WHAT DOES IT TAKE TO BECOME A TOP-SWIMMER?		
Perceptions of Success Factors in Finnish Swimming		
Laura Kurki		
	Master's Thesis in Social Sciences of Sport	
	Faculty of Sport and Health Sciences	
	University of Jyväskylä Spring 2020	
	5pmg 2020	

ABSTRACT

Kurki, L. 2020. Perceptions of success factors in Finnish swimming. Faculty of Sport and Health Sciences, University of Jyväskylä, Master's thesis in Social Sciences of Sport, 59pp.

The purpose of this Master's thesis is to examine different factors that affect the possibilities of Finnish swimmers to succeed at the international level. This thesis focuses on the social, environmental, and organizational factors that influence athletes' success. As a framework, the SPLISS (Sport Policy Factors Leading to International Sporting Success) model 2.0 and its nine pillars were used.

The data of this study consisted of theme interviews of five individuals who are closely involved with top-level swimming in Finland. All the participants had different perspectives and backgrounds related to swimming. Two of the participants were competitive swimmers, out of which one has already achieved international success, while the other has not yet reached the international level. The other three participants were a swimming coach, a Finnish federation official, and a former physical education lecturer as well as swimming expert. The participants were asked to rank the nine SPLISS pillars from least important to most important, according to their own perspective. All the interview themes were derived from the nine pillars.

The results reveal that all the nine pillars were seen as important for the swimmers in order to succeed internationally. Two pillars scored a bit higher than the others. Pillars seven and three, which stand for coaching provision and coach development, alongside foundation and participation scored higher than the other pillars, respectively. All the pillars were seen as important in some phase of the swimmer's career. Coach provision and coach development was one of the factors with the highest need of improvement in Finnish swimming.

Keywords: swimming, success factors, Finland

TABLE OF CONTENTS

1	INT	RODUCTION	5
2	THE	E FIELD OF SPORTS AND SWIMMING IN FINLAND	8
	2.1	Policies and Finance of Sports	8
	2.2	Swimming Participation	11
	2.3	Talent Identification	13
	2.4	Athletes' Support Systems	14
	2.5	Availability of Swimming Halls and Other Training Facilities	17
	2.6	Coach Development	18
	2.7	Importance of National and International Competitions	20
	2.8	Research in the Swimming Field	20
3	AIM	1, THEORETICAL FRAMEWORK OF THE STUDY AND RESEARCH QUES	STIONS
	22		
4	ME	THOLOGY AND DATA	25
	4.1	Research Approach	25
	4.2	Semi-structured theme interviews / Qualitative research	25
	4.3	Personal experience	26
	4.4	Study participants	27
	4.5	Analysis of the interviews	28
5	RES	SULTS	29
	5.1	Coaching provision and coach development	29
	5.2	Foundation and participation	31
	5.3	Financial Support	32
	5.4	Training facilities	33
	5.5	National and International Competition	34
	5.6	Possibilities to Combine Swimming and Academic Career	36

5.7 Athletic and Post-Career Support	36
5.8 Talent identification and development system	38
5.9 Scientific Research	39
6 DISCUSSION	41
7 CONCLUSIONS	51
7.1 Success Factor	51
7.2 Limitations and Evaluation of This Study	52
7.3 Ideas for Further Studies	52
REFERENCES	53

1 INTRODUCTION

Swimming is one of the most popular forms of exercise throughout the whole population in Finland. Studies show that 26 percent of people aged 15-79 visits swimming hall at least once a month or more (Suomen Uimaopetus- ja Hengenpelastus ry, 2016). In 2013, there were approximately 25 million visits in Finnish swimming pools (Laalo-Häikiö, 2014, 16). Swimming is an attractive sport and form of exercise because it is not too expensive, it is easily accessible, and it is a great way to exercise for people who have injuries or problems with their weight and joints (Tanaka, 2009, 378). Swimming is a sport that serves all age groups from baby swimming to elderly swimming. This makes swimming a sport and form of exercise that people can do throughout their whole life.

Swimming is seen as important skill to have for everyone because of the nature of the Finnish landscape. Finland has at least 168 000 lakes that are bigger than 500 square meters, not to mention the amount of smaller lakes and ponds (Pölkki, 2019). Every year one hundred to one-hundred-and-fifty people lose their lives because of drowning in Finland. Good swimming skills might, therefore, help to lower the number or yearly drownings. The number of drownings is higher in Finland than in other Nordic countries when compared to the total population (Suomen Uimaopetus- ja Hengenpelastusliitto ry, 2019). Good swimming skills are not only recommended, but are mandatory for people that live in Finland and spend a lot of time outdoors in close proximity to the natural waters.

Swimming is one of the most popular ways to exercise throughout the Finnish population, but it also has a long tradition in Finnish culture. It has been part of the Olympic Games from the very beginning in Athens 1896, where swimming competitions were organized in the bay of the sea (Finnish Olympic Committee). The first Finnish swimmers participated in the Olympic Games in London 1908. Arvo Aaltonen won the first Olympic medals for Finland, two bronzes, in Antwerp in 1920. 72 years later, Antti Kasvio won bronze in Barcelona 1992, and Jani Sievinen won silver in the next Olympics in Atlanta 1996. The most successful Finnish women have been Eila Pyrhönen, placing fourth in Tokyo 1964, and Hanna-Maria Seppälä, placing

fourth in Peking 2008 (Finnish Olympic Committee, 2020). Finnish swimming has traditionally been relying on only a few athletes to bring medals home from the European and World Championships. There have been only two swimmers during the past two years who have reached the podium in international competitions. (Suomen Urheilumuseon tietopalvelu & Kilpa- ja huippu-urheilun tutkimuskeskus KIHU, 2019).

Talent plays an important role in many successful athletes' careers. However, talent is still not the only factor that enables winning championships and medals. Successful athletes have a system that supports them and makes their goals achievable. They have sport clubs where they can train and compete; they get guidance from coaches and other professional staff; they get support services from governments and Olympic Committees; and private partners have made their careers more affordable. Studies have been made about the success factors in different countries. They show that more than fifty percent of international success can be explained by only three factors. These factors are wealth, population, and communism. These factors are stable, and a single person cannot change them, but they are important to take into consideration when countries are creating their strategies for elite sports (De Bosscher, 2015, 37).

Since this thesis' main interest lies in elite athletes, it is important to define what is meant by an elite or successful athlete. Furthermore, the definition of "success" and of a successful athlete is not always clear. There is an old assumption that a person can be defined as "elite" or "expert" when he or she has trained over 10,000 hours or practiced over 10 years (Swann et al, 2014, 4). The idea behind the number of hours in opposition to pure talent is that it does not matter "what you are made of" but it matters "what you do" (Halldorsson, 2017, 15). Elite and expert athletes are also referred to as Olympic champions, professional performers, inter-varsity athletes, national team members, or athletes who were competing in a team (Swann et al, 2014, 4). According to De Bosscher et al (2015), an elite athlete is someone who is ranked in the world top sixteen or in the top twelve of any other equivalent ranking system. Elite athlete can also be defined as an athlete who receives direct or indirect funding because of their success at Olympic Games, senior Continental Championships, or in the senior World Championships in his or her sport (De Bosscher, 2015, 62). However, successful athletes or factors that have an effect on becoming successful can be hard to define. Researches have been conducted on

physiological and mental abilities of an athlete, but in reality, these things are not the only things that limit athletes to reach the top level. Sociological factors, environment, and different policies play a big role in every athletes' career without most of them even thinking about it.

This study deals with individuals in top-level Finnish swimming and their perceptions of the most important factors that influence Finnish swimmers' possibilities to succeed at the international level. Some athletes succeed better than others, so it is interesting to know what factors affect their training and abilities to succeed.

2 THE FIELD OF SPORTS AND SWIMMING IN FINLAND

Top-level athletes and swimmers need to take care of all the different areas in their life in order to succeed on the sporting field. Thus, sport policies and sport systems need to work in a way that athletes can fully focus on their sport. The following chapter provides some important background information in the fields of Finnish sports and Finnish swimming.

2.1 Policies and Finance of Sports

According to De Bosscher et al. (2006) fifty percent of the determinants affecting an athlete's possibility to succeed are macro-level variables. This means that politics and policies cannot do anything about them. Consequently, the remaining fifty percent contain meso-level factors, which means that here policies can affect the success possibilities by the means of their actions. One of the main policies that increases the overall success possibility is to make competition and elite sport equal for everyone (De Bosscher et al, 2006, 185-193). Overall, many things influence an athletes' possibility to succeed. However, without the right kind of policies and politics it is generally not possible for athletes to succeed. Sport organization politics, planning, and administration can also be a problem for the athletes, especially when they are competing at a higher level. High-level athletes might be exposed to different kinds of organizational stress, which might have an effect on their performance. This kind of organizational stress can appear before or during the competitions (Woodman & Hardy, 2003, 453).

According to De Bosscher (2015), the reason for increased international competition and investments in elite sports, through lottery money and government funding, is the growing belief that progressive planning of success will also grow a country's chances of actually succeeding. International success always depends on the rival nations' actions. Therefore,

when rivals are investing more money towards elite sports, the "price of success" is rising for all of the other countries as well.

Many countries are increasing the funding of the elite sport, which illustrates that success in elite sports can be meaningful and valuable for a nation. According to De Bosscher (2015), countries that invest more money in elite sports will also create more opportunities for athletes to gain success. For example, in Australia there has been a linear relationship between total medals and money spent since the 1980s. The gap between big countries that are investing a lot of money for the hope of success and smaller countries is diminishing because more countries have started to invest more money in elite sport, which has made the competition stable. The return of investment in the form of medals is also diminishing because of the raising competition from other countries. This leads to a situation in which successful countries need to keep on investing money in elite sport just to maintain their existing levels of performance (De Bosscher et al, 2015, 43).

