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Dropout as a Phenomenon among 15 – 18 – Year – Old Cross Country Skiers at Vuokatti Sports Academy.

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<p>This thesis focuses on the issue of premature termination of the sport career, i.e. “dropout phenomenon”, among adolescent athletes. The purpose of this thesis was to describe the dropout phenomenon among 15 – 18 – year – old Cross-Country Skiers of Vuokatti Sports Academy team and explore its nature and reasons for it. The cross-country skiers of three other academies also participated in the survey. These academies were Etelä-Karjala Sports Academy, Päijät-Häme Sports Academy and Etelä-Kymenlaakso Sports Academy, but the primary focus group was the skiers of Vuokatti Sports Academy. The 42 athletes completed the questionnaire that evaluated their motivation for sport participation, personal motivation orientation, attitude towards the most common sport dropout reasons, career expectations and contentment with the previous competing season. The aim of the thesis was to explore the determinants of sport dropout among 15-18 year old cross- country skiers and provide the information about dropout phenomenon and predisposition for it for to the Academy’s coaches and administration. The author’s personal aims were to understand the training needs of the chosen age group, and explore the factors affecting growth, development, and social behavior of adolescent cross-country skiers.</p> <p>The results of the study indicated that 29.6% of the cross country skiers in the Vuokatti Sports Academy team had thought about dropout and did not plan to become top athletes, while only 3.7% of the athletes did not want to continue training and competing in the upcoming season. The most important reason for sport dropout predisposition was “I am not as good as wanted to be” followed by “The training is too hard”, “I need more time for non sport activities” and “I need more time for education”.</p> <p>This thesis also highlighted the important role of motivation and motivational climate in the developmental process of dropout predisposition and actual desire to drop out. The results obtained from the cross-country skiers of Vuokatti Sports Academy and from the other academies that took part in the study are in line with previous research on sport dropout.</p>	
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PREFACE

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1 INTRODUCTION

Dropout phenomenon is the well-known issue for coaches and sport scholars in a significant number of sports. According to the existing data, as many as two-thirds of participants aged 7–18 withdraw from sports each year, with attrition rates being particularly high during adolescence (Petlichkoff 1996; as cited in Fraser-Thomas, Cote & Deakin 2008, 646). This conclusion is consistent with the later studies of J. Butcher (2002) and E. Enoksen (2011); they both have concluded that the dropout rate peaks at about 15-17 years and occurs in the transition between primary and secondary school, and at the end of secondary school education. That is why this thesis is focused on athletes within the age group of 15-18 years.

In relation to adolescent sports, dropout phenomenon can be explained as a moment when young athletes terminate their athletic careers prematurely and before they have reached their top performance (Cervello, Escarti & Guzman, 2007, 65). This thesis studies the dropout phenomenon among competitive 15-18 year-old cross-country skiers at Vuokatti Sports Academy and three other Finnish Sports Academies: Etelä-Karjala Sports Academy, Päijät-Häme Sports Academy and Etelä-Kymenlaakso Sports Academy. Even though, dropout phenomenon has been studied before, little research has been done in the field of cross-country skiing, and more information is needed in order to understand the dropout phenomenon and its nature in the sport.

The purpose of this thesis was to describe the dropout phenomenon among 15 – 18 – year – old Cross-Country Skiers at Vuokatti Sports Academy team and explore its nature and reasons for it. This topic was chosen because of the working life interest in it and the need for such a research in the sport of cross-country skiing. The aim of the thesis was to explore the determinants of sport dropout among 15-18-year-old cross-country skiers and provide the information about dropout phenomenon and predisposition for it to the Academy's coaches and administration. The author's personal aims were to understand the training needs of the chosen age group and explore the factors affecting growth, development, and social behavior of adolescent cross-country skiers.

From the working life point of view, Vuokatti Sports Academy wanted to get a picture about dropout phenomenon existence in Academy's cross country skiing team. Also Vuokatti

Sport Institute has commissioned this thesis because understanding the determinants of sport dropout is an important issue for the sport center, which has to grow and make itself sustainable. This study and the answers to its research questions should help the sport institute to understand the nature of sport dropout phenomenon among adolescent cross country skiers, and get knowledge how to prevent perspective athletes from dropout if signs of it will occur and improve the services of the academy.

From Kajaani University of Applied Sciences (KUAS) perspective, it improved the cooperation with Vuokatti Sport Institute and got the research data that can be used in the lectures related to coaching or sport psychology.

2 SPORT OF CROSS COUNTRY SKIING

Recreational touring and racing skiing are common activities in many countries today but cross country skiing has been practiced for several thousand years in northern countries. Ski racing equipment has changed considerably and the dimensions of skis has changed from being 3m long, 10 cm wide, and weighting 2-3 kg, at the beginning of this century, to 2m, 4cm and about 0.5 kg in the modern era. (Ekblom & Bergh 2008, 656.)

Cross-country skiing is one of the most demanding endurance sports. Cross-country skiers are able to sustain prolonged physiological challenges during competitions and races. The sport involves different techniques, each involving the upper and lower body to various extents. Compared to other endurance sports, cross-country skiing is a complex racing form with different types of locomotion on various types of terrains and different inclinations. (Smith & Holmberg 2010, 64.)

Nowadays cross-country competitions are classified into two different styles: classic skiing and free style. There are specified skis for classic and free style skiing. The distances of ski races range from 5 to 30 km for women and from 10 to 50 km for men. Recently, sprint skiing races with up to 4 repetitions of distances 1000 – 1700 m have been included in the program of international ski competitions (Rusko 2008, 12). Also, according to Ekblom & Bergh (2008, 656) “Average duration of the individual races varies between 12-90 min for women and 22-140 min for men.”

Cross-country skiing is both a technical and an endurance sport, and skiing performance is affected by physiological and biomechanical factors, by athlete’s anthropometric parameters, physical conditions and technical skills, and by the forces influencing the athlete during exercises and competitions. Since all these factors affect the performance, they are discussed in this chapter of the thesis in order to provide a sport specific analysis of cross-country skiing.

2.1 Characteristics of Cross-Country Skiers

International elite competitors are often relatively old; average ages are reported to be 27 and 29 years for females and males respectively, indicating that it takes years of training to achieve high level of performance (Ekblom & Bergh 2008, 656). Statistics from the biggest international competitions proves that a significant amount of practice is needed to achieve success in cross country skiing, because no junior skier has ever won an Olympic gold or World Championship. This fact is important in relation to dropout phenomenon. Not every athlete will be strong enough physically and mentally to compete and practice until the age of 27-29 years without any guarantee that he or she will win in any national or international competitions.

In cross-country skiing there is no any certain “perfect” body type as in swimming, distance running or rowing. In general, elite cross-country skiers are heavier than distance runners, but lighter than rowers (Seiler & Kjerland 2006). Also cross-country skiers have relatively little body fat but not to the extreme degree observed in some endurance sports.

The feature that strongly differs cross-country skiers from an average person is the capacity of cardiovascular and respiratory systems, and oxygen uptake capacity. These physiological factors will be discussed more closely in the chapter 1.2 Physiology, further in this thesis. As for muscle strength, available data indicates that the maximum strength of legs is only slightly greater than that of the average person. However, the endurance of leg muscles is superior to those of the average person and other endurance athletes. The upper body is significantly stronger than that of the average person. The muscle mass of the upper body is higher than that of distance runners but lower than that of rowers (Seiler 2006; Ekblom & Bergh 2008; Smith 2008; Rusko 2008; Smith & Holmberg, 2010).

2.2 Physiology

The single most important physiological determinant of cross country skiing performance is the maximal oxygen uptake ($\text{VO}_2 \text{ max}$) which integrates the ability of the lungs to transfer oxygen from air to blood, the blood and red blood cells to bind oxygen, the heart to pump

blood, the circulation to distribute blood to muscles, and the muscles to use oxygen. (Rusko 2008, 1.)

The maximal oxygen uptake has two important determinants; they are maximal cardiac output and stroke volume of the heart. Maximal cardiac outputs in excess of 40 Liters per min and stroke volumes over 200 ml have been measured in elite cross-country skiers, with maximal oxygen uptake values above 6 Liters·min⁻¹ (Ekblom & Hermansen, 1968) with relative values in the range of ~80-90 ml·kg⁻¹·min⁻¹ (Bergh & Forsberg, 1992; as cited in Smith & Holmberg 2010, 64.)

Achieving such high values of cardiac output and stroke volume is impossible without strong respiratory system. During maximal skiing at the intensity of maximal oxygen uptake the lung ventilation of elite cross-country skiers may increase up to and over 200 Liters per min. If the lung ventilation during a ski race is close to maximal individual respiratory capacity, respiratory muscles may also fatigue. This means that during cross-country skiing, the ability to maintain high ventilation and to resist respiratory muscles fatigue may, therefore, be a very important determinant of race performance (Rusko 2008, 3).

Blood composition is another important factor that affects cross-country skiing performance. The total mass of red blood cells, the hemoglobin mass and the total blood volume are the most important blood variables for elite cross-country skiers. Those variables are generally high among elite cross-country skiers. Accordingly to Rusko (2008, 3) "Hemoglobin concentration is usually within normal limits, however prolonged endurance training and altitude training may slightly increase hemoglobin concentration in elite skiers."

Energy production during cross-country skiing is mainly aerobic. Taking that into account, the main aim of the training is to increase muscles' ability to tolerate high acidity caused by lactate production during muscle activity. Anaerobic power does not limit the performance; instead, it is important in sprint skiing and during uphill skiing in long ski-races. Athletes' muscular system consists mostly of slow twitch muscle cells that have better endurance qualities compared to fast twitch muscle cells. But, as Bergh & Forsberg pointed out "The difference between athletes and the division of their muscle cells according to their qualities can be significant." (1992, 576).

Summarizing the physiological models and determinants of endurance performance, cross-country skiing performance depends on two factors. The first is the ability to ski fast, i.e. neuromuscular input and muscle recruitment, maximal oxygen uptake, skiing economy and technique, aerobic and anaerobic energy production capacity. The second is the ability to resist fatigue, i.e. sustained neuromuscular recruitment, fractional utilization of maximal oxygen uptake, glycogen stores before and during the race, utilization of fats, anaerobic and buffer capacity.

2.3 Biomechanics

Cross-country skiing is a technical as well as an endurance sport, where race performance is not completely determined by physiology. Mechanical forces clearly affect how skiers move over snow. Unlike an endurance sport such as running, where physiological capacities are major determinants of performance, and where environmental conditions, equipment and technique have relatively little effect, skiing performance is often influenced by mechanics. (Smith 2008, 247.)

Performance in cross-country skiing is affected by ski and pole reaction forces, by snow and air drag forces, and by gravity. Each of these resistive and propulsive forces may be influenced by skier's technique, body characteristics, equipment and environmental conditions. (Smith 2008, 268). The statement above applies to both skating and classical styles of cross-country skiing. This "split personality" of cross-country skiing provides a wide variety of moving patterns, which are commonly used in ski racing. The main freestyle and classical styles are subdivided into nine different sub-techniques. Each of those techniques has own biomechanical features: pole and leg kinematics, kinetics, and workload distribution (Smith & Holmberg 2010, 65). Skiers adapt to the changes of inclination and speed through choosing an optimal technique along the course. Taking into account that each technique has its own metabolic costs and biomechanical features, choosing an optimal technique at a certain point of the course, is an important issue in cross country skiing.

A general relationship, which has been observed under many conditions of terrain and technique, is that faster skiers move with greater cycle length but similar cycle rate to slower skiers. Skiing optimally must involve minimizing drag forces without degrading technique. Op-

timal technique helps to minimize the mechanical costs of skiing at maximally sustainable metabolic rates. (Smith 2008, 268.)

2.4 Psychological Factors in Skiing

Cross-country skiing is an extremely demanding sport, both physically and psychologically, and so the role of psychological factors in the preparation for optimal performance in skiing is well documented (Rusko 2008, 176). Many researchers have outlined that psychological factors are closely connected to the focus point of this thesis – dropout phenomenon. According to E.D. Cervello, A. Escarti & G.F. Guzman: “Sport psychology researchers have identified youth sport dropout as an area of concern over the past three decades.” and “Understanding the dropout behavior in youth sport has been the object of analysis in the area of sport motivation for the past two decades.” (2007,65). So it is essential to know the psychological factors that affect cross country skiers in order to understand the nature of dropout phenomenon.

