Intrinsic motivation of college athletes and football players in Iceland:

Effects of coaches’ leadership style and determinants of intrinsic motivation

Hjörtur Þórisson og Magnús Pálm Gunnarsson

Lokaverkefni til BS-gráðu í sálfræði
Leiðbeinendur: Hallur Hallson og Ragnar Pétur Ólafsson

Sálfræðideild
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Ritgerð þessi er lokaverkefni til BS-gráðu í sálfræði og er óheimilt að afrita ritgerðina á nokkurn hátt nema með leyfi rétthafa.

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Abstract

The purpose of this study was to address intrinsic motivation in two different samples of athletes in Iceland and assess variables that relate to or affect their intrinsic motivation. The first sample consisted of both male and female footballers from 21 teams in three different divisions in Iceland. The Sport Motivation Scale-6 (SMS-6) questionnaire was used to measure the football players’ intrinsic motivation. Results indicated that (a) football players in the top divisions report higher intrinsic motivation than football players in fourth division, (b) female football players report higher intrinsic motivation than their male counterparts in the top divisions, and (c) no relationship was found between football players’ age and intrinsic motivation. The second study assessed the relationship between leadership styles of coaches and intrinsic motivation of 50 male and 60 female college athletes from variety of sports at the University of Iceland. Additionally to SMS-6 questionnaire, researchers used Leadership Scale for Sports (LSS) to measure athletes’ perceived behavior of their coaches to see if there was any relationship between coaches’ leadership styles and athletes’ intrinsic motivation. Results from these combined questionnaires revealed that (a) democratic leadership styles of coaches and athletes’ intrinsic motivation is positively correlated, thus the more that athletes perceives their coaches to be democratic the higher the levels of intrinsic motivation, (b) athletes who perceives their coaches to show behavior of social support and positive feedback report higher intrinsic motivation, and (c) positive correlation between higher training and instruction behavior among coaches and athletes’ intrinsic motivation.

Key constructs: motivation, intrinsic motivation, coaches’ leadership style, athletes
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Motivation and how coaches motivate their athletes is a widely-discussed topic in sports. When asked about the importance of motivation, Jose Mourinho manager of Manchester United stated “I think it’s more about people’s nature. It’s who you are and I always felt that it was my biggest motivation. I think when you need external sources of motivation, you are not so strong as you can be. External sources of motivation are exactly that – external sources” (Marshall, 2016). Here we have one of the greatest managers in football history emphasizing that motivation of successful individuals must come from within.

**Motivation**

A simple definition of motivation comes from Ryan and Deci (2000). The authors summed up the core meaning of motivation in a simple but nicely written sentence; “people who are motivated tend to be moved to do something” (p. 54). Thus, those who seek participation in a task may be characterized as motivated, whereas those who feel no inspiration to engage in an activity may be characterized as unmotivated (Ryan & Deci, 2000). Eventhough the above definiton seems adequate, other researchers have come up with several different definitions. For example, Kanfer (1990) explained that motivation can only be seen through products of multidimensional stream of behaviour. Another definition of motivation provided by Tillery and Fishback (2014) describes the construct as a psychological force that enables action. Although researchers differ in their definitions, most of them have come to treat motivation as a critical element for success in both learning and in sports and exercise context (Massarella & Winterstein, 2009). It has been endorsed by many scholars that motivation consists of peoples’ effort to seek out certain activity (direction of behaviour), the effort put into activity (intensity of action) and persistence of behaviour over time (see Kanfer, 1990). However, for most people direction and intensity of effort are closely related (Weinberg & Gould, 2015). For instance, a golf player who seldom misses a practice, and puts forth high effort during practice will eventually improve more than a golf player who misses many practices, and often exhibits low efforts when in attendance.