One of the social factors that has an effect on the possibilities of success is financial background, and maybe more specifically the financial situation of the family during childhood and teenage years of the swimmer. This factor becomes especially clear when considering different nationalities and athletes who come from countries with different financial situations. Social background creates inequalities between athletes and determines the chances of success as much as precocious talent, aptitude, and ability (Collins & Buller, 2003). Money plays an important role in starting or even considering starting certain sports. There are many things that a young athlete needs financial resources for. Swimmers need to pay for their training space, equipment, coaching, massages, nutrition, as well as competition- and training trips. According to Puronaho (2014) During the past 10 years, the total cost in different sports has doubled and even tripled in some. The steepest increase of costs can be seen in the youngest athletes in competitive sports. Still, when we compare different individual sports, the costs of swimming are below the average (Puronaho 2014, 14). In Finland, the average annual prize for competitive swimmers aged eleven to fourteen in 2001 was 2231 euros. In 2012, the annual prize was 3629, which is quite an increase. Another interesting factor concerning the costs and amount of time used for training, was the fact that swimming was the only sport in which the, aforementioned, group of eleven to fourteen-year-olds had reduced the number of annual training hours. In 2001, swimmers in that age group trained 235 hours per year, when in 2012 they trained 202 hour per year. Even though the swimmers are training on average thirty-three hours less per year, they are still paying more (Puronaho 2012, 22).

Financial support is seen as one of the most important factors behind international sporting success (Kärmeniemi et al, 2012, 14). International success requires a certain kind of long-term financial stability and safety, so that it is possible for athletes to plan and excel their training towards their goals. In Finland, the majority of funding for sports, athletes, and coaches comes from the lottery money. The amount of financial support directed to elite-level sports was 20 million euros in 2010 (Kärmeniemi et al, 2012, 15). Overall, the Finnish government pays 140 million euros for sport and exercise in Finland, which is relatively low compared to many other countries. The 20 million euros that the Finnish government allocated directly to elite level sports, however, is an adequate amount of money that is spent to develop elite sports. It is proportionally more than in many other countries. (Kärmeniemi et al, 2012, p.15)

The Finnish government supports athletes financially. The National Olympic Committee (NOC) provides financial aid to those sport federations, that have proved to have a system that is able to produce successful athletes that succeed at the international level. The Olympic Committee supports different sports based on their ability to succeed in the next international competition (Kärmeniemi et al, 2012, 15). Furthermore, athletes can apply for financial aid from the Olympic Committee. The financial aid is 6 000, 10 000, or 20 000 euros whose purpose it is to help athletes cover the expenses of their professional athletic training (Finnish Olympic Committee, 2018). in 2019, eight swimmers received the financial aid from the Finnish Olympic Committee. One swimmer received 20 000 euros, four swimmers 10 000 euros, and three swimmers 6 000 euros (Opetus- ja kulttuuriministeriö, 2019).

According to a study by Kärmeniemi et al (2012), seventy percent of the athletes who participated in their research reported that they are receiving on average the same amount of money per month than they would receive by working full time. Most of the athletes (eighty percent) get their funding from the Olympic Committee athlete support, but some athletes

(sixteen percent) receive a monthly salary from their sport clubs (Kärmeniemi et al, 2012, 18). Most of the athletes do not feel that their monetary situation is sufficient to pursue a full-time, professional athlete's career. For most athletes their yearly salary is below 10 000 euros, which has to cover all the living as well as full-time professional athlete expenses (Kärmeniemi et al, 2012, 18).

On the elite level, the need for co-ordination and control is higher than in other sport settings. The need for specialization in elite sports is high, so, for example, a well-organized centralization for different sports is crucial (De Bosscher et al, 2015, 116-133). Many countries tried to centralize their elite sport systems in hopes of maximizing their effectiveness. The term "centralizing" in this context means that all the nation's top athletes leave their home programs to join an elite program that is better resourced. Centralization has created good results in different sports in many countries. For example, British cycling, British sailing, and New Zealand rowing have reached Olympic success at least partially because of centralizing their top athletes (Allen et al, 2015, 198). There is a research done in New Zealand about centralizing their nation's elite swimming program and which compared swimmers' official long-course records between 2002 and 2013. During that time, swimmers moved from their home training system to the elite swim program. The results show that the centralization strategy took many years to produce effects. However, over an eleven-year period, the standard of swimmers' performances improved every year, which proves the effectiveness of the centralization (Allen et al, 2015, 201).

2.2 Swimming Participation

The foundation of sport participation is an important factor when we think about maximizing the number of elite athletes. According to De Bosscher et al (2015) there is a correlation between medals won during the Olympics and mass participation. The biggest correlation here happened when the grassroots sport was competitive and intensive. There are also cases, which

prove that there does not always need to be mass participation for a country to be able to succeed on the elite level. Nevertheless, it creates a foundation for potential success because of the supply of young talent and various competition and training opportunities (De Bosscher et al, 2015, 44). Since comparing sport participation internationally is a difficult task, there are three levels of analysis made to test sport participation in sample nations. These three levels of evaluating sport participation are sport opportunities at school, sport participation rates, and management to improve quality. According to a study, the top three nations in regard to sport participation are Denmark, Switzerland, and the Netherlands. These countries have a high rate of general sport participation, high number of sport club members, and a high number of people participating in competitions. On one hand there are cases that show that there do not need to be high participation rates to achieve success. When it comes to the three countries mentioned above, however, high participation rates are benefiting them. On the other hand, there are countries who are performing well on the elite level but that have only average scores on the grassroot level. One of these countries is Australia. It has low scores for childrens' opportunities to play sports at school, but they have traditionally performed well in elite sport (De Bosscher et al, 2015, 181-183). Small countries have their own problems concerning the participation levels. Within a small population, it is harder to find sufficient numbers of talented people for certain sports, that might require specific attributes. For example, in Iceland, it is hard to produce national teams for basketball because the population is small, so it is more difficult to find enough tall players (Halldorsson, 2017, 5).

Despite immovable barriers such as population size, the government can still affect the levels of people's physical activity on certain levels. In Finland, there is a policy of having physical activity two hours per week for students in primary school (Kärmeniemi et al, 2012, 24). There are many other recommended sport activities for children where they are able to go, for example, to after school programs. Two hours a week is not much, but since the law sets it, every child in Finland will get at least that amount of physical activity every week. In Finland, there is also a certain amount of swimming that every child needs to do during their primary school. The recommendation is six hours of swimming per age group during their primary school time (Opetushallitus, 2008, 7).

2.3 Talent Identification

Talent identification and developmental focuses on national strategies. These strategies include the management of talent development and the examination of service delivery as well as talent identification procedures. (De Bosscher et al, 2015, 198). During the developmental stage, the amount of training increases and talented athletes become more motivated. During this stage, there are many different phases in young athletes' lives connected to sport, studies, and psychological and social factors (Kärmeniemi et al, 2012, 26). Most of the young athletes are balancing between student and athlete life, which might be one of the reasons for talented athletes to terminate their career (De Bosscher et al, 2015, 198).

In Finland, there is no national strategy of identifying or developing talented children and youth. The responsibility for this has been put with sport federations and sport clubs. There has been a strong belief that talented individuals will be found through a competitive sport system and that coaches will recognize and then develop those talents into elite level athletes. Sport clubs and federations can use different support systems for talent identification and development. The Finnish Olympic Committee is one of the sources that provides help to the federations and sport clubs concerning this matter (Kärmeniemi et al, 2012, 26). The Finnish school system is also supporting talented athletes to combine their academic and athletic careers. Sport clubs, furthermore, cooperate with schools by providing the coaching in schools for the athletes (Kärmeniemi et al, 2012, 27).

One of the factors that have an effect on athletes' success is relative age effect. There have been many research into the age of children and its relation to the success levels reached in their later athletic career. Sometimes the age difference can be as much as one year, which is a big difference on the level of readiness to participate in sport and learn new skills (Cóte, 2006 & Starkes, 2001). The research suggests that children who have been born during the first three months of the year are more likely to succeed in their later athletic career compared to children

who have been born during the last three months of the year (Coatsworth &, Conroy, 2006). If the child's birth month is any of the first months of the year, they are more developed physically and mentally than a child whose birth month is any of the latest months of the year. This means that the older players will be faster and more developed, which in many cases lead to more attention from the coaches because they put more attention on them compared to the younger children. Older children who get more attention are more likely to succeed at that moment and in later times as well. They are also more likely to continue their athletic career later on (Cóte et al, 2009). This is not happening only in the sport field; this is a common problem in the school field as well. The relative age effect might divide highly educated people and not educated people even more than they are now if educated people start to think about this when they are planning to have children.

2.4 Athletes' Support Systems

Athletes face many changes and challenges when they transition from junior competitions to senior competitions, and from an amateur to a professional athlete. Athletes need different support services that they can use during their career and tools to plan their life after the sport career end. If nations can provide appropriate support for their athletes, it might be the difference between success and failure in elite sporting success (De Bosscher et al, 2015, 233-234).

Another social factor that is important to take into account is the environment where the athlete is living in. One of the environmental factors affecting the possibility to succeed is having school on the side of a sport. Studies show that schoolwork has a positive effect on an athlete's life (Henriksen et al, 2010, 127). Athletes who have something else in their life besides sport, might have less time to worry and be frustrated about the little things that are going on with their sport every day.