Cross-country skiing involves a high amount of exercises and high intensity of physical exercises aimed at developing athletes’ basic and sport specific physical qualities. Usually training involves exercising until fatigue and even exhaustion, so it is essential for a cross-country skier to develop positive attitude towards intensive, prolonged exercises and fatigue in order to cope with the training loads and enjoy practicing. Also such demanding sport as cross-country skiing requires strong volitional qualities from the athletes. As H. Rusko stated in his book “Cross Country Skiing: Olympic Handbook of Sports Medicine”: “Positive (self-empowering) attitude to fatigue results in a new quality of physical exercise which has also a facilitating effect on the development of such psychological factors as individual tolerance to physical stress, persistence and goal-orientedness”. Also he outlined that negative attitude towards fatigue could be a strong psychological barrier to the development of athlete’s endurance and physical qualities.

Additionally to the tolerance to physical stress, persistence and goal-orientedness, another essential psychological skill for a cross-country skier is the ability to cope with pressure during races and exercises. This can be achieved by finding an optimal situational performance state for the athlete. According to Rusko “Situational performance states are one of the

most important factors that can affect the quality and consistency of skiers' performance in training practices and races." (2008, 179).

Recent research in the field of optimal and dysfunctional performance states in skiers has found that in practices and races both pleasant (positive) and unpleasant (negative) emotions can be helpful. Skiers usually perceive strong energy-producing emotions, such as 'motivated', 'charged', 'rested', 'energetic', 'willing' and 'confident' as pleasant and helpful. Negative emotions such as 'tense', 'dissatisfied', 'nervous', 'tight', 'irritated' and 'attacking' are also perceived as strong and helpful emotions. Conversely, feeling of being 'tired', 'unwilling', 'depressed', 'distressed', 'exhausted' and 'lazy' are perceived as harmful for athletic performance (Rusko 2008, 180). Long-term experience of harmful emotions usually leads to burnout phenomenon, which in many cases results in dropout from sport; this phenomenon will be discussed more closely later in this thesis. Oppositely to harmful emotions the experience of helpful emotions and success in performance helps skiers to build up self-confidence.

Summarizing the psychological factors of cross-country skiing, it is possible to outline few essential psychological skills for a successful skiing performance. They are: positive attitude to fatigue and physically challenging training, persistence, goal-orientedness, self-confidence, the ability to cope with stress and pressure, and the ability to maintain optimal situational performance state. It is important to remember that each skier usually has his or her own constellation of optimal and dysfunctional emotions – emotional profile – for races, intensive exercises and technical skills training (Rusko 2008, 181).

3 ADOLESCENT ATHLETE

This thesis is focused on the athletes within the age group of 15-18 years. This age is considered as the final part of the adolescence period. According to the World Health Organization (WHO), adolescence is “any person between ages 10 and 19”. Therefore, any person between ages 10 and 19 years who does sports on the regular basis can be called an adolescent athlete. For example, I. Robertson (1988) gives such definition for the term ‘adolescent athlete’: “Adolescent athlete is a person between 10 and 19 years, who has regular involvement in a formal training program and takes part in regular adult supervised competitions provided by a sport organization”. Adolescence is a challenging period of anyone’s life, and being an athlete at that age applies more pressure on any person. The working approach with adolescent athletes differs from that of adults or juniors, this fact should be considered by the coaches in any sport. This chapter outlines the key points about the coaching approaches and the working methods with the adolescent athletes and provides an overview of the basic changes in physical and psychological growth of adolescents.

3.1 Physical Growth and Motor Development

Adolescence is characterized by dramatic physical changes moving the individual from childhood into physical maturity (Goel 2009, 4). During this development stage the body, for both male and females, undergoes a tremendous amount of change. It is at the stage of life where hormones are released within and through the body causes dramatic changes to occur - maturity of the reproductive organs begins, body tissues develop and physiological changes occur.

During adolescence, most growth generally occurs during one, single growth period, or “growth spurt.” Girls reach their adult height between the ages of 10 and 16 years. Boys tend to begin their growth spurt a bit later than girls, reaching their adult height between the ages of 13 and 17. The arms and legs also lengthen and eventually become proportional to the rest of their body. Besides significant changes in height, adolescents also experience changes in body composition; i.e., the ratio of body fat to lean muscle mass. Adolescent boys' lean muscle mass greatly increases during adolescence due to the rising levels of male hormones,

such as testosterone, that cause an increase in muscle mass. Girls continue to develop muscle mass while also adding body fat. Also during adolescence, girls' percentage of body fat will increase relatively to the muscle mass. (Oswalt & Zupanick, 2010, 5.)

As adolescents continue to mature, they gradually improve their motor skills and the ability to control the moves of the body. The movement skills are divided into two types: gross motor skills and fine motor skills. Gross motor skills refer to the large muscle movements of the body, while fine motor skills refer to the tiny and precise muscle movements. As Oswalt & Zupanick stated “During the later adolescence (age 15-18 years) boys rapidly gain physical speed, jumping strength, throwing strength, and endurance, while girls gain their motor skills until approximately 14 years unless they are not specifically training for a sport or hobby which requires these skills.” (2010, 5)

Sports and physical activity have a significant influence on the physical development of adolescents and the influence is sport specific. Cross-country skiing has a great effect on cardiovascular and respiratory systems, as well as on muscle and bone structure, and therefore, adolescent cross-country skiers may have great changes in those parameters. It is worth mentioning that there is a great variability in those changes, because they might be affected by genotype, nutrition and environment. For example, A.Milojevic & V.Stankovich (2010, 112) pointed out “Naturally, the influence of the genotype on the development of motor abilities prevails, which means a greater number of single motor abilities are highly influenced by genetic ones, while a smaller number is not as influenced by them. Thus, one should expect a greater possibility of change in them.”

3.2 Emotional and Psychological Development

The emotional development during adolescence involves establishing a realistic and coherent sense of identity in the context of relating to others and learning to cope with stress and manage emotions (Gentry & Campbell 2002, 15). Emotionally, adolescents begin to separate from their parents and create their own identity and the role of their peers becomes central to their daily lives. Establishing a sense of identity has traditionally been thought of as the central task of adolescence.

Identity includes two concepts. First is self-concept: the set of beliefs one has about oneself. This includes beliefs about one's attributes (e.g., tall, intelligent), roles and goals (e.g., occupation one wants to have when grown), and interests, values, and beliefs (e.g., religious, political). Second is self-esteem, which involves evaluating how one feels about one's self-concept. "Global" self-esteem refers to how much we like or approve of our perceived selves as a whole. "Specific" self-esteem refers to how much we feel about certain parts of ourselves (e.g., as an athlete or student, how one looks, etc.). (Gentry & Campbell 2002, 15.)

The self - esteem of the adolescents can be strongly affected by their physical development, especially in the later adolescence (15-18 years) when physical appearance is one of the most important determinants of one's self-esteem. This fact proves close connection between adolescent self-esteem and sports. There have been many studies done on how to improve self-esteem levels, and participation in sports seems to be something that positively correlates to higher self-confidence levels in both boys and girls. For example, Gilbert & Morawski claimed that "Participation in sport has numerous benefits for young athletes, including improved skill development, fitness, and self-esteem." (2007, 13). Additionally to better physical appearance and self – esteem, sports improve social interaction. For example, Hedstrom & Gould said "Another strong motive of sport participation is social interaction. Sports can provide peer interaction through both teammates and healthy competition and give the sense of belonging." (2004, 4). Even though, cross country skiing is an individual sport, a skier may have the sense of belonging to a team, training group or just the sense of being a 'skier'.

Proper emotional and psychological development should lead to the development of identity, strong self - esteem, ability to recognize and manage emotions, developed emotional intelligence and improved social interaction. All those skills can be used in sports domain, so they are of importance in relation to the successful cross-country skiing performance.

3.3 Coaching an Adolescent Athlete

The youth sport coach can have a dramatic influence on young athletes' development and enjoyment of sport (Hedstrom & Gould 2004, 9). Coaching adolescent athletes can be chal-

lenging because of their varying degrees of physical, emotional, and social development and/or maturity. How much and how well each athlete develops tactically, psychologically, emotionally, and physically is directly influenced by these factors.

The study of S.B. Martin, G.A. Dale & A.W. Jackson found that “Adolescent athletes want a coach who implements effective instructional practices, can perform the skills required of the sport, and provide opportunities for the athletes to compete and achieve their goals”, also they have found that “Adolescent female athletes preferred a coach who emphasizes fun and excitement during practice and competition slightly more than did boys. Conversely, boys preferred a coach who stresses fitness, achievement and competitive challenge.” (2001, 208). The results of their study were consistent with the previous research of Gould (1985), and Ewing & Seefeldt (1989), so the preferences of adolescent athletes should be considered by the coaches to improve athletes’ development and enjoyment of sport participation.

During the adolescence phase athletes tend to recognize that sport is truly important in their life. Participation in sport and being an athlete becomes a significant piece of their identity. Helping the young athlete enhance the technical mastery of their chosen sport, and support their growth, as an individual is the challenge facing the coaches. A successful adolescent athletes’ coach should be able to help his or her athletes to cope with stress, keep the athletes motivated, and provide athletic and technical development in the chosen sport.

4 SPORT DROPOUT PHENOMENON

With millions of children participating in youth sports each year, it is vital to understand the motives for, predictors of, and detractors to involvement. It is estimated that around 35% of children drop out of sport each year, with dropout rate being at the highest level during adolescence (Gould & Petlichkoff 1988, 161). Some children drop out of one sport and continue to participate in other sports while other young athletes discontinue sports completely. This chapter provides an overview of the theory behind sport dropout phenomenon. Such aspects as the reasons for sport participation, the nature and types of sport dropout and the reasons for sport dropout are discussed in this chapter.

4.1 Reasons for Sport Participation

In order to understand the reasons for youth sport dropout it is essential to understand why youth do sports. Youth participate in sports for a variety of reasons and have multiple reasons for involvement. It is generally accepted that children participate in sports for a multitude of reasons, major motives for participation include factors such as having fun, improving skills, making friends or getting/staying in shape (Molinero, Salguero & Tuero 2006, 255). Their findings are very similar to the results of the largest study of its type conducted to date (Seefeldt, Ewing, & Walk, 1992; surveying 8000 youth) identified the reasons children report for participating in sport. The reasons included: to have fun, to do something I am good at, stay in shape, learn and improve skills and to play as part of a team (Seefeldt, Ewing, & Walk, 1992; as cited in Hedstrom & Gould 2004, 21).

Early sport dropout studies claimed that a dropout takes place when the motives for sport participation are not met. Petlichkoff (1993) was among the first to suggest that the reasons for participation and dropouts may not be directly related. Instead, she delineated dropout as a slow and progressive process. Understanding of that process and the process that athletes go through before they decide to dropout from sport has a significant importance. Such knowledge will help to understand the nature of dropout phenomenon among young athletes and provide strategies for preventing it.

4.2 Nature of Dropout Phenomenon

The term 'dropout' - a primary term used in this study to explain the phenomenon of leaving sport by an athlete. Many researches on this topic use different terminology such as fluctuation, burnout, withdrawal and retirement. The term fluctuation in sport implies the transfer of an athlete from one team to another or from one sport to another one. The term burnout is used in case when an athlete, due to excessive physical and mental pressure, suffers from emotional exhaustion and stress; the consequence is a negative attitude towards sport practicing, which then leads to leaving the sport activity. The term retirement is also commonly used and refers to athletes who voluntarily decide to leave the sport either for reasons of having achieved the sport goals or for reasons of having reached a certain age (Lepir 2009, 194). In this thesis, all those terms according to their definitions, represent the specific ways of leaving sports, so they are considered as the specific ways of dropout. The term 'dropout phenomenon' is used in this study as a general term for defining quitting sports and it encompasses all the above-mentioned specific terms.

This thesis is focused on the adolescent athletes, so it is reasonable to give a definition for dropout phenomenon in adolescent sports. Dropout phenomenon in adolescence sports could be understood as a point when young athletes terminate their sport careers prematurely and before they have reached their top performance (Cervello, Escarti & Guzman, 2007, 65). One more definition for the youth sport dropout that was made by Ian Robertson (1988) is: "sport dropout is one who has discontinued involvement in one particular sport but may still be participating in another one." Since this thesis is focused on the dropout from competitive cross-country skiing, the definitions presented above fit the concept of the study.

The nature of sport dropout phenomenon has been investigated by a variety of researchers during past three decades. Years of the research made it possible to outline few tendencies in the nature of dropout phenomenon. The researchers have found that dropout rate peaks at about age 15-17 years and occurs in the transition between primary and secondary school, and at the end of secondary school education, dropout is greater among girls than boys, also dropout types and the reasons for it varies depending on gender, age, type of community, type of training and competitive level (Robinson (1982); Klint & Weiss (1986); Sisjord

(1993); Butcher & Lindner (2002); Sarrazin (2002); Cervello, Escarti, Guzman (2007); Delorme, Chalabaev, Raspaud (2010); E. Enoksen (2011).

