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**Internal Motivation as a major factor in young male Athletes**

**BSc Thesis**

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## **Abstract**

**Objective:** The aim of this research was to determine if the Intrinsic Motivation factor is the most prominent in motivating young male athletes aged 13, 14 and 15 to practice sports, among the other motivating factors which are Amotivation, External Regulation Introjected Regulation, Identified Regulation and Integrated Regulation.

**Method:** A selection of 30 young, male, Cypriot athletes, in a cross-sectional design, participated in a structured questionnaire using the Sport Motivation Scale (SMS) which included seven subscales measuring the three categories of motivation Amotivation, Extrinsic and Intrinsic Motivation.

**Results:** Using Analysis of Variance the main finding of the present study was that the Intrinsic Motivation factor was found to be the most statistically significant factor among the other motivating factors in the age category of 15 year olds. This result allowed the researcher to reject the null hypothesis. However, the External Regulation factor had the highest mean value (4.93) overall among the other factors for the ages 13, 14 and 15.

**Conclusion:** In this specific sample (Cypriot Community) it was found that Intrinsic Motivation (4.69) was the major factor motivating 15 year olds. However, the results also revealed that the External Regulation (4.93) factor was a major factor contributing to motivating young male athletes to practice sports in this specific sample. In opposition, the lowest mean score, apart from the Amotivation factor (1.82) was the Integrated Regulation factor (4.37).

**Keywords:** *Sport, Motivation, Internal Motivation, Young Athletes.*

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*“Man is most nearly himself when he achieves the seriousness of a child at play”*,

-Heraclitus, Greek Philosopher, 500 B.C.

## **Chapter 1 Internal Motivation as a major factor in young male Athletes**

### **1.1 Research Structure**

The motivating factor, whether it be for Intrinsic reasons, External reasons or a mixture of both, in young athletes to enter sports, largely depends not only on the person themselves, but also on the coach, the cultural value that is placed on the sport by the said community or more specifically that specific sport, and the amount of pressure from parents that is directed towards the young athlete to either play a sport for health reasons or whatever other factors they may be consciously or subconsciously aware of. Therefore it is important to mention some developmental aspects of male youths and various other aspect that influence youths in adolescence before entering into a discussion on Amotivation, Intrinsic Regulation and External Regulation. Method and results of the research are then presented followed by the discussion, conclusion, limitations and suggestions for future research.

### **1.2 Research Goal**

1.2.1 In the present research, the first part describes the developmental perspective and various differences that are present in young athletes that participate in sports.

### **1.3 Research Question**

1.3.1 The major question in this research study was to determine the main factor that motivates young athletes to practice sport.

1.3.2 Sub-questions that arose from the study was whether or not there was a specific difference in individuals motivational reasons due to their age difference between athletes aged 13, 14, and 15.

### **2.1 Research Background**

Entering a stadium that is filled with thousands of spectators getting ready to watch a football game or any game for that matter is an exciting event for most. The air is filled with a buzz that is unexplainable and is normally shared by the crowd, regardless of the team they are rooting for. Sports may be the one universal language that all people can understand and share in, in an enthusiastically spirited way, regardless of age or race. It has been used to entertain the masses since the beginning of time and will continue to do so throughout the existence of mankind.

The difference between girls and boys and their reasons for being motivated to participate in sports vary. John R. Sirard et al. (2006) found that in middle school the factors that influenced boys and girls varied in terms of importance. For boys the motivating factor involved the competitive nature that sport had to offer, whereas for girls there was more of a social benefit. Up until the age of about eight or nine, children will tend to rely on external outcomes, such as winning or losing, and also upon the advice of adults in order to provide them with positive or negative feedback about their personal sports ability (Horn & Hasbrook,

1986, 1987; Horn & Weiss, 1991). Studies also point towards the factor that before adolescence, there is only a very slight understanding of children's perceptions of skill and their actual abilities as assessed by teachers or coaches (Horn & Weiss, 1991; Nicholls, 1978).

### **2.1.1 Boys Development**

Boys typically begin their growth spurt at the age of 13 and it will peak at 14, and by 16 it gradually slows back down. Thus this is a crucial period during young boys' lives. This is the time when they become men, and since sport is something that an individual must be able to relate to in order to be drawn to the sport of their choice, it is crucial to understand the importance of this period. Boys will tend to welcome weight gain during puberty (Richards et al., 1990) and wish to become hairier, taller and handsome, becoming preoccupied with their physical and athletic prowess (Simmons & Blyth, 1987). Mikulic et al. (2009) studied the differences between young rowers at the ages of 12, 13 and 14 in order to determine whether there was a difference in anaerobic power between the ages. Mikulic discovered that 14 year olds were found to have significantly greater adjusted mean power and peak power values. Thus, this illustrates the importance of differences between the various ages during this crucial developmental period and the importance of emphasizing the effects it can have on test outcomes in various settings. Not only does this period mark physical changes that include sexual maturity, broadening shoulders, deepening of the voice, but it also is a time of psychological maturation. Some of course will mature earlier than others will. Biological changes will interact with the social environment to influence the adolescent's experience (Magnusson, 1995). Depending on the environmental and psychological support present during this period, this transition can become either pleasant or unpleasant.

Studies have shown that early maturing boys are at a greater advantage in the sense that they have greater size and strength and often become more capable athletes, which in turn brings on better social recognition from peers and adults (Simmons & Blyth, 1987). This can boost their self-confidence and in turn allow them to take on more responsibilities, also depending on the relationship with parents, this can facilitate for positive negotiating and communicating with parental figures. However when parental control is at a high then there is a tendency for individuals' intrinsic motivation to become drained and thus this can in turn cause negative changes in self-esteem (Berk, 1999).

### **2.1.2 Cognitive and Emotional Maturity**

Coakley (1986) suggested that children were mostly lured to sports by the excitement they had to offer before they reached a mature concept about sport. For this reason, we can confer to the notion that for children to fully understand the competitive notions that games often entail, they are required to have reached a level of cognitive maturity (Passer, 1988). In support of this view, Morris et al. (2006) studied the effects of cognitive development on decision making in a soccer specific test amongst 11, 13 and 15 year olds. Morris found that there was a significant difference amongst the ages of 13 and 15 year olds in young athletes' cognitive development, which evidently affected their decision-making performance. Therefore the older the child the greater the likelihood that he/she will come to appreciate the nature of competitive sports and be better able to consider how committed they would like to be to their sport. The psychological and social benefits that sports provide for young athletes are essential and this is of great importance to emphasise this. Prior to the 1930's it was believed in the past, that, youth sports created stress and anxiety for young athletes that was in some ways inappropriate for them to deal with in adolescence, however Skubic (1955) in an attempt to overthrow this belief compared Little Leaguers and Middle Leaguers between



the ages of 9 to 15 to youths in non-league sports using the Galvanic Skin Response (GSR) and found that there was no difference in emotional excitation for boys at these ages. Thus, it can be safe to say that sports in adolescence are age appropriate and provides for a wide range of benefits. Furthermore, according to Coatsworth & Conroy, (2006), the benefits of youth sport have been known to improve self-esteem for young athletes that had a low self-esteem. Similarly, Slutzky & Simpkins (2009) found that those who reported spending more time in team sports had a higher sport self-concept, which in turn was related to a higher self-esteem over peers.