The Finnish school system offers opportunities for young athletes to combine athletic career and academics. Especially high schools have created programs that support and encourage athletes to graduate while aiming at the elite level in their sport career. In 2011, there were thirteen high schools and eleven trade schools that got a national title of a sports school. Sport federations are responsible for the quality of coaching in these sport schools. The idea of these sport schools is to offer student-athletes at least two hours of extra training three times per week. For university level studies, there are sport academies where athletes can finish their studies while focusing on their sport. There are nineteen sports academies in Finland (Kärmeniemi et al, 2012, 27).

Athletes can get support to plan their life after their career from many different sources. Some athletes know about these services better than others do. According to Kärmeniemi et al, 40 percent of athletes are not fully aware of the possibilities and services that athletes can get for being able to prepare for the life after their career. Seventy percent of the athletes who know about these support services have used them. According to the athletes, the post career -services are not developed enough in Finland and there is not enough information about these services available (Kärmeniemi et al, 2012, 35).

Athletes can receive different kinds of support from many sources in addition to the financial support. For example, athletes who are part of the Olympic committee program can get support services in form of insurances, health care, nutrition adivice, and study planning (Kärmeniemi et al, 2012, 32-33). In addition to financial support, Finnish swimmers get support for training camps and competitions if they are part of the national team. Swimmers are also able to get new information and new data from different kinds of physical tests (Uimaliitto, 2020). Different swim clubs might offer support services for their swimmers.

One of the most important support systems for athletes, who are aiming for elite success, is the familial support. Parents play a big role in their child's life because the athlete is dependent on the parents' activity and monetary support when they are still young unable to support themselves. Parents play the most crucial role when it comes to supporting their child who is involved in sports. They need to support them monetarily, take care of the equipment, drive

him or her to practice, go watch games, and most importantly be there for the child during the difficulties that they will experience. (Aarresola, 2016, 84). The emotional support that family provides to the athlete is considered to be one of the most important things for the athlete. Young athletes especially need emotional support from their families. The research shows that young athletes who were living in student dormitories did not succeed in their sport as well anymore compared to athletes who were living with their family or host families (Henriksen et al, 2010, 127). Many young athletes need to move to a different city, which means that they might lose a big part of their emotional support. This is something that sport clubs can take into consideration when new and young athletes move to a new city and new club because they want to get better at their sport. If social support is not taken into consideration, the results might not get better even that the training would be better. Parents are also the ones who provide support and encouragement to the child on levels that no one else can usually reach. This kind of support can be either positive or negative and is totally up to the child's perceptions. Top-level athletes tend to seek and use social support as a way to deal with stress and pressures of success and popularity (Gould et al, 1999, 375). Family and significant others can be an enormous resource for the athlete and they can work as stress relievers and emotional support for them. However, family support might not always be beneficial and helpful for the athlete. If this is the case, the social support might become distractive and negative (Gould et al, 1999, 390). Inappropriate interactions with family and significant others might be complicated for the athletes and it might be hard to get rid of this kind of negative support from their lives.

Tradition and culture play a big role in an athlete's choice to start a certain sport and to continue it later on to a higher level. Culture can work as a positive support or a negative support, depending on the athletes' sport of choice and the country that they are living in. Every athlete needs traditions that include values, social support and knowledge, motivation, and an opportunity to succeed. Many of these things are taken for granted in a society. Traditional culture can also be the basis for great national achievements in certain sports. Certain countries have a traditional culture in certain sports which they are succeeding in. For example, curling in Canada, football in Argentina, sprint running in Jamaica, and ice hockey in Finland. (Halldorsson, 2017, 17-18)

2.5 Availability of Swimming Halls and Other Training Facilities

Training facilities and support services connected to those facilities have been recognized to be major factors when developing the sport system. There are two critical success factors related to training facilities. These two factors are national co-ordination and planning of exercise and sport facilities, in addition to a sport academy network where athletes have anoptimal training environment year around (De Bosscher et al, 2015, 262). There are approximately 30 000 sport facilities in Finland and municipality owns three quarters of them. In Finland there are no training facilities exclusively made for elite athletes. Thus, elite athletes are just one group of facility users among the other exercisers. Despite that, most of the sport facilities have been thought out for elite level athletes, so that they can train appropriately in these facilities as well. Sport academies are beneficial centers for athletes to concentrate on their sport. Even though these sport centers are focusing on providing sport education and leisure time activities, elite level athletes still have the best facilities and knowledge on their hands for their specific needs (Kärmeniemi et al, 2012, 38).

Many countries have started to build multi-functional indoor and outdoor training facilities because of the lack of space in locally owned sport facilities. The main idea for elite athletes using these facilities is to reduce duplication costs, reduce travelling, and exchanging knowledge between different sports. Small countries have less need for centralism due to the shorter distances between training locations compared to bigger countries. One good example is that Spain and Japan do not have big and famous training centers like many bigger countries, but their advantage is that they have excellent training facilities around the country and they are open for the athletes at any time of the day. (De Bosscher et al, 2015, 261-264)

Since swimming is a very common way of exercise and because it is beneficial for the well-being of citizens, there are many swimming pools in Finland. There are 250 actively working swimming halls and spas in Finland, and they are located around the whole country. In addition to the number of swimming halls, there are many outdoor pools and lakes where people can swim during the summertime. Twelve swimming halls have a 50-meter pool as their main pool. Most of the swimming clubs do not have an opportunity to use a 50-meter

pool in their practices (Laalo-Häikiö, 2014, 14). In Finland, there are eighteen provinces and Åland, which is part of Finland but not a province in the same sense as other provinces (Varsinais-suomi, 2019). Some provinces are more populated than others, which means that some swimmers have better and closer-located training facilities than swimmers who are living in less populated provinces.

There are also environmental factors related to geographical circumstances that a country has that are relevant. If a country does not have snow at all during the year, it most likely does not have popular winter sport players, facilities, or even an audience for those sports compared to summer sports that are practices in their country (Baker et al. 2003, 6). In those, aforementioned, snow-free countries the possibilities for young athletes to participate in winter sports are smaller compared to summer sports. It would be more expensive for the family to find facilities and there would also be a lot traveling involved to reach appropriate training and competition conditions. This makes sense when we think about Finland as an example, and how popular winter sports are when we compare many other countries in the world. In addition, it is important that the training possibilities are close to athletes and that they are easily accessible for them. Young athletes are especially dependent on their parents, and if there are problems with transportation to the training facility, it might be the end of this athlete's career.

2.6 Coach Development

Different countries have very different coach educational systems and coaches are valued differently in different cultures. Countries that value coaches typically have a longer tradition of recognizing coaching as a profession and they have an intention to improve the coaches' circumstances in order for them to be able to coach full-time. A study shows that there is no correlation between the educational level of the coach and a country's level of success. There was a correlation between more experienced coaches who had gained their knowledge by mentoring from other coaches and their own experience of being a former athlete themselves.

Higher-level coaches were more likely to have international experience by being athletes themselves compared to lower level coaches. (De Bosscher et al, 2015, 279-282)

The Finnish coaching education system is divided into different organisations. Typically, sport organisations educate coaches from level one to three, and level four is organised by universities of applied sciences and sport academies. There are 10 000 people completing the first level of coaching education every year in Finland, but the amount of people who complete level two and three is dramatically lower. The fourth level is designed for the need of elite level sports. (Kärmeniemi et al, 2012, 41)

The amount of professional coaches has been on the rise in Finland for years across the board in different sports. In this research, a professional coach is someone who is a full-time coach or someone who earns at least half of their income from coaching. The biggest increase of professional coaches was in sport clubs, when at the same time other sport organizations and sport academies raised the number of coaches as secondary employees. The rise of the professional coaches is dramatic; between the years of 2002 and 2016 the amount of professional coaches increased from 441 to 1682, which means that during those fourteen years the amount of professional coaches increased to over triple the amount that it used to be. The research showed that swimming was one of the five sports in Finland that had the highest amount of professional coaches working in the sport. In 2002, there were seven professional swimming coaches, when in 2016 the amount was already 129 (Puska et al, 2016, 11).

The level of professional coaches' salaries has also changed in Finland between 2012 and 2016. The average salary for a professional coach was 3500-4000 euros in 2012 and in 2016 it was 2500-3000 euros. The biggest group of coaches (thirty-four percent) in 2012 earned over 6000 euros per month, when in 2016 the biggest group (twenty-five percent) earned 2501-3000 euros per month. The Finnish Olympic Committee is also giving financial benefits for the coaches who are coaching youth in any Olympic sport by paying thirty to fourty percent of the coaches' salary to their employer. Still today, many Finnish coaches are working voluntarily or with little monetary compensation on the side of their regular job (Puska et al, 2016, 21-23).

2.7 Importance of National and International Competitions

National and international competitions are important to athletes in many different ways. Competing against rival athletes gives them a comparison and benchmark of the different competition and performances levels in their country as well as gobally. It, furtheremore, makes them progress towards participating in respected competitions such as the Olympic Games (De Bosscher et al, 2015, 311).

The Ministry of Education and Culture plays an important part in coordinating elite level sport events in Finland. They support these events by providing financial support for the organizers and taking part in building and reconstructing the sport facilities. There are other organizations participating in giving consulting or education to the event organizers. In Finland, there is no long-term plan about hosting international competitions, and every competition is handled as a single event (Kärmeniemi et al, 2012, 44).

There are many swimming competitions held in Finland and there are many opportunities for Finnish swimmers to go compete in international competitions. Swimming clubs organize yearly over 300 competitions around Finland. Most of the swimming clubs organize one or two competitions every year (Laalo-Häikiö, 2014, 6).