4.3 Types of Dropout

While studying the dropout phenomenon the researchers have found that some athletes decide to drop out from competitive sports participation willingly, while others do not have any choice, also in some cases athletes drop out of one sport and still participate in other sports while other young athletes discontinue sports completely. Such differences in the types of dropout led to the appearance of various sport dropout classification systems.

For example, Klint & Weiss (1986) have classified three different groups of competitive sports dropouts: (1) the reluctant dropouts, who are forced to quit competitive sports because of serious illness/injury or an overwhelming athletic program; (2) the voluntary dropouts, who want to engage in other interests and activities; and (3) the resistant dropouts, who consider the costs of participation in competitive sport to be greater than the benefits of being involved. Another classification system was introduced by Linder, Johns & Butcher (1991). Their system recognized four types of dropout: sampler, low level participant, high level participant and elite, with each type based on the length of time in the sport, competitive level, and the amount of time spent training and competing. In both classification systems dropout types had different dropout patterns and reasons.

In 1991 Linder, Johns & Butcher have introduced one more classification model of sport dropouts. They outlined three main types of dropouts: the Sampler-Dropout, the Participant-Dropout, and the Transfer-Dropout. The term “sampler dropout” is used when a person moves around trying a number of sports; the term “participant dropout” describes a person who stops their participation in sport for some reason; the term “transfer dropout” is used when a person transfers to another sport. Their system is very similar to the system introduced by Gordon (1990, 1989). He separated former participants into Sport-leavers (those discontinuing participation in one particular sport), Drop-outs (those withdrawing from sport altogether) and Sport-transfers (those taking up a new sport after leaving another sport). Both researchers pointed out that the dropout patterns and reasons are different for

each of three types of dropouts and those types should be separated in sport dropout research.

Classification of dropouts is only possible after the actual dropout has occurred and the analysis of dropout patterns and reasons was made. This study was conducted with the engaged athletes, so the classification was not possible (and it was not the aim of the study). But it was possible to assume the potential dropout type after the analysis of the athletes' dropout profiles.

4.4 Reasons for Sport Dropout

Dropout from sports and reasons that cause that, first became the topic of interest during the seventies, and then became especially important during the eighties (Lepir 2009, 194). Much of the youth sport dropout reasons research has been framed within motivation theories and explained youth sport dropout to be the consequence of a lack of motivation. From this perspective, researchers have considered dropout phenomenon to be the final result of the process of decline in motivation. However, the researchers have found more specific reasons for sport dropout that has been replicated in several studies.

The most common reasons that show up in the majority of researches are: interest in other activities, lack of fun and satisfaction, lack of success or advancement, not enough participation in competitions, excessive competitive stress (burnout), dissatisfaction with the coach and program, boredom, and lack of friends (Lepir 2009, 194). Very similar reasons were claimed to be the most common by the other researchers too. For example, J. Fraser-Thomas in her study concluded that "...most commonly cited reasons for withdrawal including conflicts of interest, and negative experiences such as lack of fun, coach conflicts, and lack of playing time" (2008, 646). Also, in their study, O.Molinero & A.Salguero have found that "While the frequency of the specific motives given for withdrawal vary among studies, a number of reasons such as conflicts of interest, lack of success or improvement, lack of playing time, dislike of the coach or boredom appear in the majority of reports." (2006, 256).

One of the researchers who tried to classify the reasons for sport dropout is Norwegian Professor Eystein Enoksen (2011). He divided the sport dropout reasons and the factors that can cause dropout behavior into five categories:

- Training and performance factors
- Education and work obligations
- Motivational aspects
- The social environment
- Choice of other sport activities and interests

His classification system is used in this thesis to describe the reasons for sport dropout more closely, because it incorporates most of the factors that may have an influence on athlete's attitude towards sport participation or decision to quit sports.

4.4.1 Training and Performance Factors

Over the years, the development of performance in elite youth sport has required increasingly more strenuous workouts, early specialization, careful planning, and the ability to handle tough competitions (Enoksen 2011, 20). Because of that, the emphasis of many coaches' switched on overly rigorous training and tough competitions, almost entirely neglecting social aspects. This led to the appearance of dropouts caused by the stagnation in athletic performance and the occurrence of serious injuries. In this research, this category includes such dropout reasons as "I was not as good as wanted to be", "the training was too hard" and "my skills did not improve". Especially such reasons are common among competitive and elite athletes.

The term 'early specialization', mentioned in the previous paragraph, explains the situation when athletes are forced to focus only on one sport and to engage in large quantities of training for this sport on a year-round basis at an early age. This phenomenon is closely related to the belief that to achieve expert level at any sport, one should have ten years or 10000 hours of practicing. (10000 hours rule; Ericsson, Krampe & Tesch-Romer's 1993). Meaning the earlier anyone would achieve them, the earlier top performance would be reached, but the rule still does not guarantee that after those amounts of practice an athlete would become an expert or would succeed at any top level competitions. Numerous negative

outcomes have been associated with early specialization, including injuries, performance anxiety, parent and coach pressure, isolation, a restricted identity, and burnout (Fraser-Thomas, Cote & Deakin 2007, 647). Also most recently, Wall & Coter's (2007) study of high-level dropout and active youth hockey players made associations between early specialization and dropout.

4.4.2 Education and Work Obligations

Educational requirements and work obligations on one hand, and the pursuit of an athletic career on the other hand, can cause conflicts between priorities of time regarding sport activities and schoolwork for many athletes (Enoksen 2011, 20). Especially this problem is topical during the final years (age 15-18 years) of the adolescent period when the end of the secondary school education takes place. Typical dropout reasons in this category are "need more time for education" and "training takes too much time".

The problem of time priorities might be one of the most frequent determinants of sport dropout among adolescent athletes. The situation is so, because the time of optimal training and peak performances in competitive sport often coincides with the phases of school and/or higher education and starting a professional career (Molinero, Salguero & Tuero 2006, 263). It is extremely hard or even impossible to combine studying or job with competitive sports, so in many cases the choice between priority of sports and non-sport activities should be made.

4.4.3 Motivational Aspects

Understanding the dropout behavior in youth sport has been the object of analysis in the area of sport motivation for the past two decades (Cervello, Escarti & Guzman, 2007, 65). From this perspective, researchers have considered young people dropping out of competition to be the final result of a process of lack of motivation (Gould 1996; as cited in Cervello et.al 2007, 65). The concept of motivation has been defined as "The hypothetical construct used to describe the internal or external forces that produce the initiation, direction, intensity, and persistence of behavior." (Tod, Thatcher & Rahman, 2010, 30). Since there is a close

correlation between sport motivation and dropout, it is reasonable to analyze dropout phenomenon from the general theories of sport motivation.

One of the motivational theories that have been widely accepted within the sport and exercise domain is the Achievement Goal Theory (Nicholls, 1984). The theory is based around the premise of two stable personality orientations: task orientation and ego orientation. Task-oriented people believe that the effort they put into a task is likely to be rewarded with success. Ego-oriented people, on the other hand, are more likely to believe that success is a result of natural ability rather than effort (Tod, Thatcher & Rahman 2010, 34). The athletes with different types of personality orientation are motivated by different factors. Task-oriented athletes are motivated to participate in sports for enjoyment and skill improvement, while ego-oriented athletes are motivated by opportunity to compare themselves with others and opportunity to demonstrate their superior ability.

Task-oriented individuals tend to put more effort in sports, demonstrate greater persistence, show greater interest, have more fun and express greater satisfaction when practicing sports. In contrast, ego-oriented individuals less adaptive motivational patterns characterized by demonstrating less effort in practicing sports, having less fun, and leaving the sport when they encounter small differences or see themselves as not very skilful (Cervello, Escarti & Guzman, 2007, 66). Taking that statement into consideration, it can be said that it is important to develop task-oriented motivational climate in athletes or teams, especially in case of a such demanding sport as cross country skiing, where great amount of practicing and persistence is needed. Also skiing practices might be very monotonous and repetitive so if an athlete with task orientation is able to have fun and get satisfaction from such practices, compare to an athlete with ego orientation, it is obvious that task-orientated climate is more acceptable in order to maintain high levels of motivation and prevent dropout behavior.

Proving that, a number of studies have found correlation between personal motivational orientation, sport participation and dropout. Task orientation was positively correlated with attendance and negatively correlated with missed sessions. Ego orientation was in direct contrast revealing negative correlation with attendance and positive correlation with missed sessions. Additionally, individuals with high task/low ego orientation had better adherence outcomes and were the most motivationally adapted group (Ricciardy 2012, 1). In line with

this research, Cervello, Escarti & Guzman (2007) concluded that “High orientation towards ego and a low perception of ability positively predict dropout behavior.”

Athletes’ personal motivational orientation is formed by the motivational climate. Motivational climate is considered to be a social situation formed by others (coaches, friends, teachers, family) that can influence motivational factors in a participant. For example, Cervello, Escarti & Guzman (2007) said that “The perception that athletes have of the success criteria used by the parents, coaches and sport friends has proven to be a variable that is strongly related to the motivational orientation of the individuals themselves.”, another example is brought by P. Sarrazin (2002) “In sport contexts, coaches’ behavior can have a crucial impact on athletes’ motivation. Coaches design practice sessions, group children, give recognition, evaluate performance, share their authority and they shape the sport setting. In sum, they establish a motivational climate.”

Task-oriented behavior can be shaped under the mastery or task oriented motivational climate. Mastery (task-oriented) climate is one where a coach or parent provides supportive comments when individuals persist in tasks, improve on personal targets, and help others to improve through teamwork. As a result, a mastery climate encourages task involvement. (Tod, Thatcher & Rahman, 2010, 36.)

Another motivation theory that is widely accepted in sport domain is Self Determination Theory (Deci & Ryan, 2000). Self-determination theory is a highly appropriate conceptual framework from which to study sport persistence and dropout. The theory has been widely utilized in understanding motivational outcomes in other achievement contexts such as educational and work settings (Calvo, Cervello, Jimenez, Iglesias & Murcia 2010, 678).

Self-determination theory distinguishes among three types of behavioral regulation that are associated with varying degrees of self-determined motivation. Those types are intrinsic motivation, extrinsic motivation and amotivation. Intrinsic motivation is reflected in behaviors engaged in for their own sake and the satisfaction derived from participation. Intrinsic motivation has been associated with adaptive cognitive, affective, and behavioral outcomes, such as a physically active lifestyle and intention to participate in sport, whereas extrinsic motivation has been linked with maladaptive outcomes, such as a lack of commitment to physical activity (Liukkonen, Watt, Barkoukis & Jaakkola 2010, 296). Individuals with extrinsic moti-

vation engage in activities because they value the associated outcomes. Such outcomes could include extrinsic rewards, and public recognition and praise. A third category of motivation, known as amotivation, constitutes a psychological state in which people lack either a sense of efficacy or a sense of control with respect to attaining a desired outcome. In other words, they are not able to regulate themselves with respect to their behavior (Calvo et al. 2010, 678).

The researchers have found a connection between self-determined motivation and sport dropout. Several studies have outlined that, higher levels of amotivation and external regulation, and lower levels of relatedness and autonomy were associated with sport dropouts. Conversely, stronger feelings of relatedness and autonomy and lower levels of amotivation, and external regulation explained sport persistence (Calvo et al. 2010; Sarrazinet al., 2002). Also in his research P.Sarrazin has found that: “lack of intrinsic motivation as well as a concomitant increase in amotivation, predicted behavioral intentions of dropping out. It thus appears that these two variables represent key motivational constructs in the understanding and prediction of sport dropout. Consequently, intrinsic motivation should be nurtured in order to facilitate athletes’ persistence in sports.”

The developmental process of the intrinsic motivation, as well as the development of task orientation in athletes’ is closely connected with the mastery (task-oriented) motivational climate, which has been discussed before in this thesis. A key element for the coaches to establish the mastery climate is to focus the training process on the mastery dimensions of the activity and not on the extrinsic (i.e. winning at all costs) dimensions. (Sarrazinet al., 2002.)