### **2.1.3 Peer Influence and Context**

Boiché and Sarrazin (2007) found in a study of 446 high school students with a mean age of 13.85, that the context of the sport led the sport itself to become competition for adolescents sport. Thus in the context of school or friendship, sport would become a competing factor and therefore may be negatively linked. Considering the age of 13 to 15, it is likely that in a school context, sport would become a means of gaining credit from various sources since this is a fragile age and since it is a landmark age and marks the beginning of teenage hood. Peer influence became increasingly important and consideration of entering sports may largely be because ‘peers’ or ‘friends’ are entering sports. As Harris (1995) states, “Peer groups are the primary environmental influence on psychological functioning”. The process of self-discovery seems to only come later on at about the ages between 14 ½ and 15 since here teenagers may have already tried several sports and have come to eliminate certain factors from their decision making process for remaining in sports. This view is supported by McCarthy et al. (2008) as he found that older children reported significantly greater enjoyment in sport and had greater self-referenced competency, competitive excitement, better affiliation to peers and more parental involvement with reference to team sport.

Important to note is also the benefit that youth sports bring in adolescence is that it allows them to become more sociable (Harter, 1978) and develop morally because they learn to engage in 'fair play' through appropriate models of social interaction that team playing provides. According to Orlick (1978), team playing provides them with the opportunity to put the team's needs above their own. For youth that are immature and have an egocentric outlook on life, this interaction can provide crucial learning and social developmental leaps that may not necessarily be provided elsewhere in the adolescent's lifestyle. However, youth involvement in sports is on the increase more than ever because of early involvement in sport, increasing involvement of women in sports and there are also better opportunities for young people with disabilities to participate (Payne & Isaac, 1999).

## **2.2 Participation of young athletes in sports**

To draw on Slutzky and Simpkins (2009) findings that team sports, as opposed to individualized sports provided for a higher self-concept and in turn a higher self-esteem, we can suggest that the competitive nature that team sports offer, also allow for individuals to attribute the reciprocal support to and from teammates to internal value systems. Although, young athletes who may enter sports for various reasons that include merit benefits, health and fitness reasons, skill development, and peer association, those who remain in sports are those that internalize the benefits and mostly remain for the fun of the game, camaraderie and the enjoyment they experience in playing sports.

Another important factor to consider when investigating the participation of young athletes in sport is the consideration as to why they remain committed to the sport. The list is endless, there are various reasons that young athletes stick to a sport, and depending on their goals for

entering a sport, their reasons for remaining in the sport will vary. Young athletes at the age of about 13 to 15 will generally participate in a game for the enjoyment that it has to offer, for the opportunity to socialize and become more popular with friends, and more so for the chance to develop their skills in differing sports or one specific sport.

Consistent with popular research it is believed that young people involve themselves in sport because of a love for the sport and a need for achievement (Bacanac et al. 2007). Nevertheless, the question is how young athletes can be helped to remain in this domain and further to make sport and physical activity a lifetime habit? The most important aspect for young athletes to stay in sports is the creation of an environment that fosters pleasure, growth and mastery therefore professionals such as coaches should use motivational techniques to achieve that (Hagger & Chatzisarantis, 2007). However, before we turn the attention to the motivation, it is essential to look at some literature around this interesting, yet essential area of investigation in sport.

### **2.2.1 The theory of Reinforcement**

The principles of reinforcement define the use of rewards and punishments that increase or decrease the likelihood of a similar response occurring in the future (Skinner, 1974). Despite the fact that there are many principles related to changing behaviour, two are the basic ones that underlie effective reinforcement. First, if doing something results in a good consequence such as being rewarded, people will tend to try to repeat the behaviour to receive extra positive consequences. Second, if doing something results in an unpleasant consequence such as being punished, people will tend to try not to repeat the behaviour so they can avoid

consequences that are more negative (Skinner, 1974). Therefore, according to the principles of reinforcement, the coaches follow two approaches to influence the behaviour of their athletes. The positive approach is designed to strengthen desired behaviours by motivating athletes to perform those behaviours and by rewarding them when those behaviours occur, whereas the negative approach concentrates on errors and thus attempts to eliminate unwanted behaviours through punishment and criticism (Dickinson, 1976).

From a sport psychological perspective, it is believed that the principal approach should be positive (Smith, 2001). Consequently, a positive approach to motivation is strongly suggested to avoid the potential negative side effects of using punishment as the primary approach. Research shows that athletes, who play for positive-oriented coaches like their teammates better, enjoy their athletic experience more, like their coaches more and experience greater team cohesion (Smith and Smoll, 1997). Further, sport psychology research, overwhelmingly supports the use of a predominantly (80-90%) positive approach (Smith, 2011), with punishment kept to a minimum. Behavioural modification techniques based on positive reinforcements have been successfully used to increase output during training sessions (Koop and Martin, 1983), improve performance and reduce errors (Allison & Allyon, 1980).

### **2.2.2 Extrinsic and Intrinsic Motivation**

The concept of motivation describes the internal or external forces that produce the initiation, direction, intensity and persistence of behaviour (Weiss & Chaumeton, 1992). In addition, people can be motivated in numerous ways. Researchers state that motivation is "a process through which a person makes use of available resources, time, talent, and energy in order to distribute them in a way they choose." This process is called the personal investment theory

(Maehr and Braskamp, 1986), which includes a two-stage causal process. The first stage involves the effects of external factors and their influence on how an individual looks at a particular situation. In the second stage, the individual takes into consideration a personal investment in the situation. The personal investment involves an inner drive, a desire, or an intention an individual possesses as a reaction to external influences (Deci 1975, Deci & Ryan, 1980, 1985).

