between males and females.*

H6 We assume that practice of Qigong and Taijiquan has a consequent impact on flow experience in every day life of the practitioners.
With regard to the results to H6 we state:

On the basis of responses in qualitative part of the research, that Qigong and Taijiquan has consequent impact on flow experience in every day life, we accept the hypothesis.

_Qigong and Taijiquan have consequent impact on flow experience in every day life._

**Conclusions for practice**

The purpose for the practice was to provide fundamental knowledge about the flow experience in Qigong and Taijiquan practice.

It turned out, that qualitative research can complement quantitative research and indicate better the quality of the flow experience which is difficult to define as it is subjective state of mind. We suggest that Qigong and Taijiquan systems can be used as appropriate tools to cultivate flow experience in every day life due to its ability to cultivate mental skills such as concentration and attention, and other qualities such as higher sensitivity and perception of oneself and his surroundings which are considered as preconditions for flow experience.

The results showed that the autotelic dimension in flow scales was the most endorsed. It means that the motivation of practitioners to participate in Qigong or Taijiquan class was rather intrinsic. Another highly endorsed items were loss of self-consciousness and concentration on the task at hand which show us that Qigong and Taijiquan help the practitioners to detach from the surrounding and concentrate on the task at hand. Based of the responses of the practitioners this experience is portable to everyday life and into any activity where the concentration is present or one is willing to bring it.

In order to examine difference in individual dimensions where statistically significant difference was found, we would need to take into account more factors that can influence the presence of flow experience such as the role of teacher, environment, physical, emotional and mental state of an individual before the class starts, number of people at the class etc.

Despite the fact that not all the factors influencing flow experience were explained, we can consider this study as support for other research interested in flow experience and physical activity of body and mind character.
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3. Demographic Information
List of abbreviations

FSS – Flow State Scale
FSS (2) – Flow State Scale + Flow State Scale – 2
DFS- 2 – Dispositional Flow Scale
SUMMARY

Dissertation thesis examines the level of flow experience in Qigong and Taijiquan practitioners. The main objective of the work is to examine the level of flow experience in Qigong and Taijiquan practice and compare the level of flow experience between Qigong and Taijiquan, Czech republic and Italy, find differences in flow experiences according the age, length of practice, gender and find consequent impact of Qigong and Taijiquan practice on flow experience in every day life of the practitioners. The work is divided into theoretical and practical part. The theoretical part is focused on literature review, it is divided into two parts. First part is dedicated to theoretical background of optimal experience called flow and second part presents theoretical knowledge about Qigong and Taijiquan. In empirical part the level of flow experience in Qigong and Taijiquan is examined by using quantitave and qualitative methods. Flow scales (FSS,FSS-2 and DFS-2) were used to measure flow in quantitative part and methods of in-depth interview and focus group were used to measure the the quality of flow experience. The level of flow experience showed at least moderate level in all dimensions of flow. The highest level of flow were in autotelic dimension, loss of self-consciousness and concentration on the task at hand. The difference in flow experience were found in connection to length of practice and it was confirmed that Qigong and Taijiquan have consequent impact on flow experience in every day life of the practitioners.

Key words: optimal experience, flow, taijiquan, qigong, flow state scales, in-depth interview
Attachment 1

Flow State Questionnaire (FSS-2)

Please answer the following questions in relation to your experience in the event you have just completed. These questions relate to the thoughts and feelings you may have experienced during the event. There are no right or wrong answers. Think about how you felt during the event and answer the questions using the rating scale below. Circle the number that best matches your experience from the options to the right of each question.

Rating scale:
1-Strongly disagree, 2- Disagree, 3-Neither agree nor disagree, 4- Agree, 5- Strongly agree