Summarizing the knowledge about motivation and sport dropout, and general motivation theories it is possible to draw few conclusions. Firstly, motivation for sports is maintained unless athlete, no matter at what age or level of performance he or she is, can achieve new goals, show signs of improvement, and regularly win in competition. Otherwise athletes, who had predominance of negative performance development in sport, will develop lower self-esteem, poorer estimation of potential success and lack of motivation, which might lead to withdrawal from training process (Sarrazin et al., 2002). Secondly, motivation is determined by such factors as athlete’s personal motivational orientation (task or ego), also degree of self-determined motivation (intrinsic, extrinsic, amotivation) and motivational climate (task or ego involving). Since the researchers have found positive correlation between

the predominance of extrinsic motivation, amotivation, ego-orientation and ego-involving climate or a combination of those, and sport dropout, it is obvious that coaches should try to avoid such circumstances and strive to create a task-involving climate followed by task-orientation and intrinsic motivation for sport participation. This will help the athletes to meet their needs for maintaining high levels of motivation and prevent early sport dropouts.

4.4.4 The Social Environment

A social and stimulating training climate with good relationships to friends, parents and competent coaches may have a positive impact on the choices that athletes might make about the sport participation (Enoksen 2011, 21). A number of studies highlights the critical influence of significant others during the adolescent years, and the fragility of athletes' relationships with these individuals. While dropout and engaged athletes recounted similar significant other influences during childhood, differences began to emerge during adolescence as athletes faced new challenges and obstacles (Fraser-Thomas, Cote & Deakin, 2008, 660). The typical dropout reasons for this category are "conflict with the coach", "no team spirit", "parents or friends do not want me to compete", "too much pressure", "did not get enough recognition", and "lack of fun". Previous research on sport dropout among competitive adolescent athletes (Butcher et al. 2002; Molinero et al. 2006; Enoksen 2011) have found that such social reasons as 'conflict with coach' and 'too much pressure' were more noticeable than lack of fun and team spirit or no recognition, among highly competitive and elite adolescent athletes.

The term 'significant others' includes parents, friends, coaches, teachers and other people who are in contact with the athlete in and out of practices. Parents have great influence on the athletes. Generally, high-perceived amounts of parent support, encouragement, involvement, and satisfaction have been associated with more enjoyment, intrinsic motivation, and preference for challenge (Fraser-Thomas, Cote & Deakin, 2008, 660). The role of the parents is greatest during childhood but when an athlete moves into adolescent period, parents become less involved and the role of the peers increases. Parents together with coaches should strain to create a positive social environment and mastery-training climate for the athletes in order to prevent sport dropout and increase the enjoyment of sport participation.

Also young athletes might benefit from having peers both within and outside of their sport, serving as both role models and supporters.

While positive social environment is associated with enjoyment and persistence in sport participation, negative social environment often leads to an early quitting from sport. Negative social environment can be created by unsatisfactory support from important individuals, conflicts with coaches or sport peers, lack of fun and positive feedback during practices and competitions, high ego orientation or too competitive climate during practices, and excessive stress.

Negative social environment and excessive stress may lead to burnout in athletes. Burnout phenomenon was determined as one of the possible reasons for dropout by various scholars (Smith 1986; Coakley 1992; Gustafson 2007). Most explanations of burnout among young athletes identify chronic, excessive stress as the cause (Coakley 1992, 272). Studies have shown that, athletes who dropped out of sports at an early age expose more stress and anxiety in training and competition situations, compared to those who continue (Sarrazin et al., 2002).

Burnout involves a psychological, emotional and sometimes a physical withdrawal from an activity in response to excessive stress. When burnout occurs, a previously enjoyable activity becomes a source of stress, and athlete starts to experience negative environment (Smith 1986, 39). In his book "Burnout in competitive and elite athletes" H. Gustafson stated that "Burnout is one reason athletes discontinue their sport participation, but there are a number of other rationales for leaving sport unrelated to burnout." (2007, 40).

4.4.5 Choice of Other Sport Activities and Interests

The participation in other sports activities is addressed in some studies as one of the main reasons for children and youngsters leaving sports (Enoksen 2011, 38). Additionally to transferring to another sport, athletes may give the time priority to non sport activities. Having other things to do was considered as one of the most common reasons for sport dropout by various studies. (Butcher, Lindner, Johns 2002; Molinero et.al 2006; Enoksen 2011) Also the researchers have found that, having other things to do, combined with or followed by low

perceived ability, lack of fun or excessive pressure may lead to discontinuing of sport involvement (Molinero et.al 2006, 257).

Such sport dropout reason as 'having other things to do' is especially common during later adolescence. The problem is closely connected with the increasing demand for education and job obligations. This category can be easily connected with education and work obligations factors, they both may include such reasons for sport dropout as "need more time for education" and "training takes too much time".

The adolescence is the period of active social development, and the role of parents in athletes' decision-making process decreases and the role of sport or non-sport peers increases dramatically. Because of that, adolescent athletes may prefer to spend more time with their friends or lovers instead of sport participation, this fact can cause sport dropout because of the reasons like "need to spend more time with friends", "friends no longer compete", "did not meet new friends" and "sport was not popular".

4.5 Summary on Sport Dropout Reasons

Based on the exciting data which indicates that athletes with different competitive levels and different age do not have the similar dropout patterns and reasons, it is possible to conclude that the main sport dropout reasons for adolescent competitive athletes are stagnation in performance, injuries, lack of motivation, negative training environment or excessive stress during training and competitions, conflict of interests and time regarding priorities, and conflicts with the coach or sport peers. This conclusion is in line with the previous research on this topic (Lindner, Butcher, Johns 1991; Molinero et.al 2006; Lepir 2009; Enoksen 2011).

There is a great variety of sport dropout reasons, but despite of different reasons the outcome of sport dropout is always the same – discontinuing of participation in a certain sport. It is difficult to generalize the reasons for sport dropout because each study has used different samples. Also each samples had differences in such variables as age, gender, sport specialization, training and social environment and dropout types of participants. However, it is clear that sport dropout needs multidirectional analysis in order to understand sport dropout patterns and reasons. As Molinero et.al wrote: "There are many environmental factors lying

outside the sport realm that draw the athlete away and a comprehensive study of sport withdrawal should include non-sport influences such as work, study and family commitments, that are often stronger motives for sport disassociation than dissatisfactions with elements within the sport itself.” (2006).

5 RESEARCH PROBLEMS

This thesis addresses the problem of the premature termination of the sport career by young athletes or “dropout phenomenon”. The purpose of this thesis was to describe the dropout phenomenon among 15 – 18 – Year – Old Cross-Country Skiers at Vuokatti Sports Academy team and explore its nature and reasons for it. The aim of the thesis was to explore the determinants of sport dropout among 15-18-year-old cross- country skiers and provide the information about dropout phenomenon and predisposition for it for to the Academy’s coaches and administration.

The research problems were:

- 1 - “How many skiers are thinking about to drop out from competitive training at the age of 15-18 years?”
- 2 - “What are the factors that make the athletes at the age of 15-18 years think about dropping out from the competitive training?”
- 3 - “Which additional services or forms of support do the athletes want to receive from the coaches and the academy?”

6 RESEARCH METHOD

This chapter provides an overview of the research process and methods. Also it describes the commissioner of the study and presents the information on the study's participants and instruments.

6.1 Commissioner of the Thesis

The commission organization for this thesis was Vuokatti Sports Academy. Vuokatti Sports Academy is a part of the Finnish Sports Academy Network of 19 academies which is regulated by the Finnish Olympic Committee. The mission of Sports Academies is to assist young elite athletes to pursue their education, combining training and competing at an elite level. The Academy provides professional coaching, testing and training facilities, as well as recovery services like massage and physical therapy. The organization has commissioned this thesis because understanding the determinants of sport dropout is an important issue for the sport center, which has to grow and make itself sustainable.

While Vuokatti Sports Academy was the commissioner of the thesis, three more academies were involved in the thesis process. Etelä-Karjala Sports Academy (Imatra), Päijät-Häme Sports Academy (Lahti), and Etelä-Kymenlaakso Sports Academy (Kotka) also gave the permission to test their athletes.

6.2 Quantitative Research Method

Quantitative research is a type of research that explains a phenomenon by collecting numerical data that is analyzed using mathematically based methods (Creswell 1994; as cited in Sukamolson, 2005, 3). The definition implies that the specificity of quantitative research lies in the numerical data collection and mathematically based data analysis. In this thesis statistics was used as a mathematical method of data analysis.

Statistics is what people usually associate with a quantitative research, and it is often seen as the most important part of quantitative studies. Understanding the significant importance of statistics in quantitative research method, the other parts of the research should not be neglected. S.Sukamolson said in his study “While it is important to use the right data analysis tools, it is even more important to use the right research design and data collection instruments.” (2005, 3).

Because quantitative research is essentially about collecting numerical data to explain a particular phenomenon, it is a suitable research method for answering such questions as: “How many?”, “What percentage of...?” or “What are the factors...?” But not every phenomenon can be naturally expressed in the form of numerical data; in such cases the problem of data converting occurs. According to Sukamolson (2005, 3) “Data converting is made by specially designed research instruments aimed specifically at converting phenomena that don't naturally exist in quantitative form into quantitative data, which can be analyzed statistically.”

Quantitative research generally focuses on measuring social reality. Quantitative research and/or questions are searching for quantities in something and to establish research numerically. Quantitative researchers view the world as reality, that can be objectively determined so rigid guides in the process of data collection and analysis are very important. (Sukamolson 2005, 4.)

Quantitative research method was highly used in sport dropout studies. There were variety of researches that used this method for exploring the dropout phenomenon. The studies of Butcher, Lindner, Johns 2002; Sarrazin 2002; Molinero, Salguero & Tuero 2006; Boiche & Sarrazin 2009; Delorme, Chalabaev & Raspaud 2009; Enoksen 2011, are examples of quantitative studies. Summarizing the advantages and disadvantages of the quantitative research method Sukamolson concluded “A well-designed quantitative study will allow us not just to look at what happens, but to provide an explanation of why it happens as well.” (2005, 17).

6.3 Participants

This study's focus was on dropout phenomenon among competitive cross-country skiers of Vuokatti Sports Academy in the age group of -15-18 years. 42 engaged athletes (23 male and 19 female) were surveyed in this investigation, with 37 athletes (21 male and 16 female) representing cross-country skiing and 5 athletes (2 male and 3 female) representing biathlon. Also the athletes represented four different Finnish Sport Academies: Etelä-Karjala Sports Academy (6 athletes), Päijät-Häme Sports Academy (6 athletes), Etelä-Kymenlaakso Sports Academy (3 athletes) and Vuokatti Sports Academy (27 athletes, including 5 biathletes). The mean age of the participants was 17.4 years ($SD = 0.6$), with mean value 17.3 years ($SD = 0.6$) for male and 17.5 ($SD = 0.7$) for female respectively.

The criteria for the selection of the participants was: age of 15-18 years, an athlete should be either involved in cross country skiing, biathlon or Nordic combine, and should be involved in all year round training process aimed for competitions. Since all the participants of the survey were students of different sport academies and followed the training program that was oriented towards the development of national-level performers, they all were considered as competitive athletes.

6.4 Instruments

The multi-compound self-administered questionnaire was used to evaluate the athletes' pre-disposition to the sport dropout. The testing form included six parts and measured the athletes' motivation for participation, personal motivation orientation, personal attitude towards various sport dropout reasons, and future career plans and expectations, as well as the contentment from the previous competitive season.

In the first part of the questionnaire the athletes were asked to give the information about such variables as gender, age, sport specialization, starting age of competitive training, training hours per week, and involvement in other sports. The following parts of the questionnaire accessed motivation for participation, personal motivation orientation (task or ego), personal attitude towards various sport dropout reasons, future career plans and expecta-

tions and the contentment from the previous competitive season. In the end of the testing form, the athletes were asked to answer for an open question on Academy's services.

The first research question was "How many skiers are thinking about to drop out from competitive training at the age of 15-18 years?" The question was answered by evaluating the athletes' career expectations and the contentment from the previous competitive season. Those variables were evaluated by the questionnaire that was made up of five statements. The athletes were asked to indicate to what extent each of the statements of the questionnaire corresponded to their opinion using 5-point Likert type scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The statements were: "My competition season was successful", "I enjoy my training", "I will continue training in the next season", "I want to become a professional (top) athlete, and "I thought about to drop out from training during previous/current season".

The second research question was "What are the factors that make the athletes at the age of 15-18 years think about dropping out from the competitive training?" It was answered by several tests. The questionnaire which has been used for assessing the athletes' attitude towards sport dropout reasons was obtained on the basis of „Questionnaire of Reasons for Attrition" (Gould et al., 1982) and on the outcomes of a retrospective ten-year study on dropout reasons of Butcher, Lindner & Johns (2002); a 25 Year Study of E.Enoksen (results published in 2011); the study of Molinero et al. (2006) and the study of D.Lepir (2009). Twelve most common dropout reasons were selected. Responses to each of the 12 items were given on a 5-point Likert type scale ranging from 1 (not at all important) to 5 (extremely important).