Thus, the concept of motivation emphasizes the two major types of motivation, which are *extrinsic* and *intrinsic* motivation. The first type of extrinsic motivation in sports comes from external influences or people. More precisely, people are extrinsically motivated to earn rewards, social recognition or benefits (Deci & Ryan, 1985). The second type, intrinsic motivation is an inherent characteristic that feeds off one's inner drive to accomplish a goal or objective. According to Seifriz, Duda, and Chi (1992), "focusing on a task for its own sake, having a sense of self-determination, and perceiving oneself as able to meet the demands of a task are all assumed to be fundamental to intrinsic motivation."

Therefore, intrinsic motivation was defined as an individual's choice to participate in an activity because of the pleasure, enjoyment, and joy it produces (Deci, 1975). For example, Gill et al. (1983) concluded that children participated in youth sport activities to improve skills, have fun, learn new skills, accept challenge, and be physically fit. On the other hand, Deci and Ryan (1985) characterized extrinsic motivation as an individuals' participation based on the acquisition of extrinsic rewards such as money and awards.

### **2.2.3 Self-determination theory**

One of the most popular and widely used theories that provide a framework, which categorizes the various, reasons underlying the pursuit of an activity into six types of

motivation. According to the Self-determination theory, self-determined behaviours are produced out of choice and pleasure because they allow accomplishment of important goals and because they are consistent with one's values. Further, the self-determined forms of motivation have been proposed to promote a more active engagement of the self when dealing with stressful situations, thus leading to the use of adaptive coping processes (Deci & Ryan, 1985).

Much research has been associated with self-determined forms of motivation with positive behavioural, cognitive and emotional outcomes (Vallerand 1997). Recent study based on the self-determination theory, showed that during competition, which believed to be important, intrinsically motivated athletes developed task-oriented (positive) coping strategies. Conversely, extrinsically motivated athletes tended to avoid dealing with key issues and were far less likely to achieve their goals (Amiot, Gaudreau and Blanchard, 2004).

#### **2.2.4 Types of Intrinsic and Extrinsic Motivation**

To begin with, as it has been mentioned, intrinsic motivation comes from within, is fully self-determined and characterised by interest in, and enjoyment derived from, sports participation. In addition, there are three types of intrinsic motivation: knowledge, accomplishment and stimulation. The first type concerns the individual who engages in a sport activity for the pleasure and satisfaction he experiences while learning, exploring or trying to understand something new. In the second type, which is accomplishment, the individual engages in a sport activity for the pleasure and satisfaction he feels when creating something or mastering difficult skill, for example mastering a difficult dive he has been working on for a while. The third type of intrinsic motivation is stimulation, the person engages in an activity to

experience pleasant sensations such as fun, excitement and aesthetic pleasure, for example feeling the pleasure of climbing a mountain (Deci and Ryan, 1985).

Turning the attention to extrinsic motivation, there are four types of this kind of motivation. *External Regulation* by which an individuals' behaviour is completely controlled by external sources such as rewards and constraints. For example, an athletic trainer who spends lots of time in the training room simply to get a raise in salary is externally motivated. *Introjected Regulation* occurs when the individual is motivated by internal prods and pressures, for example, an exerciser who stays in shape to impress the opposite sex. It is important to note here that external and introjected regulations represent non-self-determined or controlling types of extrinsic motivation because athletes do not sense that they have the choice to select the type of their behaviour and consequently, they experience psychological pressure (Deci and Ryan, 1985).

Moreover, *Identified Regulation* happens when the behaviour is highly valued, accepted and judged by the individual and thus is performed willingly, even if the activity is not pleasant in itself. For example, an athlete participates in a sport because she believes her involvement contributes to her growth and development. *Integrated Regulation* is the most developmentally advanced form of extrinsic motivation. The activity is personally important because of a valued outcome rather than interest in the activity solely for itself. These two types, identified and integrated regulations, are self-determined types of extrinsic motivation because behaviour is initiated out of choice, although it is not necessarily perceived to be enjoyable. Additionally, these types of regulations account for why some athletes devote hundreds of hours to repeating mundane drills; they realise that such activity will ultimately help them to improve (Deci and Ryan, 1985). It is even more important to highlight that the three types of intrinsic motivation (knowledge, accomplishment and stimulation) as well as

the two types of extrinsic motivation (identified regulation and integrated regulation), all reflect the feeling of 'want' rather than 'ought' and thus have been found to positively relate to affective, cognitive and behavioural outcomes (Vallerand, 1997).

Lastly, *Amotivation* represents a lack of intention to engage in any behaviour. More precisely, individuals are neither intrinsically nor extrinsically motivated and thus experience is accompanied by feelings of incompetence and a lack of connection between one's behaviour and the expected outcome. For example, an amotivated athlete might be heard saying, 'I can't see the point in training any more – it just tires me out' or 'I just don't get any buzz out of competition whatsoever'. Such athletes exhibit a sense of helplessness and often require counselling, as they are highly prone to dropping out (Deci and Ryan, 1985).

### **2.3 Previous Research Findings**

A wide number of empirical studies seem to support the notion that people tend to be motivated intrinsically rather than extrinsically in any sport activity they engage. For example, the results of a study (Gagne et al. 2003) concluded that intrinsic motivation predicted attendance at practice each day over a 15-day period. Additionally, in another study (Simons et al. 2003), students who perceived a basketball dribbling task as personally relevant and instrumental, were more intrinsically motivated, put more effort and time on the task and also displayed higher levels of objective performance than those in less self-determined conditions.

Furthermore, attention has been given to the context of motivation in behavioural types of outcomes such as a persons' intention to engage in sport or physical activity. Research seems to support this notion by showing that intrinsic motivation positively predicts effort and



persistence. Further findings from this research reveal that the more self-determined the motivation, the more one intends to continue engagement in a sport activity (Ferrer-Caja & Weiss, 2000). Another research with teenage swimmers has also looked the context of motivation in persisting in sport and the findings support that intrinsic motivation is the most important positive predictor whereas amotivation found to be the most important negative predictor (Pelletier et al. 2001).

Even more, some researchers were interested in investigating certain types of motivations to understand better the complexity of continued behavioural engagement in exercise. More precisely, Hein et al. (2004) observed the three types of intrinsic motivation with British teenagers' intention to remain in sport and exercise after high school. The results concluded that intrinsic motivation to experience stimulation was the best predictor, followed by intrinsic motivation to accomplish things. In addition, these findings are in line with those of Jackson et al. (1998) who found that the best predictor of flow was intrinsic motivation to experience stimulation. Similarly, in another study, results showed that children's ability in swimming was positively associated with their reports of intrinsic motivation (Woolger and Power, 2000).