1. I was challenged, but I believed my skills would allow me to meet the challenge.
   1 2 3 4 5

2. I made the correct movements without thinking about trying to do so.
   1 2 3 4 5

3. I knew clearly what I wanted to do.
   1 2 3 4 5

4. It was really clear to me how my performance was going.
   1 2 3 4 5

5. My attention was focused entirely on what I was doing.
   1 2 3 4 5

6. I had a sense of control over what I was doing.
   1 2 3 4 5

7. I was not concerned with what others may have been thinking of me.
   1 2 3 4 5

8. Time seemed to alter (either slowed down or speeded up).
   1 2 3 4 5

9. I really enjoyed the experience.
   1 2 3 4 5

10. My abilities matched the high challenge of the situation.
    1 2 3 4 5

11. Things just seemed to be happening automatically.
    1 2 3 4 5

12. I had a strong sense of what I wanted to do.
    1 2 3 4 5
13. I was aware of how well I was performing.
14. It was no effort to keep my mind on what was happening.
15. I felt like I could control what I was doing.
16. I was not concerned with how others may have been evaluating me.
17. The way time passed seemed to be different from normal.
18. I loved the feeling of that performance and want to capture it again.
19. I felt I was competent enough to meet the high demands of the situation.
20. I performed automatically, without thinking too much.
21. I knew what I wanted to achieve.
22. I had a good idea while I was performing about how well I was doing.
23. I had total concentration.
24. I had a feeling of total control.
25. I was not concerned with how I was presenting myself.
26. It felt like time went by quickly.
27. The experience left me feeling great.
28. The challenge and my skills were at an equally high level.
29. I did things spontaneously and automatically without having to think.
30. My goals were clearly defined.
1 2 3 4 5

31. I could tell by the way I was performing how well I was doing.
1 2 3 4 5

32. I was completely focused on the task at hand.
1 2 3 4 5

33. I felt in total control of my body.
1 2 3 4 5

34. I was not worried about what others may have been thinking of me.
1 2 3 4 5

35. I lost my normal awareness of time.
1 2 3 4 5

36. I found the experience extremely rewarding.
1 2 3 4 5
Attachment 2

Dispositional Flow Questionnaire (DFS-2)

Please answer the following questions in relation to your experience in taijiquan, qigong or dance. These questions relate to the thoughts and feelings you may experience during participation in chosen activity. You may experience these characteristics some of the time, all of the time, or none of the time. There are no right or wrong answers. Think about how often you experience each characteristic during your activity and circle the number that best matches your experience.

Rating scale:

1-Strongly disagree, 2- Disagree, 3-Neither agree nor disagree, 4- Agree, 5- Strongly agree

When participating in ________________________ (Name of class):
1. I am challenged, but I believe my skills will allow me to meet the challenge.
   1 2 3 4 5
2. I make the correct movements without thinking about trying to do so.
   1 2 3 4 5
3. I know clearly what I want to do.
   1 2 3 4 5
4. It is really clear to me how my performance is going.
   1 2 3 4 5
5. My attention is focused entirely on what I am doing.
   1 2 3 4 5
6. I have a sense of control over what I am doing.
   1 2 3 4 5
7. I am not concerned with what others may be thinking of me.
   1 2 3 4 5
8. Time seems to alter (either slowing down or speeding up)
   1 2 3 4 5
9. I really enjoy the experience.
   1 2 3 4 5
10. My abilities match the high challenge of the situation.
    1 2 3 4 5
11. Things just seem to happen automatically.
12. I have a strong sense of what I want to do.
13. I am aware of how well I am performing.
14. It is no effort to keep my mind on what is happening.
15. I feel like I can control what I am doing.
16. I am not concerned with how others may be evaluating me.
17. The way time passes seems to be different from normal.
18. I love the feeling of that performance and want to capture it again.
19. I feel I am competent enough to meet the high demands of the situation.
20. I perform automatically, without thinking too much.
21. I know what I want to achieve.
22. I have a good idea while I am performing about how well I am doing.
23. I have total concentration.
24. I have a feeling of total control.
25. I am not concerned with how I am presenting myself.
26. It feels like time goes by quickly.
27. The experience leaves me feeling great.
28. The challenge and my skills are at an equally high level.
29. I do things spontaneously and automatically without having to think.
30. My goals are clearly defined.
31. I can tell by the way I am performing how well I am doing.
32. I am completely focused on the task at hand.
33. I feel in total control of my body.
34. I am not worried about what others may be thinking of me.
35. I lose my normal awareness of time.
36. The experience is extremely rewarding.
Attachment 3

Demographic Information

1. Gender
   Male/Female

2. Date of birth

3. The current length of practice; specify in weeks (e.g. 10w), months (e.g. 3m), years (e.g. 5y).

4. What is your average frequency of practice per week (how often do you practice, e.g. everyday, two times a week).

5. How long do you practice per week? (specify in hours)

6. Do you practice at home? (specify ratio between practicing at home and in center in percentage, e.g. 20% home, 80% center).

7. Do you have experience with other physical activities before practicing qigong, taiji or simultaneously practicing with qigong, taiji? (what, length of practice, what level)

8. Place where you practice (city, state).

9. Which style do you practice?

10. Your focus in practising is mainly on:

    a) Physical exercise (stretching, strength,...)
    b) Spiritual experience (meditation)
    c) Both at the same rate