The Sport Motivation Scale (SMS 28; Pelletier et al., 1995) was used to evaluate the athletes' motivation for sport participation. This test was used to evaluate the role of motivation in the dropout process. In the SMS test, athletes are asked 'Why do you practice your sport?' They are provided with 28 items presented in the form of answers to that question. These items assess the predominance of amotivation, extrinsic motivation or intrinsic motivation in athletes' motivation for participation. Athletes ranked the importance of different reasons for participation on a 7 point Likert scale (1= does not correspondent at all; 7 = corresponds exactly). The SMS 28 test was frequently used in the sport domain and its reliability was confirmed by many researchers. For example, G. Pelletier claimed that: "Results from

the two studies revealed that the SMS has adequate levels of validity and reliability.” (1995, 48). Later studies of Vallerand & Fortier (1998); Vallerand & Losier (1999) and Sarrazin et al. (2002) also confirmed the factor structure of the scale and revealed satisfactory level of internal consistency as well as adequate test–retest reliability.

Previous research on sport dropout found a correlation between athletes’ personal motivational orientation and dropout rate, so Task and Ego Orientation in Sport Questionnaire (TEOSQ; Duda & Nicholls, 1989) was included in the testing form too and its results were used for answering on the second research question. The TEOSQ is a 13-item questionnaire intended to analyze task and ego orientations in sport or physical activity. The form utilizes a 5-point Likert-type scale anchored with 1: strongly disagree and 5: strongly agree. The questionnaire has been used in many physical activity, exercise, and sport settings to determine the goal orientation of individuals (Ricciardi 2012, 21). Psychometric tests on the scores gathered by TEOSQ across various populations have shown the instrument is supported by evidence of reliability and validity. The factorial structure of the TEOSQ represents a valid and reliable theoretical construct for studying sport goal orientations among adolescents (Castillo, Tomas, Dias, Fonseca, Balaguer & Duda 2010, 22).

The last research question “Which additional services or forms of support do athletes want to receive from the coaches and the academy?” was evaluated by the open question in the last part of the testing form.

All the questionnaires and testing instructions were translated into Finnish in order to make the testing process easier for the athletes. The translation was made by the staff of Vuokatti Sports Academy that was familiar with participation and testing in sports and approved by the head of Vuokatti Sport Institute, so it can be claimed that the translation of the questionnaire has not decreased the reliability of the study.

6.5 Data Collection and Procedures

After Vuokatti Sports Academy commissioned the thesis, the gathering of the theoretical background was begun and the English version of the testing form for the athletes was developed. The head of Vuokatti Sports Academy approved English version of the testing

form in the end of March 2013, and Finnish version of the testing form was introduced in mid April 2013. After the Finnish version was introduced and approved in mid April 2013, the testing process in Vuokatti sports academy was started.

The tests were conducted by the coaches of Vuokatti Sports Academy in the end of the studying year and well after cross-country skiing competitive season. The testing period lasted from mid-April till mid May 2013. Also during March and April 2013 the author contacted eight Finnish Sports Academies. The academies were selected based on the presence of the cross-country skiing departments. The academies' managers and cross-country skiing coaches were contacted by email. The email included the description of the thesis topic idea, target group for testing and the consent form. Three Sports Academies gave the permission to test their athletes, the academies were: Etelä-Karjala Sports Academy, Päijät-Häme Sports Academy, and Etelä-Kymenlaakso Sports Academy.

In mid April 2013 the Finnish version of the testing form and the instructions how to conduct the tests were sent to those academies, which have agreed to participate in the study. In those academies, managers or cross-country skiing coaches conducted the tests during mid-April and May 2013. After the testing process was finished the paper versions of the testing forms were returned to the author by post. Throughout these procedures, a total of 42 questionnaires (including Vuokatti Sports Academy) were gathered by the end of May 2013.

In all the Academies that took part in the study the athletes were informed that the participation was voluntary. Also anonymity was guaranteed and assurance that all data would be kept strictly confidential was given. The athletes were asked to answer the questions as honestly as possible and considerable time was given for the completion of the questionnaire.

6.6 Data Analysis

This thesis is an example of a survey research. Survey Research is the systematic gathering of information from respondents for the purpose of understanding and/or predicting some aspects of the behavior of the population of interest. The survey research is concerned with sampling, questionnaire design, questionnaire administration and data analysis (Sukamolson, 2005, 12).

For the data analysis all the surveyed athletes were subdivided into two groups – the risk group and the non-risk group. The athletes were put into the risk group if they indicated that: (1) they are not planning to compete next season, (2) do not want to become a top athlete, and (3) they have thought of dropout. The presence of at least one of those three factors was enough to put the athlete into the risk group. The athletes who indicated that they want to continue their careers, become top athletes and have not thought of dropout were put into the non risk group. Also the athletes of Vuokatti Sports Academy were brought in to the separate group, while the athletes of Etelä-Karjala Sports Academy, Päijät-Häme Sports Academy, and Etelä-Kymenlaakso Sports Academy were combined into one group. Also in Vuokatti Sports Academy five biathletes participated in the study too. The data analysis indicated that in this study most important dropout reasons do not differ between skiers and biathletes, so the presence of the biathletes in the survey should not affect the outcomes. The research data was analyzed by Microsoft Office Excel software. Firstly the questionnaires were analyzed manually by the author of the thesis and then the results were put into the Excel software.

7 RESULTS

This chapter describes the results of the present study. The information regarding the primary research questions is presented first, and then the additional findings of the study are presented too.

7.1 Number of Skiers at the Age of 15-18 Years that Did not Plan to Continue Training in the Next Season and Did not Want to Become Top Athletes

The number of the athletes in the risk group was calculated separately for Vuokatti Sports Academy and the combined group of three other academies. The total number of eight athletes was put into the risk group in Vuokatti Sports academy, giving the risk group distribution of 29.6 percentages from the total sample. In the combined group of the other three academies, the total number of five athletes was included in the risk group, giving 33.3 percentages for the risk group distribution from the total sample.

There was one noticeable difference between the athletes in the risk groups in both academies. One part of the risk group athletes indicated that they were not going to continue training in the next season, followed by no desire to become a professional athlete and the presence of dropout thoughts, while another part of the risk group athletes indicated the presence of dropout thoughts too, did not want to become top athletes or was not sure about it, but still claimed that they will continue training in the next season. Taking into consideration such a notable issue, the risk group was subdivided into two sub groups: the risk group (a) – those who did not want to continue training in the next season, combined with no desire to become a professional athlete and the presence of dropout thoughts, and the risk group (b) – those who have thought about to drop out, did not want to become top athletes or was not sure about it, but still wanted to continue training.

In Vuokatti Sports Academy 25.9 percentages of the entire sample belonged to the risk group (b), while only 3.7 percentages belonged to the risk group (a). In the combined group of three other academies, the situation was directly opposite; with 26.7 percentages of the

entire sample representing the risk group (a) and 6.7 percentages representing the risk group (b) (Figure 1).

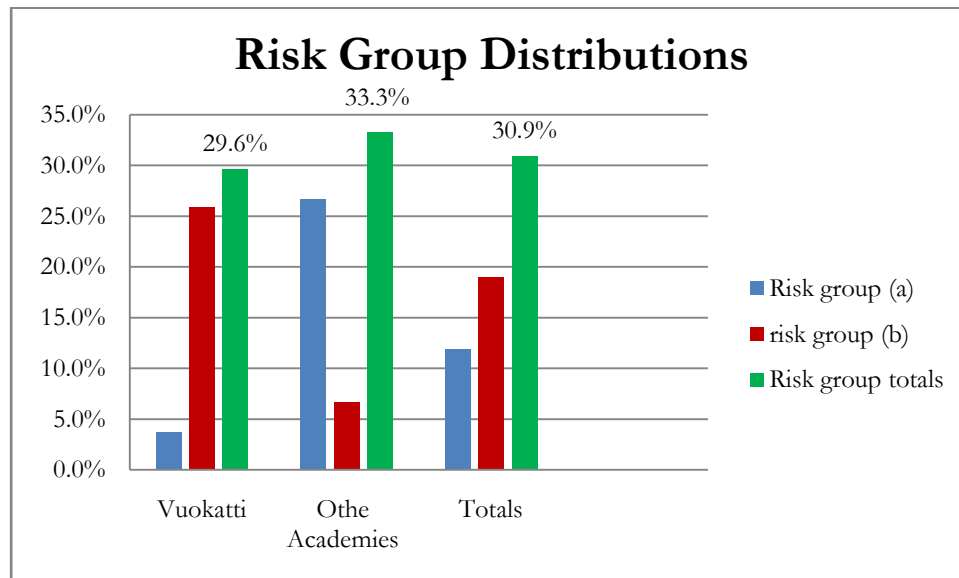


Figure 1. Risk Group Distributions

7.2 Factors that Forced the Athletes at the Age of 15-18 Years Think about Dropping out from Competitive Training

The risk group athletes' attitude towards dropout reasons was analyzed separately for Vuokatti Sports Academy and the combined group of three other academies. The most common dropout reason, mentioned by the risk group athletes of Vuokatti Sports Academy was "I am not as good as wanted to be", 87.5 percentages of the risk group athletes have agreed with the statement. The second most common reasons were "I need more time for non sport activities" and "The training is too hard", 75 percentages of the risk group athletes have agreed with these dropout reasons. The third most common reasons with the value of 37.5 percentages were "I need more time for education" and "My skills do not improve". Also the two subgroups had different prevalence of the dropout reasons. In the risk group (a) the reasons were "The training is too hard" and "I need more time for education", 100 % of the athletes of the risk group (a) agreed with those statements, while in the risk group (b) three most common reasons were "I am not as good as wanted to be", "I need more time for non sport activities" and "The training is too hard", with the agreeing rates of 87.5 percentages, 75 percentages and 62.5 percentages respectively. The attitude of the Vuokatti

Sports Academy risk group athletes towards most common dropout reasons is summarized on the Figure 2.

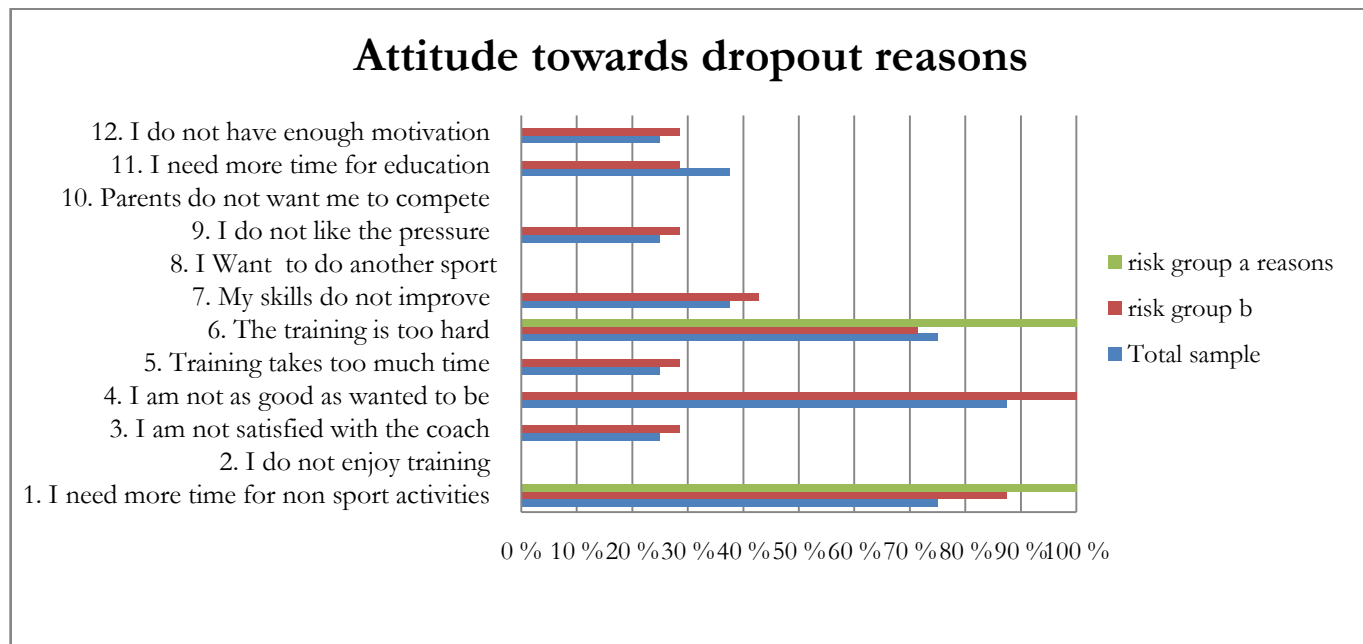


Figure 2. The attitude of the Vuokatti Sports Academy risk group athletes towards most common dropout reasons

The risk group athletes from the combined group of three other academies had mostly agreed with such reasons as “I need more time for non sport activities”, “I am not as good as wanted to be”, “The training is too hard” and “I want to do another sport”. All these reasons were accepted by 80 percentages of the risk group athletes. Other highly accepted reasons were “My skills do not improve”, “I do not like the pressure”, “I need more time for education” and “I do not have enough motivation” the reasons were accepted by 60 percentages of the athletes who were included in the risk group. The most accepted reason in the risk group (a) was “I need more time for non sport activities”, mentioned by all the athletes in the risk group. Also such dropout reasons as “I need more time for education”, “I do not have enough motivation”, “The training is too hard”, “I want to do another sport”, “My skills do not improve” and “I am not as good as wanted to be” were highly accepted by the risk group (a) athletes and got the value of 75 percentages. The only athlete of the risk group (b) has agreed with such reasons as “I am not as good as wanted to be”, “The training is too hard”, “I want to do another sport” and also “I do not like the pressure”. The attitude of the risk group athletes from the combined group of three other Academies towards most common dropout reasons is summarized on the Figure 3.