## **2.4 Present Study**

Taking into account the theory on the children's development in different age categories, while joining a sport activity as well as the literature and research on motivation, the hypothesis of the current research is to determine that intrinsic motivation is the predominant factor that motivates young athletes aged 13, 14 and 15 in a Cypriot community. For this reason, the present study aims to investigate the six factors of motivation (intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation and amotivation) among the chosen sample of participants in order to search

whether this specific aged- group from this specific population are motivated intrinsically or extrinsically in a sport domain.

In order to accomplish this, the 'Sport Motivation Scale' (SMS) had been used in a structured questionnaire, which consists of seven subscales that measure the three types of Intrinsic Motivation (Knowledge, Accomplishment things and experience Stimulation), the three forms of regulation for Extrinsic Motivation (Identified, Introjected, and External), and Amotivation. Studies confirmed the factor structure of the scale and revealed a satisfactory level of internal consistency and correlations among the subscales revealed a simplex pattern confirming the self-determination continuum and the construct validity of the scale (Pelletier et al. 1995).

## **CHAPTER 3 RESEARCH METHOD**

### **3.1 Subjects**

The participants who took part in this study were Cypriot pupils in Limassol community. Thirty (30) young boys were selected to take part in this study, 13 years old ( $n = 8$ ), 14 ( $n=12$ ), and 15 ( $n=10$ ). The participants' mean age was 14.

### **3.2 Instrument**

An anonymous questionnaire, the Sports Motivation Scale (SMS) was used for this cross-sectional design, consisting of 24 questions in response to the question "Why do you practice your sport?" (Pelletier et al. 1995). It must be mentioned that the items related to all factors were measured using a Likert scale from 1 to 7. It is also important to note that 1 stands for 'does not correspond at all', whereas 7 stands for 'corresponds exactly'. To be more specific the questions 5, 12, 17 and 22 were used to determine the Amotivation factor, questions 4, 11, 19 and 24 for the External Regulation factor, questions 7, 10, 16 and 23 for the Introjected Regulation factor, questions 3, 8, 15 and 20 for the Identified Regulation factor, questions 2, 9, 13 and 21 for the Integrated Regulation factor, and finally the questions 1, 6, 14 and 18 for the Intrinsic Motivation factor. It should also be noted that the Questionnaire was translated in the Greek language and then back into English. Furthermore, participants parents were given an information sheet and consent form which were done in Greek and then for the purposes of this research paper, were translated into English. Children were also

asked for their assent in Greek and also debriefed in the Greek language. These scripts were written in English for the purpose of this paper.

### **3.3 Design**

The main design of the present study is a cross-sectional design as it examines the motivation of teenagers to practice sport in a Cypriot community. The statistical design is an independent groups design while participants responded individually to a structured questionnaire.

### **3.4 Procedure**

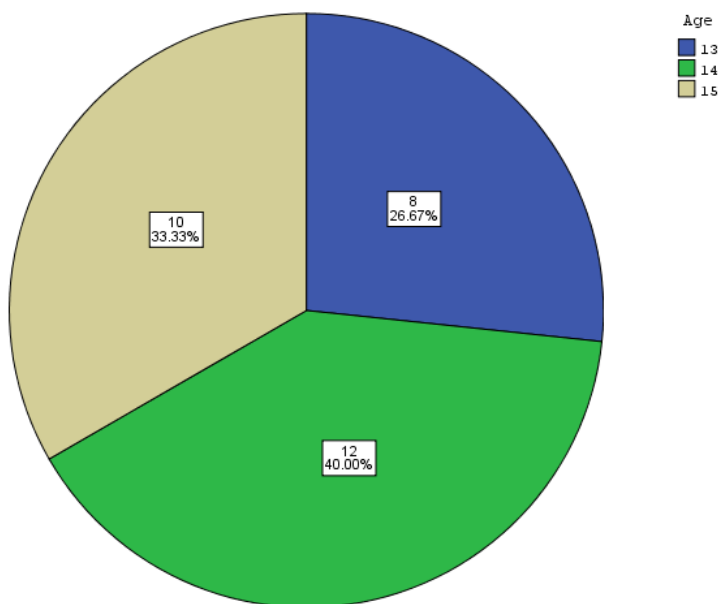
In order to conduct this research, permission from the coach in Ayios Yiannis Suburb in Limassol was gained to approach parents. The coach has a basketball team of 3 different age groups, of which 15 parents were approached from each age group, however, 8 from the 13 year old age group, 12 from the 14 year old age group and 10 from the 15 year old age group agreed. Firstly, participants' parents were given an information sheet (see Appendix 1) and after they have read and understood the nature of the study and agreed for their children to participate, they signed the consent form (see Appendix 2). In addition, they were informed about their child's right to withdraw at any time and for any reason from the study. After collecting the consent forms, it should be mentioned that the study was conducted in the premises of the 'Solomonides Athletic Centre' for collecting data from the young Cypriot participants. Young athletes were also asked to give their assent to participate in the study by explaining what the study was about, their rights to withdraw at any time and any other information that was necessary to complete the study (see Appendix 3). Correspondingly, the participants were expected to fill in a questionnaire (see Appendix 4) according to their

motivation for entering sports by circling the numbers showed on the 7-point scale. The completion of the questionnaire lasted no more than 15 minutes and at the end of it, participants were provided with a debriefing form (see Appendix 5).

## Chapter 4 Results

### 4.1 Frequency Distribution of the three age groups

The number of participants that participated in the present study is 30, and they were young athletes from Cyprus and more specifically from Limassol district. The following figure presents the frequency distribution for the age from where the responses selected. Eight (26.67%) young athletes were thirteen years old, twelve (40.00%) were fourteen years old and ten (33.33%) were fifteen years old.



## 4.2 Descriptive Statistics for six factors of Motivation

**Table 1:** *Descriptive statistics for the factors selected for this study*

The table below presents the descriptive statistics and mean scores for the six factors that have been observed for this study. It must be mentioned that the items related to all the factors were measured using a scale 1 to 7. It is important to note that 1, stands for ‘does not correspond at all’, whereas 7 stands for ‘corresponds exactly’. It can be seen that Amotivation factor has the lowest mean value (1.82) whereas External Regulation factor has the highest mean value (4.93).