2.8 Research in the Swimming Field

Innovative scientific research is an increasingly important factor in elite sports, and it is one of the fastest growing fields in elite sports. Australia was one of the first countries that adopted a highly scientific approach to elite sports, and it is still the leading country regarding the application of science to elite sport. Innovations and sport engineering play a big role in elite sport next to sports medicine and sports science support. New ideas and new products can create competitive advantages for athletes or countries in an increasingly competitive environment.

Most coaches are trying to take advantage of the scientific research on the field and adapting new information to their training. A study shows that seventy-eight percent of the international elite coaches used scientific research in planning and training activities. Even though coaches are getting new scientific information about their sport, there is still a gap between the newest information and delivering all of it to the sport federations and coaches. One of the reasons for the gap between theory and coaches might be the gap between theory and practice. Academic research experiences high pressure to publish peer-reviewed journals, which in many cases leads to problems to translate that information into actual practice so that it can be used in elite level coaches' and athletes' training. (De Bosscher et al, 2015, 329-339) In Finland, sixty-one percent of the coaches search scientific research regularly to be able to improve the quality of coaching and to improve the athletes' possibilities of developing in their sport (Kärmeniemi et al, 2012, 49).

In Finland, KIHU (Kilpa- ja huippu-urheilun tutkimuskeskus) is mainly responsible for coordinating and developing scientific research. There are also other organizations doing research about elite sports. For example, universities, sport academies, and sport medicine centers are giving their own part to scientific research. The ministry of education and culture supports the research made by KIHU by funding their operations with a million euros per year (2009). In Great Britain, the amount used for elite sport research was ninety million in 2003 (Kärmeniemi et al, 2012, 48-49).

3 AIM, THEORETICAL FRAMEWORK OF THE STUDY AND RESEARCH QUESTIONS

The aim of this study is to investigate and outline the perceptions of factors that influence Finnish swimmers' possibilities to succeed at the international level. These factors are based on SPLISS 2.0, which are related to sport policies and factors related to them. Participants who were interviewed for the research have different backgrounds of swimming, which reach from the experiences in the pool to the governing level of Finnish swimming.

The theoretical framework of this study was SPLISS method 2.0. The abbreviation of SPLISS comes from Sport Policy Factors Leading to International Sporting Success. SPLISS 2.0 1 is based on the classification of three levels (macro-, meso-, and micro-level) that are influencing the success of elite athletes (De Bosscher et al, 2015, 41). The focus in SPLISS lies on the policy factors that are affecting international sporting success or, in other word, the meso-level factors. SPLISS acted as a framework in this Master's thesis and provided the structure for the interviews. All interviews were semi-structured, so the interviewees had an opportunity to talk about topics outside of the SPLISS model themes as well.

The purpose of SPLISS is to advise and assess sport policy makers and help them to develop and optimize their elite sport systems (SPLISS, 2018). SPLISS has its main purpose in identifying different policies and their timing in different countries, as well as differentiating between the policies and how they work in each country (De Bosscher et al, 2015, 15). The results from SPLISS showed that success is developable, which shows us that success can be influenced by different policies. Countries, that are succeeding better, tend to score better in these nine pillars than countries that are not succeeding that well. Some pillars are more connected to success than other pillars. For example, pillar three sports participation and pillar four talent identification and development did not show any significant relationships between these pillars and success. The most significantly related pillars to success were pillar one financial support, pillar two governance, organization and structure, pillar seven coaches' provision and development, and last but not least pillar nine sport science, research and

innovation. For summer sports also pillar six training facilities and pillar eight (inter)national competition were significantly related to success (De Bosscher et al, 2015, 3). Countries are also different and some pillars work in some countries better than others (De Bosscher et al, 2015, 15).

Sport Policy Factors Leading to International Sporting Success (SPLISS)

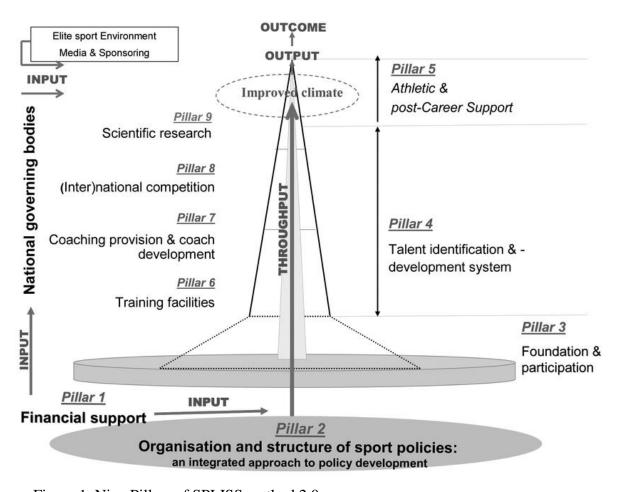


Figure 1. Nine Pillars of SPLISS method 2.0

The SPLISS model describes the elite level sport policy in three different levels: Pillar 1 financial support is an input to the processes. Pillars 2-9 are the processes on the way to the results, for example medals in international competitions (Kärmeniemi et al, 2012, 5).

Based on the SPLISS model I derived the following research questions aimed at identifying the importance of different factors in Finnish swimming.

Question 1: What kind of perceptions are there of the success factors in Finnish swimming?

Question 2: Are some success factors perceived to have a greater effect on the possibilities to succeed internationally than others?

4 METHOLOGY AND DATA

This chapter outlines the methology and data used in this research. Firstly, the research approach and method will be presented. Secondly, there is information about personal experience of the topic and description of the study participants. Lastly, there is a description of the analysis of the interviews.

4.1 Research Approach

For this thesis semi-structured theme interviews were used to collect the data. The basis for the thesis and the questions of the interviews were derived from the nine pillars of SPLISS 2.0. The questions are strictly connected to the nine pillars only, however, they were still openended questions. That way the participants could still add their opinions and thoughts about other matters that are related to the pillars. The topic is broad, so it is important to stick to specific questions for the purpose of structure, but also give the participants time and space to speak freely at times. Thus conducting semi-structured interviews was the best data collection method for this thesis.

Before the actual interviews, participants were asked to rank the nine different themes that are congruent to the nine pillars, from the most important (1) to the least important (9) factors influencing international swimming success in Finland. This part was pen and paper task, and participants ranked those pillars in the order that supported their opinions about the system.

4.2 Semi-structured theme interviews / Qualitative research

In this research, I used the qualitative research method because I wanted to get detailed and broad answers to different aspects. A Qualitative research method works well when someone

is interested in the detailed structures instead of the overall division. The methods in qualitative research are observing, text analysis, interviews, and transcribing (Metsämuuronen, 2008, 14-15). A Qualitative research method was necessary in this study because I wanted to know what people are thinking about the Finnish system, and what the most important factors are that lead to success from the individuals' perspective. Getting deep and specific information is only possible with qualitative research.

All interviews were one-on-one interviews, and they were in a place that the participants felt comfortable to be. All places were quiet and private for the participants to answer the questions anonymously. All the interviews were semi-structured theme interviews. Theme interviews work well in situations that touch upon intimate or sensitive information, and values. Participants filled in a consent for, which promised them anonymous during and after the study. The interviews are based on different themes that are chosen before the interview. The order and formation of the questions is not strict, and it might change during the interview (Metsämuuronen, 2008, 41). By using the semi-structured theme interview, I was able to change the format of the questions for every participant so that the questions could be more specifically catered to each participant's own area of expertise. In addition, I was able to create new questions during the interview when I wanted to know about something more specifically.

4.3 Personal experience

I have been swimming competitively for fifteen years and it has given me more than I dared to wish for at the beginning of my athletic career. During my career I have competed in countless Finnish national championships, youth European championships, NCAA (Annual college championships in the United States), PAC 12 competitions (Annual conference championships in the United States), World cups, and European championships. I ended my career with a handful of national championship medals, PAC 12 conference relay medal, and two European championship relay medals. My journey from children swimming school at the

age of ten to competing against the best in Europe and the best in America taught me irreplaceable things.

During my swimming career I became more interested in the factors that separate champions from all the rest of the swimmers. In swimming, and especially in sprint swimming the time differences are small. In the final of a sprint distance, the difference between the winner and the last one can be only few tens of a second. All of the swimmers on the elite level are talented, they work hard and professionally, they are motivated and want to succeed, and they have good support behind them. Still, some swimmers succeed better than others do, so there are factors that divide people.

Since I have a personal athletic background in elite level swimming, it also brings challenges and potential biases to this study. I am aware of my own opinions and experiences about this topic, and how they might have affected my ability to collect and analyse this research objectively. I have attempted to disregard my own perspective during the interviews and while analysing the results and approach this research open-minded. However, I also see my personal experience as even more of an advantage than a disadvantage for this study. My vested personal interest motivated me to conduct research in this topic and gain more knowledge about this topic on the field of swimming. I think that this study might also help the next generation of swimmers reach some of the benefits that I was able to enjoy.

4.4 Study participants

I selected five participants for this study because of their different backgrounds within swimming. Participants were either swimmers or people who are closely connected to swimming due to their profession. All the participants have been involved with swimming for over ten years. Two of the participants were competitive swimmers, one with international success already and one younger swimmer who has not yet reached the international level. One participant is a swimming coach, another working in the Finnish swimming federation, and the last one is a former physical education lecturer and a swimming expert. The initial contact to the participants was facilitated by my personal swimming career and the networks built

throughout. This again illustrates how my background can also be seen as an advantage for this research.

All of the selected participants represented different groups of members in the swimming field. I contacted all the participants either via email, text message, or in person to ask if they would be interested in participating in this study. After I got the names of participants who were interested in the study, we were able to set up meetings in the near future for the interviews. Each interview was tape-recorded and transcribed verbatim.