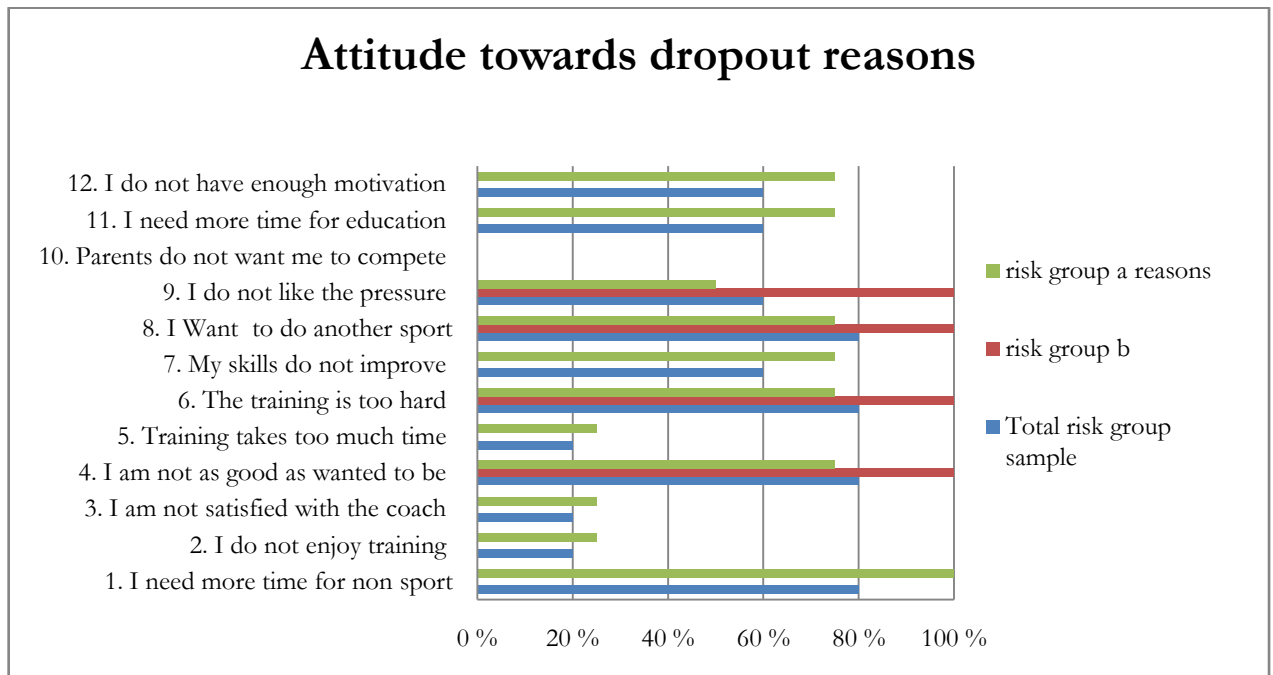


Figure 3. The attitude of the risk group athletes from the combined group of three other academies towards most common dropout reasons

Combining the risk group athletes from Vuokatti Sports Academy and the risk group athletes from three other Academies the most common dropout reason mentioned by the entire population of the risk group athletes was “I am not as good as wanted to be”, 11 of 13 athletes (84.6 percentages) agreed with the reason. Also such reasons as “I need more time for non sport activities” and “The training is too hard” were equally important for the athletes and were accepted by 10 of 13 (76.9 percentages) of the entire risk group athletes. The third most common reasons were “My skills do not improve” and “I need more time for education”, supported by 46.1 percentages of the risk group athletes. While mentioned above reasons were obtained from the total risk group, the athletes of the risk group (a), who are more likely to become dropouts had other dropout reasons prevalence. Such reasons as “I need more time for non sport activities”, “The training is too hard” and “I need more time for education” were the top three dropout reasons mentioned by the entire risk group (a) athletes. The results from the risk group (b) were very similar to the results of the overall risk group sample. Top three most common reasons for the entire risk group (b) were “I am not as good as wanted to be”, “I need more time for non sport activities” and

“The training is too hard”. The first reason was supported by 100% of the athletes, while second and third reasons were equally important and were accepted by 75 percentages of the athletes. The attitude of the risk group athletes from both groups of Academies towards most common dropout reasons is summarized on the Figure 4.

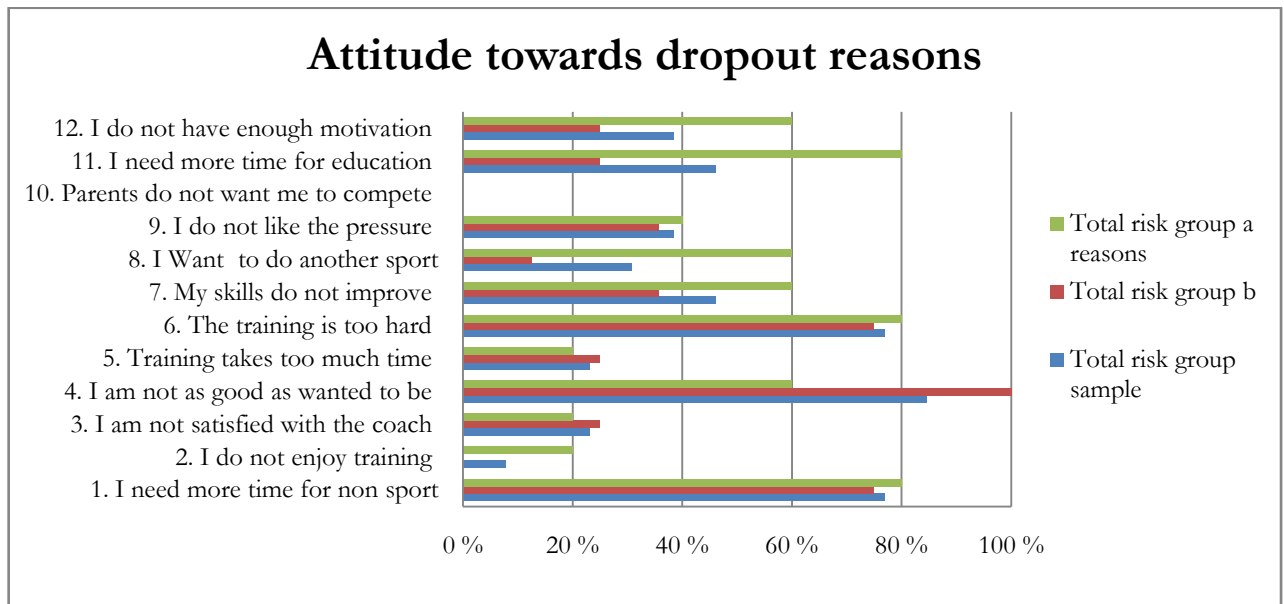


Figure 4. The attitude of the risk group athletes from both groups of Academies towards most common dropout reasons

7.3 Additional Services and Forms of Support that Athletes Wanted to Receive from Coaches and the Academy

The last research problem, “Which additional services or forms of support do athletes want to receive from the coaches and the academy?” was evaluated by the open question, on which athletes were asked to answer in the last part of the questionnaire. The athletes’ answers were analyzed separately for each Sports Academy to get more specific and reliable picture on academies’ services.

Most of the athletes in Vuokatti sports academy were satisfied with the services and claimed that there is nothing to improve. Such an answer was given by 63 percentages of the athletes. Then 18.5 percentages of the athletes wanted to have cheaper meal price in the academy’s canteen. Also such additional services and improvements as free gym and fitness test-

ing, financial support, better recovery services, more training sessions during school time and more training discussions with the coaches were mentioned once by various athletes.

In Etelä-Karjala Sports Academy 3 of 6 athletes wanted such additional services as free massage and physiotherapy, while 3 other athletes were totally satisfied with the academy's services and claimed that there is nothing to improve. In Päijät-Häme Sports Academy the athletes wanted very similar services. Free gym access and free physiotherapy was mentioned by 50 % of the athletes. Also one of six athletes (16.7 percentages) wanted to get more feedback on training process and two of six athletes (33.3 percentages) were totally satisfied with the academy's services and claimed that there is nothing to improve. In Etelä-Kymenlaakso Sports Academy all three athletes who took part in the survey were satisfied with the academy services.

7.4 Response Rate on the Questionnaire

The response rate on the questionnaires was calculated based on the number of cross-country skiers that meet the selection criteria for the study in the each Academy, and the number of the received questionnaires. The coaches or managers of the Sport Academies were asked to tell the amount of the athletes that meet the selection criteria for the study, before sending them the questionnaires.

The highest response rate was shown by Vuokatti Sports Academy and Päijät-Häme Sports Academy, where all the athletes of the academies' cross country skiing teams in the age group 15-18 years participated in the survey. Even the number of cross country skiers in Päijät-Häme Sports Academy was significantly smaller than in Vuokatti Sports Academy (6 to 27 athletes), 100% of the target group athletes in both academies participated in the survey. In Etelä-Karjala Sports Academy six athletes participated in the study, while 12 athletes met the selection criteria for the study, giving the participation rate of 50 percentages. The lowest participation rate was obtained from Etelä-Kymenlaakso Sports Academy, where nine athletes met the selection criteria and only three athletes participated in the survey, giving the participation rate of 33.3 percentages. Summarizing the information obtained from the Sports Academies, the total number of athletes who met the selection criteria in the academies was 54, while the number of surveyed athletes was 42, giving the total response

rate of 77.8 percentages. The response rates from each Sports Academy and generalized response rate in percent value is shown on the Figure 5.

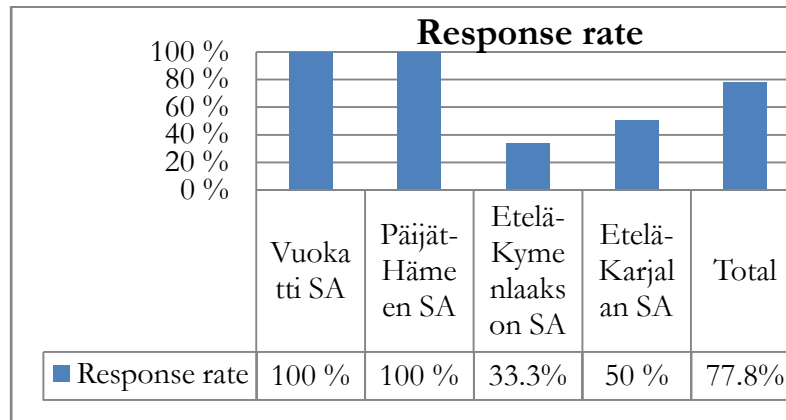


Figure 5. Academies' response rate

7.5 Age and Risk Groups

The age of the athletes who represented the risk group was calculated separately for Vuokatti Sports Academy and the combined group of the other academies. For Vuokatti Sports Academy the mean age of the athletes in the risk group was 17.6 years (SD= 0.5), and for the combined group the mean age value was 17.4 years (SD=0.5). The mean age of the risk group athletes from both Academies was 17.5 years (SD= 0.5) (Figure 6).