Table 1

*Descriptive statistics for the factors selected for this study*

|                           | N  | Minimum | Maximum | Mean | Std.<br>Deviation |
|---------------------------|----|---------|---------|------|-------------------|
| Amotivation               | 30 | 1.00    | 3.75    | 1.82 | .989              |
| External Regulation       | 30 | 2.50    | 6.00    | 4.93 | .843              |
| Introjected<br>Regulation | 30 | 2.75    | 6.25    | 4.83 | .847              |
| Identified Regulation     | 30 | 3.50    | 6.75    | 4.73 | .729              |
| Intergrated<br>Regulation | 30 | 2.25    | 6.25    | 4.37 | 1.052             |
| Intrinsic Motivation      | 30 | 2.75    | 6.50    | 4.69 | .832              |
| Valid N (listwise)        | 30 |         |         |      |                   |

*Note.* Values on mean scores on a 7-point scale (1= ‘does not correspond at all’, 7= ‘corresponds exactly’). N=30. Adapted from the ‘Sport Motivation Scale’ (SMS) by Pelletier, L. G., Fortier, M. S., Vallerand, R. J., Tuson, K. M., Brière, N. M., & Blais, M. R. (1995). Toward a new measure of intrinsic motivation, extrinsic motivation, and amotivation in sports: The Sport Motivation Scale (SMS). *Journal of Sport & Exercise Psychology*, 17, pp. 35-53

### 4.3 ANOVA test of six motivational factors for differences in age groups

**Table 2:** ANOVA test of the six motivational factors between the three different age groups

In order to check possible differences for the mean scores for each of the six factors between the three age categories (13, 14 and 15 years old) the one-way analysis of variance (ANOVA) was used. It can be observed from the following table that there are statistically significant differences between the means of the three age categories for the Intrinsic Motivation factor (P-value=0.004<0.05). ANOVA test also suggests that there are statistically significant differences between the means of the three age categories for the Identified Regulation factor (P-value=0.045<0.05).

Table 2

*ANOVA test of the six motivational factors between the three different age groups*

| Test of Homogeneity of Variances |                  |     |     |         | ANOVA |         |
|----------------------------------|------------------|-----|-----|---------|-------|---------|
|                                  | Levene Statistic | df1 | df2 | P-Value | F     | P-Value |
| Amotivation                      | 0.69             | 2   | 27  | 0.51    | 0.13  | 0.876   |
| External Regulation              | 8.27             | 2   | 27  | 0.00    | 1.59  | 0.221   |
| Introjected Regulation           | 1.32             | 2   | 27  | 0.28    | 2.59  | 0.094   |
| Identified Regulation            | 0.49             | 3   | 27  | 0.62    | 3.49  | 0.045   |
| Intergrated Regulation           | 2.08             | 2   | 27  | 0.14    | 2.057 | 0.095   |
| Intrinsic Motivation             | 1.07             | 2   | 27  | 0.36    | 6.69  | 0.004   |

*Note:* Levene test for equality of variances in different samples. A 7-point scale (1= 'does not correspond at all', 7= 'corresponds exactly') was used. ANOVA analysis used for differences across the six motivational factors. Toward a new measure of intrinsic motivation, extrinsic motivation, and amotivation in sports: The Sport Motivation Scale (SMS) (Pelletier et al. 1995).



#### 4.4 Kruskal-Wallis test for equality within small population size

Taking into consideration the small sample size in each age category a non- parametric test seems to be most appropriate. Therefore, the Kruskal-Wallis test has been used to test possible differences between the three age categories. It can be seen from the following table (Table 3) that there are statistically significant differences for the Intrinsic Motivation factor between the three age groups (P-values=0.008<0.05), whereas there are no significant differences between the age categories for the other factors.

Table 3

##### *Kruskal-Wallis Test*

|                | Amotivati<br>on | External<br>Regulation | Introjected<br>Regulation | Identified<br>Regulation | Intergrated<br>Regulation | Intrinsic<br>Motivatio<br>n |
|----------------|-----------------|------------------------|---------------------------|--------------------------|---------------------------|-----------------------------|
| Chi-<br>Square | .278            | 1.017                  | 3.486                     | 5.314                    | 3.972                     | 9.662                       |
| df             | 2               | 2                      | 2                         | 2                        | 2                         | 2                           |
| Asymp.<br>Sig. | .870            | .601                   | .175                      | .070                     | .137                      | .008                        |

*Note:* Kruskal-Wallis test was used for equality of variances across the six motivational factors. Chi-squared values are displayed for goodness of fit.

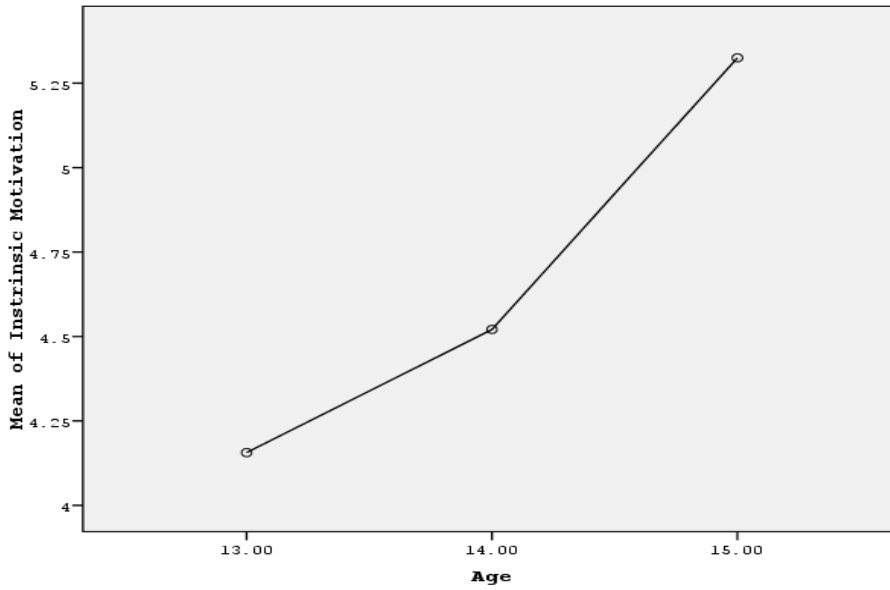
Table 4 illustrates that the mean ranks of the Intrinsic Motivation for those who are 15 years old (22.15) are much higher than those who are 13 and 14 years old (mean ranks are 10.06 and 13.58 for 13 and 14 years olds respectively).