4.5 Analysis of the interviews

Before the analysis, I transcribed the five interviews, which lasted 263 minutes in total and were approximately fifty-two minutes long each. At the end, there were fourty-two pages of transcribed text. I used content analysis for the analysis of the data. In qualitative research, collecting and analysing data happens at the same time in many cases. The collected data will be broken down into pieces and then assembled and categorized into scientific conclusions. These conclusions are separate from the participants, so they can be converted to a common and theoretical level (Metsämuuronen, 2008, 48).

The content analysis has seven different stages, which were used in the analysis of this study.

- 1. Researcher getting to know the background of the subject matter from the literature.
- 2. Internalizing and theorizing the literature.
- 3. Categorizing literature into themes.
- 4. Specifying the aims of the research.
- 5. Specifying the repetition of appearances, classifying exceptions.
- 6. Cross validation.
- 7. Conclusions and interpretation.

(Metsämuuronen, 2008, 50).

5 RESULTS

The comments and thoughts that came up in the interviews outlines that sport policies and possibilities for swimmers to succeed are not self-explanatory. Since all the interviewed participants had different perceptions of the Finnish swimming system and their own experiences in and around the pool, the answers varied a lot but there were also common themes that combined people's thoughts.

Before the interview part, participants had to rank the nine different themes that are the nine pillars as well, into order of the most important (1) to the least important (9) factors influencing international success. This part was a pen and paper task, and participants ranked those pillars in the order that supported their opinions about the system. Based on the rankings made by each participant it could be found that there are no clear factors that everyone would rate to be the most important ones.

Participants ranked the coaching provision and coach development to be the most important factor for success. The second most important factor is foundation and participation. The two least important factors according to the participants are scientific research and talent identification and –developmental system. In the following subchapters I will illustrate each of the nine pillars and the differences between them in more detail.

5.1 Coaching provision and coach development

Participants rated coaching and coach development as the most important of the nine pillars. Most of the participants said that the coach education system in Finland is not good enough and that it needs to be improved.

Two of the participants mentioned that the coach education system is not systematic and that every part of the education system looks too much like the educator. There should be a systematic idea of what the big picture in Finnish swimming is.

"I think that it does not support swimming too well. The problem is that it looks too much like the instructor at least that is what it looks like. It does not communicate with the big picture of the Finnish coaching line. We are lacking the big notion of how we want to swim and move forward in Finland. I do not think that it is supporting this too well". —Coach

Almost all of the participants said that there are not enough elite level coaches in Finland. Some participants mentioned that there are at least many successful swimmers coming from all around Finland, which means that there are good coaches within the entirety of Finland and not just concentrated in, for example, the Helsinki area. Overall, participants think that there are only few elite level coaches in Finland and that there is a need for more of them.

"It is not sufficient. It is a clear thing where we need to get more knowledge, but it goes both ways. Coaches also must understand that there is a need for knowledge. It is not enough that someone is a former swimmer and starts to coach. We also must give more tools and opportunities". - Member of the Finnish swimming federation

According to most of the participants, coaches in swimming are valued and respected. One participant mentioned that since swimming is visible for the public and people can see the work that they do every day, it increases the respect towards swimming coaches. In addition, many participants said that coaches, who have successful swimmers, are more valued than coaches who do not have successful swimmers.

Participants did not think that professional coaching is a tempting and profitable career. Some participants said that the working hours of coaches are not good, the salary is not good either, and the pressure level at work is still high. All of the participants said that coaches end up

coaching full time because it is their passion and because they get so much out of it at the end of the day.

5.2 Foundation and participation

Swimming is an easy sport for which to attract new participants because swimming is seen as a basic skill in many families. Swimming is a relatively cheap hobby, which lowers the threshold. All of the participants mentioned that there are many children in swimming schools, which, consequently, brings more swimmers into club activities and competitive swimming as well.

Foundation and participation are seen as important factors for swimmers to succeed internationally. Participants ranked it on the second place out of all the nine themes influencing international success. Participants think that the number of new children coming to swimming schools is good right now. Since there are less children born in Finland every year and many sports are having fewer children coming to their sport, swimming is in a good position when considering the number of participants.

On the negative side, participants noticed the lack of space that swimmers have. This mostly concerns young children because the group sizes are big and there is not enough lane space for them. In addition, young swimmers do not have enough practice times per week. Participants say that since the city often owns the swimming pools, there is too much focus put on swimmers who do it for physical activity instead of competitive swimmers.

One factor that all participants mentioned, was the lack of adequate school swimming. Swimming is the only sport that is in the school exercise program but every school is at the liberty to decide the amount of swimming that they want to include in the school year. Location plays a big part of schools' ability and willingness to offer swimming lessons. Sometimes the distance between a school and swimming hall is too far for it to make sense for them to go swimming during the school day. Moreover, the standards of school swimming are lower than

in many other countries. One of the participants mentioned that in many other countries, children have swimming practices in school swimming, instead of learning to swim basic techniques or trying to survive from one side of the pool to another in Finland.

"For example, in Australia they have real swim practices in school swimming. Here in high school, we have to be able to swim 200 meters and even then, you can take support from the sides after every 50 meters. So, there is a huge difference". –Swimmer

5.3 Financial Support

The importance of financial support during some part of the career is seen as an important factor for being able to succeed internationally. This, however, came with some reservations voiced by a few of the participants. Opinions about the importance of financial support were divided into two groups. Three of the participants said that financial support is an important factor for the swimmer. Financial support is seen as a cornerstone for the career and without financial support, it is hard to be able to concentrate fully on swimming. All participants mentioned that there are good financial support systems available for athletes. Participants mentioned student support, Olympic Committee support for higher-level athletes, and sponsorships in all of the interviews. It is seen that there are different sources where athletes can get financial support.

"It is very important. On the other hand, it is not something that would prevent you from succeeding. We have different kinds of monetary support for athletes, societal support, and others, if you are a student or something". — Member of Finnish swimming federation

Two of the participants did not see financial support being an important factor to success. Both of these participants think that during childhood and youth, financial support is not important

but when a swimmer reaches adulthood and international level, it becomes more important. Most of the funding comes from swimmers' summer jobs or their parents.

"You need it when you have to sustain professional career, but on the way to professionalism it is not that important". –Swimmer

5.4 Training facilities

Participants ranked training facilities with financial support in third place for being an important factor affecting the possibilities to succeed. None of the participants said that training facilities would inhibit anyone from succeeding in Finland. The general idea about training facilities is that they are good in Finland and that everyone who wants to swim has a possibility to do so. Most of the participants said that in small towns the facilities are not as good as in big cities, but since there are 50-meter pools in all of the big cities around Finland, it is possible for them to move to these cities if they want to focus more on swimming.

"You need a swimming hall. You can pretty much succeed with anything as long as you have a swimming pool, and it does not matter what kind of swimming pool it is. At least until to a certain level you can succeed with that. I don't think that it is a limiting factor".

-Swimmer

When participants were asked to describe optimal training facilities, most of the participants described them in a similar way. Having a swimming pool, weight room, enough lane space, and having everything close to home were factors that most of the participants mentioned. Training facilities need to be close together and the daily routines need to be around home, school, pool, and the weight room. Some of the participants also mentioned centralization. Centralization could bring the best Finnish swimmers in the same place to train and spar together every day and they would get the best experts, doctors, and coaches there every day as

well. Since Finland is a widely spread out country, all resources and swimmers are spread around to different cities as well, so they do not get the advantage of training with fast swimmers.

Another factor mentioned in the interviews was the general availability of swimming halls. Since municipalities typically own swimming halls, there is a lot of bureaucracy involved. Problems might appear in the way of how line reservations are scheduled or how there is no flexibility with opening times. One of the participants mentioned that in many other countries, clubs could go train during the holidays even when the swimming hall is closed. This may give swimmers of countries an advantage because they do not need to take a day off from the pool because of swimming hall closures.

"About the training facilities our problem is more that they are municipality owned. Which means that if the pool happens to be closed on the day of midsummer, then it is closed, and nobody will get in at those times. The system turns bureaucratic very easily. Then again, in Australia for example the coaches had keys to the pool, so when there was an Australian day, they had agreed on going at seven. Maybe that is our weakness". — Coach

5.5 National and International Competition

All of the participants said that participation in national and later on international competitions is important. The most important factor about participation in competitions was gaining new experiences. According to the participants, it is important to go to bigger competitions and experience new situations, because the swimmer needs to get used to those in a way that they will not affect their performance anymore. One participant mentioned that it is also important to gain new experiences when going to the big competitions. It is not beneficial to go to similar competitions abroad because it will not bring the same psychological effect for the swimmer anymore.

Organizational factors in national competition was another aspect that participants agreed upon. Most of the participants said that national competitions are not organized as well as they could be and most of the factors that were negative about these competitions were about scheduling and organizing the competitions. Participants mentioned that there are too many people participating in national competitions, which leads to incredibly long sessions. Many older swimmers do not want to participate in some competitions because the sessions might go over midnight in the worst case scenarios. This kind of scheduling problem could be changed by creating A and B flights, which are already common abroad.

Most of the participants agreed that there should be international competitions in Finland more often. The biggest issue with hosting international competitions is the lack of money. Since there are not that many sponsors or spectators in Finnish swimming, the competition fees that the hosting country needs to pay are too high for Finland right now. Hosting international competitions could have a positive impact on the swimming culture in Finland and it could create a new kind of fan culture in swimming.

"If there would be resources and money, it would be a big deal for Finnish swimming. Young swimmers could see more international activity and competitions. This could also increase the fan culture around young. For example, last year when young swimmers saw Katinka Hoszu there, it for sure brought fire to their own doing. We, elite swimmers can travel elsewhere to look for a competition but that we could get a certain kind of culture and culture of winning and passion towards our doing, and for that I think we need it a lot". -Swimmer

5.6 Possibilities to Combine Swimming and Academic Career

The next topic focuses on how swimmers combine academics during their swimming career, how that is organized, and if that is even a tempting option for swimmers who aim for international level swimming careers.