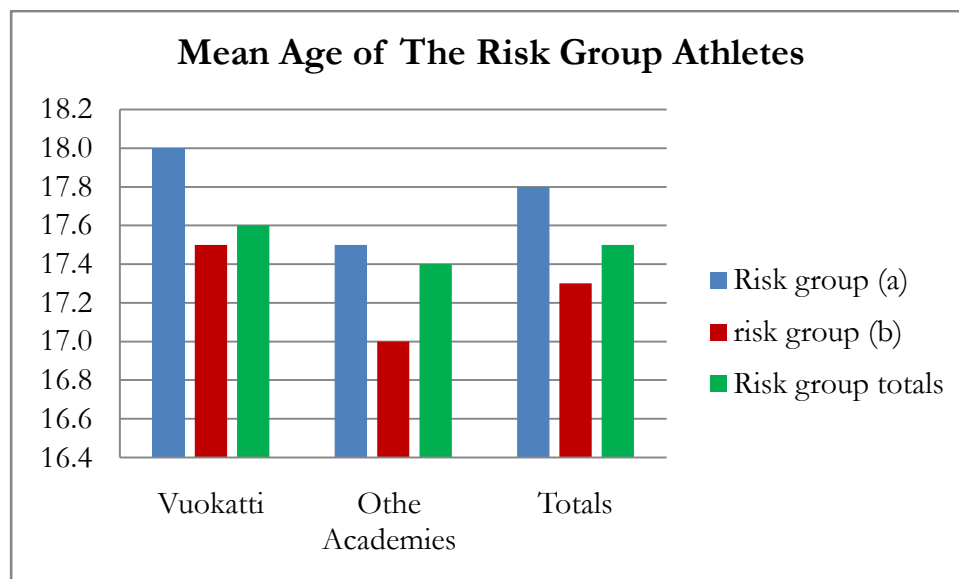


Figure 6. Mean Age of the risk group athletes

8 DISCUSSION

This chapter evaluates the implementation and the outcomes of the present study. Also the chapter evaluates Ethicality and reliability of this thesis as well as the author's personal development.

8.1 Research Evaluation

The purpose of this thesis was to describe the dropout phenomenon among 15 – 18 – year – old Cross-Country Skiers at Vuokatti Sports Academy team and explore its nature and reasons for it. The aim of the thesis was to explore the determinants of sport dropout among 15-18-year-old cross- country skiers and provide the information about dropout phenomenon and predisposition for it for to the Academy's coaches and administration. The author's personal aims were to understand the training needs of the chosen age group, and explore the factors affecting growth, development, and social behavior of adolescent cross-country skiers.

The research data was gathered by a quantitative research method. The acquired data helped to answer three research questions: "How many skiers are thinking about to drop out from competitive training at the age of 15-18 years?", "what makes the athletes at the age of 15-18 years think about dropping out from the competitive training?" and "which services or forms of support do the athletes want to receive from the coaches and the academy?"

The primary focus group of the study was the cross-country skiing team of Vuokatti Sports Academy. Also athletes from three more academies were involved in the survey process, the academies being Etelä-Karjala Sports Academy (Imatra), Päijät-Häme Sports Academy (Lah- ti), and Etelä-Kymenlaakso Sports Academy (Kotka). The athletes from those academies were combined into one group. Such grouping method allowed to evaluate were the dropout rates and reasons academy-specific or, there was a general tendency in the academies.

The first research problem was implemented by creating risk group which included the athletes who did not want to become professionals, thought about dropout and did not plan to

continue training in the next season. The entire number of the surveyed athletes was 42, while 13 athletes were included in the risk group, therefore 30.9 percentages of the athletes from the entire population of the study could experience a predisposition to dropout. Also five athletes clearly indicated that they were not planning to continue training and compete in the next season, based on that fact, it was possible to conclude that 12 percentages of the athletes from the total sample were most likely to become sport dropouts.

The Academies had a relatively high amount of athletes in the risk groups, with 29.6 percentages of the athletes in Vuokatti Sports Academy and 33.3 percentages in the combined group of three other academies, respectively. Surprisingly, there was a significant difference in the number of athletes who were not going to continue training and competing between the academies, in the combined group of three academies 4 of 15 athletes (26.7 %) did not plan to continue training, while in Vuokatti Sports Academy only one of 27 athletes (3.7 %) claimed that he was not going to continue training in the next season. The obtained numbers do not contradict with the results of Gould & Petlichkoff (1988, 161) who concluded that “Around 35% of children drop out of sport each year, with dropout rate being at the highest level during adolescence.”

Regarding the second research problem, accordingly to the results of this thesis, the most common reason that forced the risk group athletes to think about dropout was “I am not as good as wanted to be”, followed by “I need more time for non sport activities” and “The training is too hard”. The same tendency was observed in Vuokatti Sports Academy, while in the combined group of the other academies the top three reasons were the same, but the athletes also reported the reason “I want to do another sport” to be equally important to the top three reasons. Also it was found that the athletes who decided to drop out from competitive training, i.e. the risk group (a), reported the other reasons to be the most important. In the overall risk group (a) the top three reasons were “I need more time for non sport activities”, “The training is too hard” and “I need more time for education”, they were accepted by 80 percentages of the athletes. The other reasons as “I do not have enough motivation”, “I am not as good as wanted to be”, “I want to do another sport” and “My skills do not improve” were also highly accepted by athletes who did not want to continue competing.

Even the study was conducted with engaged athletes, the results obtained from the risk group (a) and the entire risk group correspond with the results of a retrospective ten-year

study on dropout reasons made by Butcher, Lindner & Johns (2002); a 25 - Year Study by E.Enoksen (2011); the study by Molinero et al. (2006) and a study of D.Lepir (2009). The most common dropout reasons that showed up in those researches were: interest in other activities, lack of fun and satisfaction, lack of success or advancement, stagnation in performance, educational demands, and lack of motivation.

This thesis also acknowledged the issue that for competitive athletes such reasons as “lack of fun” or “lack of enjoyment” are less important compared to training and performance factors or educational demands. Only 20 percentages of the entire risk group athletes reported such reason as “I do not enjoy training” to be important for dropout predisposition; notable there were no athletes in Vuokatti Sports Academy who mentioned this reason at all. Such a tendency was highlighted by E.Enoksen, J.Butcher et al. and O.Molinero et al; who outline that subjects with different ages and competition levels have different dropout patterns and reasons. Such phenomenon could be explained by the fact that adolescent competitive training is already very demanding and it is aiming for result and maximal performance. Athletes usually follow a training plan which is aimed for achieving an optimal shape, but the plan does not imply on having fun during practices. Having fun is more important for beginners and juniors, because early training is usually introduced in form of games or other activities that help to learn sport specific skills through games or other fun activities. For example, Molinero et al. stated that “Subjects with different competition levels at the time of dropout mainly differed in factors related to fun and status. Results confirm that a combination of factors from a variety of sources interact to determine attrition and that gender, participation in individual/ team sports or level of competition reached at the time of dropping out influence reasons for discontinuing involvement” (2006, 255).

The athletes who were not included in the risk group had very similar prevalence of the dropout reasons. The three most common reasons mentioned by the athletes were “I am not as good as wanted to be”, “I need more time for non sport activities” and “The training is too hard”. In Vuokatti Sports Academy, three dropout reasons, which were mostly accepted by athletes who were not included in the risk group, were “I am not as good as wanted to be”, “I need more time for non sport activities” and “The training is too hard”. The first reason was accepted by 58 percentages of the athletes, the second reason by 36.8 percentages and the third by 31.6 percentages respectively. Such a high frequency of the “I am not as good as wanted to be” reason among all the surveyed athletes can be explained by the low level of

satisfaction with own results. The results of the study support that fact indicating that 73.8 percentages of the athletes from the total sample were not satisfied with their own results in the past competing season. Adolescent athletes may set too tough or unachievable goals for themselves; it is important for coaches to teach their athletes to set achievable goals and to properly assess their own capability.

The third research question was evaluated by the open question on the academy services and coach support. In Vuokatti Sports Academy 63 percentages of the athletes were satisfied with the services. Also 18.5 percentages of the athletes wanted to have cheaper meal prices in the academy's canteen. That is an obvious desire, if the situation is viewed from the customer perspective: customers always want cheaper services. Also such additional services and improvements as free gym and fitness testing, financial support, better recovery services, more training sessions during school time and more training discussions with coaches were mentioned once by various athletes. Because those reasons were mentioned only once, they are more likely to be a personal desire neither that a need of the entire group.

In Etelä-Kymenlaakso Sports Academy all three athletes who took part in the survey were satisfied with the academy services, while in Etelä-Karjala Sports Academy and Päijät-Häme Sports Academy 50 percentages of the athletes wanted such additional services as free massage and physiotherapy. This desire can partly explain why the athletes claimed that the training process was too hard; probably there was a lack of recovery or the access to the recovery services was limited due to high prices.

In the present study the mean age of the entire risk group athletes was 17.5 years ($SD = 0.5$). The academy-specific mean values were very similar: 17.6 years ($SD = 0.5$) in Vuokatti Sports Academy and 17.4 ($SD = 0.5$) years in the combined group of the other three academies. The mean age of the risk group's (a) athletes was 17.8 years for the entire group and 18 years for Vuokatti Sports Academy athletes. Taking that into account, it can be claimed that for the athletes who participated in this study, the predisposition to dropout occurred between 17 and 18 years. Such a result is consistent with the results of E. Enoksen (2011), who examined dropout track and field athletes, and concluded that: "The highest dropout rate occurred when the athletes were 17 years old" (31). Also the study of J. Butcher, K.J. Lindner and P. Johns (2002) indicated that dropout rate peaks at about 15-17 years and occurs in the

transition between primary and secondary school, and at the end of secondary school education.

The comparison of the overall risk group and non-risk group athletes also highlighted the role of motivation in the development of dropout predisposition. The risk group athletes agreed with such reason as “I do not have enough motivation” to a greater extent compare to the non-risk group athletes. In the overall risk group 38.5 percentages of the athletes reported a lack of motivation, while in the non-risk group only 7 percentages of the athletes indicated a lack of motivation. Interestingly, the percentage of the athletes who experienced the lack of motivation dramatically increases from the non-risk group to the risk group (a), with 7 percentages in the non-risk group to 60 percentages in the risk group (a) respectively. This finding confirms that motivation plays an important role in the process of sport dropout. Also it supports the idea of Gould (1996) who concluded that “Young people dropping out of competition to be the final result of a process of lack of motivation.”

The results of the Sport Motivation Scale (SMS 28; Pelletier et al., 1995) also highlighted the importance of motivation. In the overall risk group sample 9 of 13 athletes (69.2 percentages) had predominance of extrinsic motivation over intrinsic and high levels of amotivation. This finding establishes a strong correlation between dropout predisposition and degrees of self-determined motivation. Even this issue was not the focus point of this thesis, such a notable finding cannot be neglected. Also this finding is in line with previous research on motivation and dropout patterns. For example, P.Sarrazin (2002) concluded that “Lack of intrinsic motivation as well as a concomitant increase in amotivation, predicted behavioral intentions of dropping out. It thus appears that these two variables represent key motivational constructs in the understanding and prediction of sport dropout. Consequently, intrinsic motivation should be nurtured in order to facilitate athletes’ persistence in sports.” (414). This fact also stresses the importance of intrinsic motivation. Intrinsic motivation has been associated with adaptive cognitive, affective, and behavioral outcomes, such as a physically active lifestyle and intention to participate in sport (Liukkonen, Watt, Barkoukis & Jaakkola 2010, 296). Therefore, coaches should strive to create a mastery climate followed by task-orientation and intrinsic motivation for sport participation. A key element for the coaches to establish the mastery climate is to focus the training process on the mastery dimensions of the activity and not on the extrinsic (i.e. winning at all costs) dimensions (Sarrazin et al., 2002, 414).

The results of the Task and Ego Orientation in Sport Questionnaire (TEOSQ; Duda & Nicholls, 1989) supported the important role of motivation too. Accordingly to Cervello, Escarti and Guzman (2007, 69) “High orientation towards ego and a low perception of ability positively predict dropout behavior.” In this investigation the results of the TEOSQ test indicated that 11 athletes (26.2 percentages) from the total sample had high levels of ego orientation. From those 11 athletes, 7 athletes represented the risk group, meaning that 53.8 percentages of the athletes with dropout predisposition had high orientation towards ego, which is in line with the findings of Cervello et al.

The commissioner wanted to receive data on the quantity of the cross-country skiers in the age group 15-18 years who did not want to continue training and did not want to become professional athletes. Since the mission of any sport academy is to assist young elite athletes to pursue their education, combining training and competing at an elite level, it is of importance to know how many athletes are actually motivated to compete and have a desire to become professional athletes. Secondly, the commissioner wanted to know what the factors and reasons were behind dropout predisposition, if it occurs among the athletes. The study provided a picture on the situation that existed at the moment of the testing in the cross-country skiing team of Vuokatti Sports Academy in the age group of 15-18 years. The study was conducted with engaged athletes in the off-season period, so the research data evaluated the situation that has been in the team at that time. This means that before the start of the competition season the opinions of the athletes might change both in positive and negative ways towards desire to drop out from training and competing.