Table 4

*Kruskal-Wallis Mean Ranks*

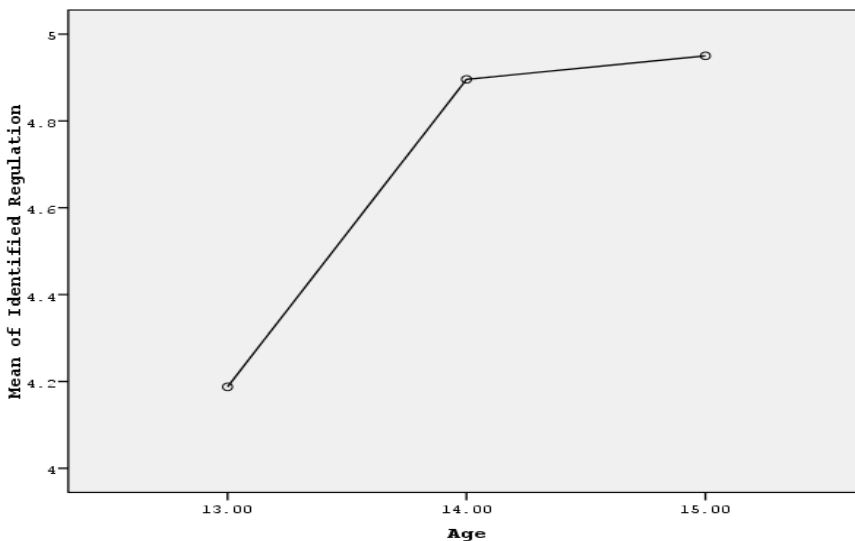
|                        | Age   | N  | Mean Rank |
|------------------------|-------|----|-----------|
| Amotivation            | 13.00 | 8  | 16.81     |
|                        | 14.00 | 12 | 14.83     |
|                        | 15.00 | 10 | 15.25     |
|                        | Total | 30 |           |
| External Regulation    | 13.00 | 8  | 12.94     |
|                        | 14.00 | 12 | 15.96     |
|                        | 15.00 | 10 | 17.00     |
|                        | Total | 30 |           |
| Introjected Regulation | 13.00 | 8  | 10.56     |
|                        | 14.00 | 12 | 17.42     |
|                        | 15.00 | 10 | 17.15     |
|                        | Total | 30 |           |
| Identified Regulation  | 13.00 | 8  | 9.44      |
|                        | 14.00 | 12 | 17.83     |
|                        | 15.00 | 10 | 17.55     |
|                        | Total | 30 |           |
| Intergrated Regulation | 13.00 | 8  | 10.56     |
|                        | 14.00 | 12 | 16.08     |
|                        | 15.00 | 10 | 18.75     |
|                        | Total | 30 |           |
| Intrinsic Motivation   | 13.00 | 8  | 10.06     |
|                        | 14.00 | 12 | 13.58     |
|                        | 15.00 | 10 | 22.15     |
|                        | Total | 30 |           |

*Note:* Kruskal-Wallis mean Ranks used to compare the six motivational factors.



**Figure 1. Mean Plot of Intrinsic Motivation factor in the three age groups.** Differences in age from 13 to 15 year olds for Intrinsic Motivation factor in young athletes. There is a slight increase from age 13 to 14 and a larger increase in 14 and 15 year olds.

Figure 1 above displays the differences in the means of Intrinsic Motivation between the ages of 13, 14, and 15 year olds.



**Figure 2. Mean plot of Identified Regulation factor in the three age categories.** Differences in age from 13 to 15 year olds for the Identified Regulation factor in young athletes. There is a vast difference between 13 and 14 year olds whereas there is only a slight increase from age 14 to 15.

Figure 2 further displays the significant difference between the means of Identified Regulation between individuals of ages 13, 14 and 15 years old. It is important to note that there is a substantial difference between the means of 13 year olds and 15 year olds. Furthermore, there is also a great difference between the means of 13 and 14 year olds for the Identified Regulation.

## **5. Discussion**

### **5.1 Discussion and Conclusion**

Several interesting findings were discovered from investigations done using the Sports Motivation Scale (SMS) (Pelletier et al. 1995). The discussion is explored by providing the findings of this study, whilst using key findings to support the results of this study and providing possible reasons for the results.

The purpose of this study was to determine whether young athletes are motivated by intrinsic motivation or extrinsic motivation in order to participate in sports and furthermore whether differences in age, play a specific role in this motivational process. In light of these findings, results from the Analysis of Variance (ANOVA) we reject the null hypothesis, since Intrinsic Motivation is the main factor that plays a role in the motivation of young athletes to practice sport amongst athletes at the age of 15 years old. Twelve (40%) participants reported that they practice sports 'For the excitement I feel when I am really involved in the activity'. At age 15 Intrinsic Motivation was more dominant than in 13 and 14 year olds. We attribute this factor largely to the fact that compared to 13 and 14 year olds, majority of 15 year olds are more mature, searching for their identity and doing more to gain a deeper sense of value. This is consistent with Buckworth et al. (2007), who propose that intrinsic motivation was greater than extrinsic motivation in a group of 70 students who were continually active, and exercise maintenance was maintained by intrinsic motivation rather than extrinsic motivation. This view that youth generally practice sport because of a love for the sport was resonated in a further study by Bacanac et al. (2007). Bacanac et al. (2007) studied 400 young athlete's response to the SSMS/97 and explored their reasons for going into sports. Results of the preliminary descriptive analysis confirmed that young people's decisions for entering into sports was above all because of a matter of personal interest and to further demonstrate this

59.3% of their sample mentioned that they entered sports to satisfy their own personal needs and motives. To support this view, Gill et al. (1983) found that young people go into sports for the fun of the sport, because they enjoy doing something which they are good at, to improve their skills, for the challenge, to keep fit and for the company they enjoy through making friends. These reasons all fall under the intrinsic motivation umbrella and support this research study that intrinsic motivation is the major factor that influences young people to practice sport.

Sport psychologists and practitioners were interested in understanding the motives of children who are involved in youth sport. For this reason, a study had been conducted in order to examine firstly the parental perceptions of their children's motivations and perceived competencies and secondly the children's responses on motives and perceived competencies. Eighty-one youngsters aged 7 and 14, and one of their parents from a youth soccer league, participated in the study. The results revealed that children and parents reported intrinsic motives such as 'feeling good' and 'having fun' as the primary reasons for participating in sport. In addition, the results indicated that both parents and their children rated external reasons such as ribbons, trophies and winning against others, as the lowest priorities for participation (McCullagh et al. 1993). Therefore, the findings of this study are in line with the findings of the present study, which resulted in high levels of intrinsic motivation in 15-year olds. It seems that young children enter sports because all they want is to have fun and further this is what motivates them to remain in a sport activity and not due to rewards or pressures by others.

Furthermore, to understand better what motivates children in physical activity, some researchers conducted a study in the school environment, investigating the interrelationship between participation motivation and achievement goal orientations. The participants were

412 secondary school students, aged 11-16. The results of this study showed that participants' involvement in sports is due to intrinsic reasons rather than extrinsic motivation (Zahariadis & Biddle, 2000). Similarly, the results of this study support the finding of the present study, that 15 year-olds are more intrinsically motivated.