Three of the participants said that combining academics with their swimming career is important. One of these participants mentioned that for some swimmers it might be easier to complete their studies after the career. Participants said that since swimming is not a sport where athletes typically could make millions, education is the only way to survive in the Finnish society. Participants think that education should be in the swimmers' paths all the time and that it should be seen as an important part of their lives. Participants also think that the system in Finland is good right now because of the sport high schools and freedom of planning in tertiary education, which gives swimmers more time to finish their degree while they are competing.

Two of the participants did not think that combining swimming and academic career is a good option for a swimmer who is aiming to succeed internationally. Both of these participants think that combining academics and swimming career will negatively affect a swimmer's athletic career. Both of these participants think that education is important, but it is better to do it after the swimming career.

"I think that this kind of dual career thing is pretty shitty. If you really want to go to the top, these elite level swimmers are not studying, it is just not possible. They are working in the coast guard, army, or some system like that where they can fully focus on swimming." – Coach

5.7 Athletic and Post-Career Support

Athletic and post-career support is not one of the most important factors but certain kinds of support still need to be available for swimmers. Participants mentioned that different expert

services, academia services, and support from parents, coaches, and the club are important for the swimmer. All of the participants talked about the importance of expert services, and by them, they meant massage therapists, mental coaches, doctors, and physiotherapists. In addition, some participants mentioned public services, which are also available for everyone, so swimmers can take advantage of them as well.

Four out of five of the participants talked about the importance of career planning. All of the participants, who talked about career planning, said that it is important to start it during the athletic career, so that swimmers would not drop out of the system without a plan or tools how to find a new direction to their lives. In addition, it is important to use leftover finances smartly, for example investing into an own apartment or a house already during the athletic career.

Some of the participants said that it is also the swimmers' own responsibility to plan their life after their career and that it is not the responsibility of a society or a coach. The idea of top-level athletes and swimmers is not that they are a special group who would need special kind of support from society, which means that swimmers should focus on planning their life after their career already while they are still swimming.

"Nobody knows what the ending moment of the career is. If it is while you are at the top or when you are not at the top anymore. There might not even be a last moment of the career and it is not society's fault, so they would have to start supporting separately those who were elite athletes. Swimmers should think about what they are going to do when they are not swimming anymore and create a plan for the future. Coaches and parents could support that plan making process while the swimmer is still swimming. It is obvious that the athletic career will end at some point". - Former PA lecturer

5.8 Talent identification and development system

Participants do not think that a talent identification and development system is that important of a success factor in swimming. Participants rated it as the least significant factor together with scientific research. Participants agree on the notion that it is hard to describe talent and that people should not lift these talented individuals on pedestals. After all, hard work is what matters more than just being talented in a certain sport.

There are still factors that separate some swimmers from the others. Some participants said that talented swimmers move in the water easily and they have a certain kind of grip in the water. Some swimmers also learn technique faster and they feel like it is more natural for them compared to other swimmers. In addition, one participant said that swimmers who have a certain kind of flame inside of them towards swimming possess a certain kind of talent f as well. Without these qualities, it is merely impossible to become a successful swimmer.

"There is a certain kind of sensitivity period in childhood that will make the grip better. Some will find it and when they find it, it opens up different variations to become a great athlete. If you do not have it, you cannot really make it later on either. Therefore, it is sort of a talent factor and because of that, swimming is an early specialization sport".

—Coach

Some participants also said that coaches and the federation should keep an eye on talented athletes and if they end up needing help, there will be help available so they will not drop out of swimming because of some minor difficulties. In addition, young children are still developing at different paces, so it is important to give them time to develop and not to think if them as talented or not. One participant wanted to emphasize the importance of giving attention to all swimmers at a young age regardless of their level because, as outlined before, even the birth month can make a big difference in the same age group. Children who have been born in January are more likely to be better than children who have been born in December.

5.9 Scientific Research

Participants ranked scientific research to the last place alongside with talent identification and development system. Participants do not think that scientific research is an important factor towards international success in swimming. Some of the participants say that science can give tools and guidelines for success, but it is not a necessary factor.

"Sometimes research will not give all the answers, it gives building blocks to start with, but it is the coach who builds the entirety of training. Science cannot give all the answers". - Former PA teacher

Most of the participants said that since Finland is a small country with limited resources, it is important to follow other countries' researches and gather new information from those. It is not necessary to invest a lot of money in swimming research in Finland. One participant said that it is important to lead with science, not with the gut feeling. Scientific research, either Finnish or foreign will give tools for knowledge based leading.

Spreading the knowledge and scientific results is not easy either. Most of the participants say that the federation needs to do more work with spreading the new information in the future. Many coaches want to get to know more by themselves, so it is common for coaches to read studies or go abroad to see how swimmers are training there.

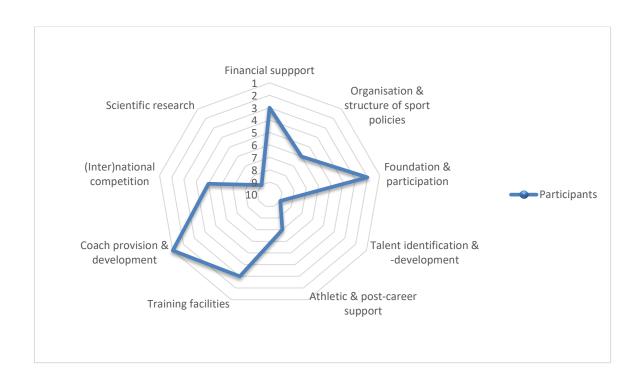


Figure 2. Participants' ratings of the most important factors in order. Number one as the most important factor and number nine the least important factor.

6 DISCUSSION

Elite level swimmers are putting a lot of money and dedication into their swimming career. Finland does not belong to the top swimming countries in the world, and there are many reasons for that. Many talented and dedicated Finnish swimmers are willing to put the effort and work in to reach the highest level. Unfortunately, the possibility to succeed is not always just about the swimmer's talent and hard work; it depends also on everything that is happening around him or her on a system level.

The purpose of this study was to find out what kind of perceptions people have about the success factors in Finnish swimming. I was interested to see if the participants think in a similar way about the Finnish sport governing and the factors that are affecting the possibilities for Finnish swimmers to succeed at international level.

Based on my thesis, I can say that there are no specific factors significantly more important than others. There are many ways for athletes to succeed, but the basis for the system around the athlete needs to be balanced and well-organized. Some factors turned out to be slightly more important than others, but opinions about the importance of different factors varied a lot.

Coaching provision and coach development

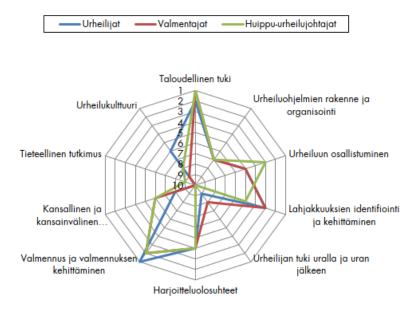


Figure 3: Athletes (blue), coaches (red), and elite sport governing members (green) of Finnish sports ranked nine pillars + sport culture into order of the most significant (1) to least significant (10). (Kärmeniemi et al, 2012, 12).

According to Kärmeniemi et al, coaching and the coach development is seen as a very important factor from athletes', coaches', and the elite sport governing members' perspective. From the figure 3 above, we can see that this pillar is ranked to numbers one or two, which means that this pillar is seen as valuable.

The amount of professional coaches has increased during the past years a lot. This change means that coaches have more time to focus on planning, educating themselves, and having more time with the swimmers. Many people are still coaching mainly voluntarily, which means that they have a regular job and that coaching is something that they do on the side. The situation in swimming is good and it is getting better all the time. In many other sports there are many coaches, especially in younger children's groups, who are mothers or fathers of the athlete, but fortunately this is not the case in swimming.

The swimming coach education system in Finland is not uniform, which prevents coaches from working according to the same plan towards the same goal across all areas of Finland. The study participants rated coach development as the most important factor influencing a swimmer's possibilities to succeed internationally. I think that educating coaches is very important and it is still in progress because there are not enough elite-level coaches in Finland. Furthermore, there are not enough education possibilities for elite-level coaches. There is a need for a new form of education to coaches who are training elite-level athletes and who need more tools for that kind of training. The Finnish swimming federation has feedback from coaches who do not feel comfortable to coach elite-level athletes because they do not have enough tools and education for that. Coaches could use information and methods from other countries and get new tools for training in their own swimming club.

Foundation and participation

Since Finland is the land of a thousand lakes, swimming is a basic skill that is important for every human. According to the study participants, the participation rates are increasing continuously, which is a positive problem for the sport of swimming. According to De Bosscher, if the grassroots level is intensive enough, it will increase the possibilities to succeed (De Bosscher et al, 2015, 44). I think that it is obvious that the more participants are starting in the sport and continuing it, the more likely there will be future successful swimmers among them. This phenomenon is noticeable in big countries like the United States and Russia where they have a lot of mass participating in sports, so they are more likely to produce elite level athletes.

According to one study participant, the problem in the Finnish swimming system is not to get new members, but to train them to the international level. If we compare the Finnish school system and the Australian school system, the difference in the amount of swimming in their physical activity courses is tremendous. The basic skill level is much lower in Finland than in many other countries to start with, so many children are lost in the process even if they could be talented and become passionate towards swimming later on in their life.