8.2 Ethicality and Reliability

The reliability of the research was established by reliable tests and measures that have been used in the survey. According to Sampson J.P. “Reliability is concerned with the extent to which a measure is consistent and stable in measuring what it is intended to measure. Evidence of the reliability of a measure helps the reader determine the likelihood that differences or relationships among variables actually exist, as opposed to being an artefact of the unreliability of the measure.” (2012, 39).

The following tests and questionnaires have been used in this thesis: The Sport Motivation Scale (SMS 28; Pelletier et al., 1995), Task and Ego Orientation in Sport Questionnaire (TEOSQ; Duda & Nicholls, 1989), and modified version of „Questionnaire of Reasons for Attrition” (Gould et al., 1982). Those questionnaires were highly used in sport dropout studies before and their reliability was proven by variety of researchers. Reliability refers to the consistency of a measure. A questionnaire/ or test is considered reliable if the same result is obtained repeatedly when the questionnaire is re-administered/ or tested repeated. For example Lafaille & Wildeboer explains reliability as follows “In the human sciences reliability has the meaning of observation without systematic bias. Derived from this general definition, it also means stability/reproducibility of the results of a scientific observation (measurement): repeated application of a research instrument upon identical persons have to show identical results.” (1995, 27).

The forth questionnaire was developed by the author and the commissioner organization and was aimed to evaluate athletes’ career expectations and contentment from the previous competitive season. Also the testing form and all the questionnaires that it included were translated in Finnish to make the testing process clearer and easier for the athletes. The translation was made by the staff of Vuokatti Sports Academy that was familiar with participation and testing in sports and approved by the head of Vuokatti Sport Institute, so it can be claimed that the translation of the questionnaire has not decreased the reliability of the study.

The ethicality of the research process was also taken into consideration during this study. Before the testing every Academy gave the permission to test the athletes and signed the permission form. Also in all the Academies that took part in the study the athletes were informed that the participation was voluntary and anonymity was guaranteed as well as the assurance that all the data would be kept strictly confidential was given.

One of the limitations of the study is the specificity of the target age group. Since the previous research has proved that the dropout rates and reasons are age specific, the data gathered through this study describes only target age group and may be different from the data obtained from other age groups. Another limiting factor is the Academy specificity, this study provides reliable data about the situation in Vuokatti Sport Academy and Päijät-Häme Sports Academy, while the data obtained from Etelä-Karjala Sports Academy and Etelä-

Kymenlaakso Sports Academy is less reliable due to the low response rates. Even the reasons for dropout predisposition mentioned by the athletes of various academies were very similar; the situation could be completely different in the other academies. The number of the surveyed athletes was not enough to generalize the outcomes of the study. According to quantitative research methodology, to make a strong statistical claim based on the outcomes of a study the population of this study should consist of at least 100 people.

8.3 Personal Development

In the beginning the thesis process seemed to be too complicated and the goal seemed to be too challenging. But I was highly motivated to complete the research, because the topic was so exciting for me. The thesis was concentrated on my favorite sport and the commissioner organization was interested in the investigation and supportive, so I tried to do my best during the research process.

The features of the thesis topic allowed acquiring a significant amount of new knowledge on cross-country skiing itself, sport psychology and working methods with adolescent athletes. Also the thesis process strengthened the bond between my theoretical knowledge and working life skills. I became more confident as a coach and deepened my expertise in pedagogy and didactics. The process of theoretical background collection has dramatically expanded the professional vocabulary and helped to understand the principles of a research making.

The outcomes of the study and the knowledge acquired during the research process are of great value for my own development as a coach and professional in the field of sports. New knowledge improved my competence in coaching and health promoting too. Especially I was glad that the thesis process gave me new knowledge on psychology, physiology and biomechanics of cross-country skiing, and since I want to become a cross-country skiing coach, that knowledge are of great importance. I was very fortunate that I was able to write my thesis on a topic that interests me and I hope that the result of the study will help the Sport Academies to understand dropout phenomenon and reasons behind it among cross-country skiers.

9 CONCLUSION

This study addresses the problem of the premature termination of the sport career by young athletes or “dropout phenomenon”. The study was focused on the cross-country skiers of Vuokatti Sports Academy in the age group of 15-18 years. The study found that 29.6 percentages of the athletes in the primary focus group thought about dropout from training and did not plan to become top athletes, while only 3.7 percentages of the athletes claimed they were not going to continue training and competing in the next season. All those athletes were put in the risk group for dropout predisposition. The most common reasons for dropout predisposition were “I am not as good as wanted to be”, “The training is too hard” and “I need more time for non sport activities”, while the most important reasons for sport dropout were “The training is too hard”, “I need more time for education” and “I need more time for non sport activities”. Also the study indicated that among the skiers at Vuokatti Sports Academy the dropout rate peaked between the age of 17 and 18 years, with the mean age of 17.6 years in this study.

This thesis also highlights the important role of motivation and motivational climate in the formation of dropout predisposition and desire to drop out from training. The coaches should strive to create a mastery climate in the team and during practice. This might help to prevent dropout behavior in athletes. The results of the study are consistent with the previous research on sport dropout, and the study provides a reliable picture on the situation in the cross-country skiing team of Vuokatti Sports Academy. The future studies could examine other age groups and evaluate gender differences as well as correlations between motivational profiles and reasons for sport dropout predisposition.

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LIST OF APPENDICES

- Consent form
- Questionnaire (the English version)
- Instructions for the questionnaire

CONSENT FORM

DEAR ACADEMY COACHES

I would like to ask you to participate in the research, which investigates dropout behavior and reasons for it among competitive adolescent cross-country skiers. The purpose of this thesis is to investigate if there is a predisposition to dropout among 15 – 18 – year – old Cross Country Skiers. With your support and approval, I would like to include the student athletes from your academy in the study.

DATA COLLECTION

Data for this study will be collected using self administrated questionnaire, which includes tests that evaluate athletes' motivation for participation (Sport Motivation Scale, Pelletier 1995), sport orientation (Task and Ego orientation in Sport questionnaire, Duda 1989) and dropout behavior (Reasons For Sport Attrition Questionnaire, Gould 1982).

PARTICIPANTS

The target group of this study is competitive, 15-18-year-old cross-country skiers (both males and females)

DATA PROJECTION

All data related to this thesis is confidential, and participation in this study is voluntary. Questionnaires are answered anonymously. The researcher is bound to professional secrecy. A copy of the research results will be forwarded to you if you wish. You have the right to ask more information on this study, and I am pleased to answer any questions.

COMMISSIONER

The commissioning organization for this thesis is Vuokatti Sport Institute.
Contact person – Jyri Pelkonen (Director of the Vuokatti Sport training center)
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Kind regards,

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QUESTIONNAIRE

I. DEMOGRAPHIC INFORMATION

1. Gender: Male Female
2. Age:
3. What is your sport? :
4. At what age did you start competitive training? :
5. Have many hours per week do you train? :
6. Are you competing in any other sports? : YES NO

II. REASONS FOR PARTICIPATION (SPORT MOTIVATION SCALE)

(Luc G. Pelletier, Michelle Fortier, Robert J. Vallerand, Nathalie M. Brière, Kim M. Tuson and Marc R. Blais, 1995)

WHY DO YOU PRACTICE YOUR SPORT?

Using the scale below, please indicate to what extent each of the following items corresponds to one of the reasons for which you are presently practicing your sport.

Does not correspond at all 1 - >Corresponds a little 2-3 - >Corresponds moderately 4 - >Corresponds a lot 5-6 - >Corresponds exactly 7

Reasons	1	2	3	4	5	6	7
1. For the pleasure I feel in living exciting experiences.							
2. For the pleasure it gives me to know more about the sport that I practice.							
3. I used to have good reasons for doing sport, but now I am asking myself if I should continue doing it.							
4. For the pleasure of discovering new training techniques.							
5. I don't know anymore; I have the impression of being incapable of succeeding in this sport.							
6. Because it allows me to be well regarded by people that I know.							

7. Because, in my opinion, it is one of the best ways to meet people.							
8. Because I feel a lot of personal satisfaction while mastering certain difficult training techniques.							
9. Because it is absolutely necessary to do sports if one wants to be in shape.							
10. For the prestige of being an athlete.							
11. Because it is one of the best ways I have chosen to develop other aspects of myself.							
12. For the pleasure I feel while improving some of my weak points.							
13. For the excitement I feel when I am really involved in the activity.							
14. Because I must do sports to feel good myself.							
15. For the satisfaction I experience while I am perfecting my abilities.							
16. Because people around me think it is important to be in shape.							
17. Because it is a good way to learn lots of things which could be useful to me in other areas of my life.							
18. For the intense emotions I feel doing a sport that I like.							
19. It is not clear to me anymore; I don't really think my place is in sport.							
20. For the pleasure that I feel while executing certain difficult movements.							
21. Because I would feel bad if I was not taking time to do it.							
22. To show others how good I am good at my sport.							
23. For the pleasure that I feel while learning training techniques that I have never tried before.							
24. Because it is one of the best ways to maintain good relationships with my friends.							
25. Because I like the feeling of being totally immersed in the activity.							
26. Because I must do sports regularly.							

27. For the pleasure of discovering new performance strategies.							
28. I often ask myself; I can't seem to achieve the goals that I set for myself.							

III. TASK AND EGO ORIENTATION IN SPORT QUESTIONNAIRE (TEOSQ)

Consider the statement "I feel most successful in sport when..." and read each of the following statements listed below and indicate how much you personally agree with each statement by entering an appropriate score where:

1 –Strongly Disagree 3 – Neutral 5 Strongly Agree
2 – Slightly Disagree 4 – Slightly Agree

Reasons	1	2	3	4	5
1. I am the only one who can do the play or skill					
2. I learn a new skill and it makes me want to practice more					
3. I can do better than my friends					
4. The others cannot do as well as me					
5. I learn something that is fun to do					
6. Others mess up but I do not					
7. I learn a new skill by trying hard					
8. I work really hard					
9. I score the most points/goals/hits, etc					
10. Something I learn makes me want to go practice more					
11. I am the best					
12. A skill I learn really feels right					
13. I do my very best					

IV. REASONS FOR SPORT ATTRITION QUESTIONNAIRE

USING THE SCALE BELOW, PLEASE INDICATE TO WHAT EXTENT EACH OF THE FOLLOWING ITEMS CORRESPONDS TO YOUR OWN OPINION ABOUT YOUR TRAINING PROCESS.

1 –STRONGLY DISAGREE 3 – NEUTRAL

5 STRONGLY AGREE

2 – SLIGHTLY DISAGREE 4 – SLIGHTLY AGREE

Reasons	1	2	3	4	5
1. I need more time for non sport activities					
2. I do not enjoy training					
3. I am not satisfied with the coach					
4. I am not as good as wanted to be					
5. Training takes too much time					
6. The training is too hard					
7. My skills do not improve					
8. I want to do another sport					
9. I do not like the pressure					
10. Parents or friends no longer want me to compete					
11. I need more time for education					
12. I do not have enough motivation					

V. CAREER EXPECTATIONS

USING THE SCALE BELOW, PLEASE INDICATE TO WHAT EXTENT EACH OF THE FOLLOWING ITEMS CORRESPONDS TO YOUR OWN OPINION

1 – Strongly Disagree 3 – Neutral 5 Strongly Agree
 2 – Slightly Disagree 4 – Slightly Agree

Statements	1	2	3	4	5
My competition season was successful					
I enjoy my training					
I will continue training next season					
I want to become a professional (top) athlete					
I thought about to stop training during previous/current season					

VI. What additional services or forms of support do you want to receive from your coach/academy?

INSTRUCTIONS FOR COMPLETING THE QUESTIONNAIRE

Dear Coach,

I would like to thank you for participating in the completion of my thesis. I know that time is precious, and therefore the instructions for completing the questionnaire need to be brief.

It is important that the athletes understand that their participation in the study is both voluntary and anonymous. The questionnaires should be administered at the beginning of a normal training session. Participants have to complete the questionnaire individually and remain quiet until all participants have completed the questionnaire. This should take approximately 20 minutes, but there is no strict time limit in order for all participants to have sufficient time to complete the questionnaire. After completion of the questionnaire, all questionnaires are returned to the coach (or person who supervises the completion of the questionnaire).

Thank you for your time and assistance.

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