A review of the literature on motivation in youth sport emphasizes that young athletes' major response to participation in sports is 'fun'. Considering the children's response, the review explains that this feeling of fun depends on experiencing the intrinsic satisfactions of skill improvement, personal accomplishment and excitement rather than being a result of extrinsic factors such as winning, getting rewards or pleasing others (Whitehead, 1989). The authors' review clearly supports the aim of the present study that intrinsic motivation is the most prominent in motivating young athletes to participate in sports.

However, one other study examined predictors of enjoyment experienced by 76 male wrestlers aged 9 to 14 years. In addition, the researchers wanted to investigate the amount of fun boys had experienced during the wrestling season and the degree to which they liked to wrestle. The study also involved intrapersonal variables such as the participants' age and their perception of their wrestling ability, which are also predictors of their sport enjoyment. Moreover, the researchers also examined the boy's perception on adult influences such as the coach and parental behaviour in relation to enjoyment. The results illustrated that the predictors of age and perceived ability found that younger boys and those who perceived greater wrestling ability, enjoyed their sport participation more than did the older boys and those with perceptions of lower ability (Scanlan & Lewthwaite, 1986). In opposition, this finding is contradicting with the finding of the present study, which found that 15 year-olds are more intrinsically motivated than the younger boys aged 13 and 14. Nevertheless, another significant finding of this study is that coaches and parental behaviour is influential for the

child's participation in the sport context. It had been found that boys, who felt their parents and coaches, were more satisfied with their overall wrestling performance than those who perceived less pressure. Surprisingly, this finding seems to deny the theory on positive motivation (Deci & Ryan, 1985).

Moreover, the second prominent finding in this study was surprisingly that External Regulation (ER) had the highest mean score overall in the outcomes of the research findings. Furthermore, in the descriptive statistics ER was not found to have significant differences across the ages. This has great implications for youth sports and should be kept in mind by sports coaches as well as parents of young athletes because initially, it may seem somewhat appropriate or worthwhile for parents and coaches to use external regulation goals to draw young athletes into sports as a means of achieving a healthier lifestyle or for the pride they feel in seeing their children achieve in sports. However, if we take into consideration the findings of this study, we can see that internal motivation increases with age and external regulation is used as motivation overall. This implies that the younger youth in this Cypriot sample, aged 13 and 14, are mostly extrinsically motivated. This would lead to debilitating teams however, since this could further affect the dropout rate of young athletes if they are only externally regulated, as participants are more likely to do the minimum work, which is allowed of them to get rewards, avoid punishment or defeat an opponent (Kruglanski et al. 1977). Possible reasons for this may be that parents and surrounding influences apply too much pressure on young people to partake in sports since Cyprus holds a very sports oriented culture which is largely connected to the politics of the country. Ryan et al. (1985) further found that if rewarding behaviour in such a way that the reward controls the behaviour, this will in effect undermines the intrinsic motivation. Black & Weiss (1992) studied the relationship between coaches and young athletes aged between 10 and 18 years of age in



order to investigate the perception of the athletes' competence and their intrinsic motivation. The study found that high levels of feedback from coaches were related to high measures of perceived competence, perceived successes and intrinsic motivation. Thus, this creation of a relationship between coach and athlete provides an added value to sport which could hold intrinsic value.

Pelletier et al. (1988) posits that athletes' perception of autonomy support was positively linked to self-determined forms of motivation, which are largely based on intrinsic motivation, however their perception of control was positively associated with less self-determined forms of motivation that are largely based on external regulation and amotivation. Therefore, due to the small population used as well as the nature of the Cypriot culture, being strongly influenced by a culture of sport, it can be postulated that the population in the present study, was greatly influenced by external pressures, either from parents and coaches to do well, since sport is highly esteemed in the said culture. To further validate this view, studies by Dean Ryan (1977, 1980) are drawn upon to discuss the effects of scholarships on young athletes. Football players who were on scholarships found to have a decreased sense of Intrinsic Motivation since their enjoyment was less than that of players who were not on scholarships.

Thus, Amorose, Horn & Miller (1994) found that in a study investigating 440 male and female athletes in a first Division of players on scholarships had lower levels of enjoyment, intrinsic motivation and perceived choice than those that were not on scholarships. Taking on a different view, we can also see that the context in which a sport is played can have implication on the Intrinsic Motivation of the athlete. The repercussions that scholarships will have on the enjoyment of sports are inevitable when taking into consideration the importance that is placed on the scholarship and its value, and Amorose and Horn (2000) further studied

this in order to validate their findings in 1994. They decided to explore the fact that athletes were on scholarships and the changing behaviours of their coaches and found that coaches, who used an autocratic approach with their athletes, further produced lower levels of intrinsic motivation as scholarship satisfaction decreased.

Another study examined the perceived motivational changes resulting from the hypothetical manipulation of a reward such as athletic scholarships. Seventy College athlete students participated in this study and completed a set of demographic questions as well as questions from the 'Sport Motivation Scale' (SMS, Pelletier et al. 1995) which assessed their 'present' motivation. The results indicated that the non-scholarship athletes' extrinsic regulation increased with the introduction of a scholarship and their intrinsic motive to experience stimulation decreased. Further, the results showed for the scholarship athletes that their intrinsic motive to accomplish things decreased when the scholarships were removed. In overall, scholarship athletes reported significant higher levels of external regulation compared to non-scholarship athletes (Nikola, 2003). The findings of this study support the significant finding of the present study that external regulation value was the highest one among the five factors of extrinsic motivation for the ages 13 and 14. Even more, they support the theory on rewards and motivation, which explains how external factors influence ones' intrinsic motivation in sports (Deci & Ryan, 1985).

To conclude this research study, much of the findings that Intrinsic Motivation is the primary reason for young athletes, more specifically 15 year olds, practicing sports in this study, resonate the results of previous researchers work that places emphasis on the importance of Intrinsic Motivation in the reasons for young athletes practicing sports. However, the other findings which we discovered, which was that External Regulation being the highest mean rank overall amongst 13, 14, and 15 year olds, lead the researchers to believe that culture and

a lack of cognitive development must play a bigger role than we are led to believe in a small island like Cyprus.

## **5.2 Limitations**

The limitations of the study to consider a few; firstly, the population sample was only a small size of thirty male participants and this is an important limitation in the present study. Unfortunately, due to the small sample size, the findings of this research cannot be generalized to a wider population of males and females, and more specifically, cannot be generalized to other cultures. Even more so, given that the predominant research done on Intrinsic and Extrinsic Motivation is mainly aimed at educational and learner environments, the literature available in order to provide a richly accommodated research study was not sufficient to allow for the adequate support of this study. A final limitation of the study was that major research studies that have been done on motivation in sports are aimed at college and young adult athletes, leaving the research on age groups that this study has focussed on, to be lacking. Unfortunately, in the current study we were unable to measure the relationship between coaches and athletes, and parents and athletes, in order to better analyse the influence of this dynamic relationship on individuals Intrinsic Motivation.