Financial support

According to Kärmeniemi et al, many athletes cover a big part of the expenses from their own money and their own savings. The amount of money that athletes pay by themselves is between 300-50 000 euros, which has an average of 9 500 euros and a median of 5 000 euros (Kärmeniemi et al, 2012, 18). This estimate describes the situation that many athletes have and it shows that some athletes have to make compromises on the things that they can afford. Elitelevel athletes should be able to put 100 percent effort in everything that they do, and if they need to save money on not going to massages or some of the training camps because of a lack of money, it is affecting their possibilities to succeed immediately.

It was interesting and surprising to notice that participants ranked the importance of financial support to third place out of all nine pillars. There might be many different reasons for this kind of result. One of the reasons that we can only guess is that the financial situation around swimming is good now and that swimmers do not have to worry about it. During the interviews, all of the participants mentioned sponsorships and different kinds of support systems that Finnish swimmers can utilize. In a way, all of these are different kinds of financial support that athletes are receiving, and all of these are seen as important sources of income. Another factor that might be the reason why participants did not see financial support as important as the two previous factors might be that swimming is not as expensive a sport compared to many other sports.

Training facilities

The overall idea about training facilities in swimming is that they are good enough for swimmers to be able to succeed internationally. The swimming pools are in good shape and there are many long course pools around Finland. Many of the study participants mentioned that there are still many things that could be improved about the training facilities. Swimming clubs have to fight for getting enough line space so that they can provide good quality practices. Most of the weight training facilities are designed for regular exercisers and elderly people,

which means that swimmers have to try to modify equipment for their use in the best way they can. I think that Finnish swimmers have to make many compromises about the quality of their training facilities. On the elite swimming level these little compromises might mean the difference between being the winner and the last one in the sprint final.

Another interesting thing about training facilities is centralization. Three of the study participants mentioned centralization in the interviews. Since there are many examples of how centralization is working well or not working at all in certain countries, it is challenging to start thinking about how it would affect Finnish swimming if all the best swimmers would be training together in one place. The Finnish swimming culture is very coach-swimmer oriented and many swimmers are training with one coach for many years or even during their whole career. It might be challenging to decide which coaches are going to be coaching in a centralized elite-swimmer program, and if most of the best swimmers in Finland are willing to change their habits and change their primary coach. The population in Finland is spread out all over the country and there are many small swimming clubs in small towns as well. Many swimmers move to bigger cities and change their swimming clubs when they start to develop, succeed more and consequently start wanting more. I think that to a certain extent this is already a kind of centralization since swimmers move from small towns to bigger cities and bigger swimming clubs. I do not think that there should necessarily be one center where all of the top swimmers are living and training in order for the Finnish swimmers to be more successful internationally.

National and international competition

Finnish swimmers have good opportunities to participate in national and international competitions year-round. Most of the study participants said that bigger competitions bring new experiences, which are important for the development and the growth for the swimmer. Study participants mentioned that there are many things that could be improved when national competitions are organized. National competitions tend to have swimmers starting from the age of six until over the age of thirty. Most of the competitions do not have time limits, so these competitions can last until midnight in worst scenarios. In many other countries there are a and b flights in use for certain kinds of competitions and I think that Finland could benefit from this

competition model a lot. It is important that adult swimmers continue to compete in national competitions for monetary reasons and because it is important to keep role models for younger swimmers around.

Some of the study participants mentioned that there should be international competitions organized in Finland. The biggest problem with international competitions is the high prize that LEN needs to be paid to (European Swimming League) FINA (International Swimming Federation) for being able to organize the swimming competition. In addition to the high prize, the facilities need to be big enough for the enormous number of swimmers and audience. According to FINA, the venue requirements for hosting World Championships are very strict. There needs to be a 50-meter competition pool with $15-20\ 000$ seats capacity, a 50-meter warm-up pool with 8 -10-meter pool deck surrounding, and three additional warm-up pools (Marculescu, 2019). For hosting the European Championships, the facilities do not have to be as big as when hosting World Championships, but it would still be a big investment for the Finnish swimming federation.

Combining education with a swimming career

The idea of combining academic and swimming careers divided participants. Participants had strong opinions why academic career is important for the swimmer and at the same time why it is basically impossible to combine these two careers.

According to the Finnish Olympic Committee, the goal is that every athlete can balance academics and their athletic career. This dual career starts from middle school and lasts until the career transition when the athlete decides to quit their elite-level sport (Finnish Olympic Committee, 2020). The system in Finland makes combining academics with a sports career possible for athletes in different sports. Swimming has an advantage here because swimmers do not have to travel that much for their sport compared to many other sports. For example,

sailors need to travel a lot to be able to practice throughout the year. The aim is that every athlete will finish a secondary degree during his or her sports career. After finishing a secondary school degree, athletes have many options to continue their dual career. There are three different dual career-models: sport as a first job, combining sport career and academics, and combining sport career and another job (Finnish Olympic Committee, 2020). Athletes have many different options after secondary school, which gives them freedom to do what will work best for them. During the interviews one of the participants mentioned that there are swimmers in Finland who only have elementary school diplomas after their swimming career. The lack of education and a degree can cause many problems for the swimmer after the career.

I think that the debate of the athletes' dual careers is interesting. Different athletes can reach their best results by doing something else at the same time than their athletic career but some need to dedicate everything to their sport career to be able to perform their best. I think that every swimmer has a right to decide what works best for them and continue with that plan.

We cannot forget the societal side about this matter. If the general idea starts to be that the Finnish educational system is distracting athletes in different sports too much and none of the athletes would want to study during their sport career anymore, what would happen to them as individuals and for the structure of the dual career system? If we think that successful swimmers would finish their careers at the age of twenty-five to thirty and none of these swimmers would have educated themselves during their swimming careers, would that be sustainable for the society?

One good example that the study participants mentioned about dual careers abroad few times in different contexts was the university system in the United States. Two of the participants mentioned that Finland could take some parts into their own system from the American university system where sport is strictly connected to academics. Participants mentioned that a similar university system could solve financial problems, many good swimmers would be training in one place, and pursuing an education would be easier because it would be linked directly with swimming.

Athletic and post-career support

The Finnish health care system provides help for people who are in different situations in their lives. It is safe to assume that a swimmer can get help from the Finnish health care providers, their own swim club or school, their family or coach, the Finnish swimming federation, and the Olympic committee. There are many help providers if a swimmer needs and understands to seek the help needed. Nothing is perfect and this is one of the things that can be improved as well. Few of the study participants mentioned that swimmers do not know about these support services and that there could be more support for athletes after they end their careers. I think that the most important thing how swimmers can be supported after their career is to help them to plan their life after they finish their career already while they are still swimming. This should be done with a coach, parents, academies, and schools. It is important that swimmers know that it will happen at some point and it might come sooner than they think. One injury can already cause someone to finish his or her career, so there needs to be a plan for a life after a sports career.

Talent identification and development system

Since there is no national system for identifying and supporting talented athletes, the responsibility is mainly on federations and sport clubs. In a way, the sport federation and coaches in sport clubs can see athletes in everyday life more and because of that, it might be easier for them to identify talented athletes. All of the study participants said that talented children should not be lifted to the pedestal, because it would not be helpful for another swimmer or the talented swimmer him- or herself.

Even though we do not have a national system for supporting talented athletes; I think that sport schools are one form of support for talented athletes. Most of the time athletes get a certain score from their athletic achievements and the better the athlete is, the higher points he or she

will get when applying to high school for example. If an athlete is not too good at academics, he or she can get support from the sport side by getting more points from his or her sport achievements. I think that this is a great way of supporting talented athletes.

One study participant mentioned the relative age difference as one corner stone that coaches should take into account when coaching young children. Many times, early development can be seen as talent because the child might be bigger, faster, and more coordinated compared to his or her own age group. Even the birth month can make a big difference in young children's development. This means that coaches need to be aware of this fact and not to start putting more effort on the early development children and also pay attention towards children who are a little bit behind on development at that point.

Scientific research

It is not surprising that innovative research is a growing field in sports. Sports are changing every year and there are new records made all the time. Study participants did not think that scientific research is important in Finnish swimming. Many participants said that it is expensive, and that Finnish swimming can learn by following other countries' research with no need for Finnish research. Swimming is a big sport in many other countries and there is much more money involved in swimming abroad than in Finland. Big countries like the United States, Australia, and China have more resources to use for swimming research. For example, the Australian institute of sports has invested thirty-eight million dollars in Australian Olympic high-performance swimming since the London Olympics 2012 (Ausport.gov.au).

Some of the study participants mentioned that coaches have to find out about new research by themselves because there is not enough new information coming from the swimming federation. One study participant from the Finnish swimming federation mentioned that they are aware of the problem and that there is going to be changes and more events where coaches will get more information about the latest updates from the swimming world.

7 CONCLUSIONS

This study explored different perceptions of success factors affecting Finnish swimmers' possibilities to succeed internationally. All participants were able to provide their opinions and perspective to the concerning matter.

The well-known SPLISS 2.0 method provided the structure for this study. The following conclusions will summarize the main findings of the perceptions of the importance of different success factors, limitations and evaluation of this study, and ideas for the future studies.

7.1 Success Factor

There are many factors affecting an elite level swimmer's possibility to succeed. Success factor describes a factor that improves or declines a swimmer's possibility to progress and succeed later in their swimming career.

According to this study, there is no singular factor that would significantly rise above the other factors. Few of the factors were seen more important than others, but the perceptions about the importance of these factor varied a lot between different participants. The structure of sport policies and factors around them are not simple and the study interviews showed that even when we know that something should be changed, it is not easy to find a solution that would improve more than it would harm some athletes' situations.