## **5.3 Future Recommendations**

In light of the findings of this research, it is proposed that further research is done amongst youths between the ages of 13 to 15 years old separately for each age group, since this is a crucial period in young teenager's lives. This period, as mentioned previously in the literature, marks the time in a young athletes life, when he goes from being a boy to a 'man', and from girl to 'woman' on a physical level, since puberty begins here, and also on a

cognitive level, since youngsters begin to question their needs and wants a lot more deeply during this critical stage. Furthermore, the context, as well as the influence from parents and peers should be considered in greater depth and furthermore, should be controlled for in a larger study that investigates their effects on young athletes' motivation because essentially, no single motive can be truly isolated.

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## APPENDIX A



### CHARLES UNIVERSITY PRAGUE FACULTY OF PHYSICAL EDUCATION AND SPORTS

#### Information Sheet

**Study Title:** *“Motivation of young athletes for entering into sports”*

**Researcher’s Name:** Elena Irodotou

You are invited to take part in a research study. Please read this information sheet carefully and if you have any questions or queries do not hesitate to ask or contact me on the following email: elena\_irodotou@hotmail.com. Your children will be asked to answer a questionnaire regarding their motivation for entering into their sport of choice. This will help us in our research to further assist children in motivating them to do sports and lead a healthier lifestyle. The questionnaire is simple and includes 24 questions that only involve circling the participant’s choice. The study will last no more than 15 minutes and is completely confidential. Your children will not be asked to give their names.

**Thank you for allowing your children to participate!**

## APPENDIX B



### CHARLES UNIVERSITY PRAGUE FACULTY OF PHYSICAL EDUCATION AND SPORTS

#### Written informed consent

I have understood the details of the research as explained to me by the researcher, and confirm that I have consented for my child to act as a participant.

I understood that my child's participation is voluntary, the data collected during the research will not be identifiable, and my child will have the right to withdraw from the project at any time without any obligation to explain the reasons for doing so.

I further understand that the data my child will provide may be used for analysis and subsequent publication, and provide my child's consent that this might occur.

Parents' Signature: .....

## APPENDIX C



### **CHARLES UNIVERSITY PRAGUE FACULTY OF PHYSICAL EDUCATION AND SPORTS**

#### **Participants assent statement**

“We would like to invite you to take part in a research questionnaire. We are interested in learning what motivates young people to enter into sports. Although your parents have given us permission to ask you about this, you are still free to make your own choice. If you agree to participate in our questionnaire you will be asked to fill it in which will only take about 15 minutes and then you are free to join the coach I your practice game.

“All of the answers you provide will be anonymous and anonymous means you don’t have to put your name on it. The questionnaires will then be locked in a cabinet and no one will see your answers except for the people who have helped in this research. That means that we will not be showing your parents or the coach what you have written. Your answers will be top secret.

“You should know you are free to stop the questionnaire at any point or say no to begin with. All you will have to do is wave your hand and one of the researchers will come over to you and all you need to say is ‘I would like to stop’, and you can stop. We will not be upset or angry that you stopped, and nothing bad will happen to you if you do not answer the questions. You will still receive your reward at the end. If you have any questions about the questions please feel free to ask now, or at any point in time.

## APPENDIX D



### CHARLES UNIVERSITY PRAGUE FACULTY OF PHYSICAL EDUCATION AND SPORTS

#### Why do you practice your sport?

- 1) For the excitement I feel when I am really involved in the activity.  
1 2 3 4 5 6 7
- 2) Because it's a part of my way in which I've chosen to live my life.  
1 2 3 4 5 6 7
- 3) Because it is a good way to learn lots of things which could be useful to me in other areas of my life.  
1 2 3 4 5 6 7
- 4) Because it allows me to be well regarded by people that I know.  
1 2 3 4 5 6 7
- 5) I don't know anymore; I have the impression of being incapable of succeeding in this sport.  
1 2 3 4 5 6 7
- 6) Because I feel a lot of personal satisfaction while mastering certain difficult techniques.  
1 2 3 4 5 6 7
- 7) Because it is absolutely necessary to do sports if one wants to be in shape.  
1 2 3 4 5 6 7
- 8) Because it is one of the best ways I have chosen to develop other aspects of my life.  
1 2 3 4 5 6 7
- 9) Because it is an extension of me.  
1 2 3 4 5 6 7
- 10) Because I must do sports to feel good about myself.  
1 2 3 4 5 6 7
- 11) For the prestige of being an athlete.  
1 2 3 4 5 6 7
- 12) I don't know if I want to continue to invest my time and effort as much in my sport anymore.  
1 2 3 4 5 6 7
- 13) Because participation in my sport is consistent with my deepest principles.  
1 2 3 4 5 6 7
- 14) For the satisfaction I experience while I am perfecting my abilities.  
1 2 3 4 5 6 7
- 15) Because it is one of the best ways to maintain good relationships with my friends.  
1 2 3 4 5 6 7
- 16) Because I would feel bad if I was not taking time to do it.  
1 2 3 4 5 6 7
- 17) It is not clear to me anymore; I don't really think my place is in sport.  
1 2 3 4 5 6 7
- 18) For the pleasure of discovering new performance strategies.



1 2 3 4 5 6 7

19) For the material and/or social benefits of being an athlete.

1 2 3 4 5 6 7

20) Because training hard will improve my performance.

1 2 3 4 5 6 7

21) Because participation in my sport is an integral part of my life.

1 2 3 4 5 6 7

22) I don't seem to be enjoying my sport as much as I previously did.

1 2 3 4 5 6 7

23) Because I must do sports regularly.

1 2 3 4 5 6 7

24) To show others how good I am at my sport.

1 2 3 4 5 6 7

## APPENDIX E



### CHARLES UNIVERSITY PRAGUE FACULTY OF PHYSICAL EDUCATION AND SPORTS

#### Debriefing Script for Study

“I want to talk to you a bit about the questionnaire you just filled in. Firstly, we want to let you know that the reason we ask these questions is because we would like to understand what it is that gets young people like you motivate to join sports, so that we can help other children stay interested in the sports of their choice. Was there anything you felt you would like to talk to anyone about or was there anything that was unclear about the questions asked.”

“Thank you for sharing your thoughts with us and helping us to improve sports in young people’s lives”.