7.2 Limitations and Evaluation of This Study

The aim of this study was to find out if some factors are perceived to play a bigger role in Finnish swimmers' possibilities to succeed internationally than other factors. This study included five participants, which provided information only from five different perspectives and areas of expertise. The number of participants can be a limitation because the more there would be perspectives and areas of expertise, the more information there would be in this study. On the other hand, since there were five participants, it was possible to go deeper into the topic and into smaller details about the factors.

If I would be able to conduct this research again, I would collect data from participants from different areas in Finland. I would also want to interview more participants so there would be more information collected from different perspectives. I would also keep the interview questions narrower, so the area of discussion would not get too broad.

7.3 Ideas for Further Studies

Since the number of participants was low in this study and the data collected was detailed and thoroughly covered, it would be interesting to find out the perceptions from a bigger target group. I would suggest similar topic to a quantitative study. The perceptions vary between the athletes and the people who are working on the sidelines. Creating a study which would include comparison between athletes and governing people would be interesting and important as well. There might be many things happening on the grassroot level that the governing people are not noticing, and the gap between these two groups can get bigger because there is not enough communication between these groups.

REFERENCES

- Aarresola, O. (2016). Nuorten Urheilupolut. Tutkimus kilpaurheiluun sosiaalistumisen normeista, pääomista ja toimijuudesta. Retrieved from https://jyx.jyu.fi/bitstream/handle/123456789/51814/978-951-39-6791-8_vaitos20161118.pdf?sequence=1
- Allen, S. V., Vandenbogaerde, T. J., & Hopkins, W. G. (2015). The performance effect of centralizing a nation's elite swim program. *International Journal of Sports Physiology* and Performance, 10(2), 198-203. doi:10.1123/ijspp.2014-0106
- Ausport.gov.au.Swimming australia: A case study in australia's winning edge. Retrieved from https://www.sportaus.gov.au/data/assets/pdf_file/0007/675007/Swimming

 Australia_case_study.pdf
- Baker, J., Horton, S., Robertson-Wilson, J., & Wall, M. (2003). Nurturing sport expertise:

 Factors influencing the development of elite athlete. *Journal of Sports Science & Medicine*, 2(1), 1-9. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/24616603
- Coatsworth, J. D., & Conroy, D. E. (2009). The effects of autonomy-supportive coaching, need satisfaction, and self-perceptions on initiative and identity in youth swimmers.

 *Developmental Psychology, 45(2), 320-328. doi:10.1037/a0014027
- Collins, M. F., & Buller, J. R. (2003). Social exclusion from high-performance sport: Are all talented young sports people being given an equal opportunity of reaching the olympic

- podium? *Journal of Sport & Social Issues*, 27(4), 420-442. doi:10.1177/0193-723503255483
- De Bosscher Veerle, Shibli Simon, Westerbeek Hans, Van Bottenburg Maarten. (2015).

 Successful elite sport policies. an international comparison of the sport policy factors leading to international sporting success (SPLISS 2.0) in 15 nations
- De Bosscher, V., Shilbury, D., Theeboom, M., Van Hoecke, J., & De Knop, P. (2011).

 Effectiveness of national elite sport policies: A multidimensional approach applied to the case of flanders. *European Sport Management Quarterly*, 11(2), 115-141.

 doi:10.1080/16184742.2011.559133
- Douglas Coatsworth, J., & Conroy, D. E. (2006). Enhancing the self-esteem of youth swimmers through coach training: Gender and age effects. *Psychology of Sport & Exercise*, 7(2), 173-192. doi:10.1016/j.psychsport.2005.08.005
- Gould, D., Guinan, D., Greenleaf, C., Medbery, R., & Peterson, K. (1999). Factors affecting olympic performance: Perceptions of athletes and coaches from more and less successful teams. *The Sport Psychologist*, *13*(4), 371-394. doi:10.1123/tsp.13.4.371

Halldorsson Vidar. (2017). Sport in iceland. how small nations achieve international success

Hanifi, R. (2011, May 25). Tilastokeskus. Retrieved from https://www.stat.fi/til/akay/2009/03/akay_2009_03_2011-05-17_kat_006_fi.html.

Henriksen, K., Stambulova, N., & Roessler, K. K. (2010). Successful talent development in track and field: Considering the role of environment. Scandinavian Journal of Medicine & Science in Sports, 20, 122-132. doi:10.1111/j.1600-0838.2010.01187.x

Kärmeniemi, M. 2012. Valmentaminen ammattina Suomessa 2012. KIHUn julkaisusarja, nro 34. Kilpa-ja huippu-urheilun tutkimuskeskus KIHU, Jyväskylä.

Kärmeniemi, M., Lämsä, J. & Savolainen, J. 2013. Aikuisurheilijoiden sosioekonominen asema ja taloudelliset tukijärjestelmät. KIHUn julkaisusarja, nro 44. Kilpa-ja huippu-urheilun tutkimuskeskus KIHU, Jyväskylä.

Kärmeniemi, M., Mäkinen, J. & Lämsä, J. 2012. SPLISS II –Urheilujärjestelmät. Suomen kansallinen väliraportti. KIHUn julkaisusarja, nro 39. Jyväskylä: Kilpa-ja huippu-urheilun tutkimuskeskus KIHU.

Laalo-Häikiö, E. (2014). Selvitys uimaseurojen harjoitus- ja kilpailuolosuhteista 2014

Marculescu Cornel. (2019). FINA world championships & FINA world master championships. Retrieved from

https://www.fina.org/sites/default/files/fina_world_championships_world_masters_cham pionships_2023-2025_-_general_info.pdf

Metsämuuronen Jari. (2008). Laadullisen tutkimuksen perusteet

Opetushallitus, Suomen Kuntaliitto, & Opetusalan Ammattijärjestö OAJ ja Suomen Uimaopetus- ja Hengenpelastusliitto ovat yhteistyössä laatineet seuraavat ohjeet turvallisen uimaopetuksen järjestämiseksi. *Uimaopetus turvallisemmaksi*

- Pölkki Minna. (2019). Suomen tarkka järvimäärä on vihdoin laskettu: Tuhansien järvien maa muodostuu 168 000 järvestä. Retrieved from https://www.hs.fi/kotimaa/art-2000006175027.html
- Puronaho, K. (2014). Drop-out vai throw-out?: Tutkimus lasten ja nuorten liikuntaharrastusten kustannuksista. Retrieved from http://julkaisut.valtioneuvosto.fi/handle/10024/75232
- Shibli, S., Bosscher, V. d., & Bottenburg, M. v. (2006). A conceptual framework for analysing sports policy factors leading to international sporting success. (pp. 185-215)

 Retrieved from http://www.hbokennisbank.nl/nl/page/hborecord.view/?uploadId=fontys_didlmods%3Ao ai%3Arepository.samenmaken.nl%3Asmpid%3A24540
- Suomen Olympiakomitea. (a). Uintiurheilu. Retrieved from https://www.olympiakomitea.fi/huippu-urheilu/olympiahistoria/olympialajit/kesalajit/uintiurheilu/
- Suomen Olympiakomitea. (b). Urheilija-apurahat. Retrieved from https://www.olympiakomitea.fi/huippu-urheilu/huippuvaiheen-ohjelma/urheilijat/urheilija-apurahat/
- Suomen Olympiakomitea. (2020). Urheilijan kaksoisura dual career. Retrieved from https://www.olympiakomitea.fi/huippu-urheilu/urheiluakatemiaohjelma/kaksoisura/

- Suomen Uimaopetus- ja Hengenpelastusliitto ry. (2019). SUH:N ennakkotilastot hukkumisista. Retrieved from https://www.suh.fi/tiedotus/hukkumistilastot
- Suomen Uimaopetus- ja Hengenpelastus ry. (2016). Uimahallit yhä suositumpia liikuntapaikkoja. Retrieved from https://www.suh.fi/tiedotus/ajankohtaista/uimahallit_yha_suositumpia_liikuntapaikkoja.2 587.news?5_o=90
- Suomen Urheilumuseon tietopalvelu & Kilpa- ja huippu-urheilun tutkimuskeskus KIHU. (2019). Suomen menestys 2005-2019

 . Retrieved from
 - https://www.urheilututkimukset.fi/web/menestysseuranta/urheilumuoto/UINTI/
- Swann, C., Moran, A., & Piggott, D. (2015a). Defining elite athletes: Issues in the study of expert performance in sport psychology. *Psychology of Sport & Exercise*, *16*, 3-14. doi:10.1016/j.psychsport.2014.07.004
- Swann, C., Moran, A., & Piggott, D. (2015b). Defining elite athletes: Issues in the study of expert performance in sport psychology. *Psychology of Sport & Exercise*, *16*, 3-14. doi:10.1016/j.psychsport.2014.07.004
- Tanaka, H. (2009). Swimming exercise: Impact of aquatic exercise on cardiovascular health. Sports Medicine, 39(5), 377-387. doi:10.2165/00007256-200939050-00004
- Uimaliitto. (2020). Maajoukkue. Retrieved from https://www.uimaliitto.fi/uinti/maajoukkueet/maajoukkue/

- Varsinais-Suomen Liitto.Maakunnat. Retrieved from https://www.varsinaissuomi.fi/fi/maakunta/maakunnat
- Vikander, N. (1997). Huipulla vallitsevat miehiset arvot. / A study on top-level skiers:

 Masculine values prevail on the top. *Liikunta & Tiede, 34*(4), 10-13. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=SPH449405&login.asp&site=ehost-live
- Woodman, T. & Hardy, L. (2003). The relative impact of cognitive anxiety and self-confidence upon sport performance: A meta-analysis. *Journal of Sports Sciences*, 21(6), 443-457. doi:10.1080/0264041031000101809