It has been found that motivation comes from two different types of sources; one internal, the other external. Intrinsic motivation refers to behaviour which is performed for itself, and carried out simply for the enjoyment it produces, whereas extrinsically motivated behaviour refers to behaviour which is carried out to attain some separable outcome, such as receiving a reward or avoiding punishment (see Vallerand, 1997). With external rewards, the
motivation comes from other people through positive or negative reinforcement which can affect peoples’ intrinsic motivation (Weinberg & Gould, 2015). It is also possible to explain motivation as a perceived locus of causality, where the emphasis is on the behaviour opposed to the outcomes (deCharms, 1968). Individuals perceive their behaviour either being regulated by internal or external causes resulting in an increase or decrease in intrinsic motivation. For example, if an individual sees himself as the cause of his behaviour, he is then intrinsically motivated, whereas an individual who perceives the cause of his behaviour to be external to himself (e.g., I did it to keep my parents happy) will consider himself extrinsically motivated.

**Theories of motivation**

It is important to understand why we do what we do, especially for people who are empowered to influence others. Instructors, such as teachers and coaches, have a responsibility to encourage their subordinates to act, think and behave in a certain way. Thus, in trying to positively influence others, one needs to understand how motivation works (Weinberg & Gould, 2015).

To better understand motivation and its components, Ryan and Deci (1980) formulated self-determination theory (SDT), a framework that distinguishes between many forms of regulated behaviour that provides a comprehensive understanding of motivational processes. In addition, they developed cognitive evaluation theory (CET; Ryan & Deci, 2002), a subtheory of SDT, that was postulated to explain intrinsic motivation in greater detail.

Regulation of behaviour can take many forms (Deci & Ryan, 1985; 2002). SDT distinguishes between these forms of regulation along a continuum of self-determination. The reason people engage in different behaviors go from non-self-determined (controlling) forms of regulation (i.e., amotivated, external and introjected) to self-determined (autonomous) types of regulation (i.e., identified, integrated and intrinsic). There is only one kind of completely autonomous motivation according to SDT, it is intrinsic motivation (people engage in sports for the pure enjoyment, pleasure, fun and satisfaction). On the opposite end on the continuum is extrinsic motivation, which includes the reasons for taking part in sports that are not fully internalized by the athlete. The gradation of reasons that range from full extrinsic motivation to completely autonomous motivation on the self-determination continuum reflect the internalization process where people are supposed to
move from the less self-determined forms of regulation to more self-determined types of regulation (Pelletier, Fortier, Vallerand & Briere, 2001).

There are four forms or reasons of extrinsic motivation; external regulation, introjected regulation, identified regulation and integrated regulation. These forms range in the degree to how much they are self-determined. The most self-determined type of extrinsic motivation is integrated regulation, in which people feel that sport participation is an essential part of their sense of self. For example, a person does a volunteer work because he believes that the act aligns with his personal belief system, even if he does not attend for the sheer enjoyment of it. He attends because he feels it is the right thing to do and he does not feel guilt or shame if he does not attend. Next on the continuum is identified regulation which is still a self-determined form of motivation and it is when individuals come to value and judge their behaviour as imperative to their life. For instance, a person may recognize that studying grammar for English class is an important means to the end of becoming a successful writer. The individual does not have to find satisfaction in the behaviour, and there does not have to be an immediate reward of any kind. The individual simply recognizes that the behaviour is beneficial toward his development and adopts that behaviour as his own (Pelletier, Fortier, Vallerand, Tuson & Briere, 1995; Ryan & Deci, 2002).

The other two forms of extrinsic motivation, introjected regulation, and external regulation, are controlling (non-self-determined), in this case behavior is performed to gain rewards and to evade negative consequences. Introjected regulation comes first and it refers to behavior which is carried out to avoid guilt or anxiety, or to gain social approval. An example of introjected regulation is a rugby player whose reason for practice is to impress a girl or to avoid harassment from his father – he does not necessarily find enjoyment in playing rugby. The last and most controlling form of extrinsic motivation is external regulation which refers to behaviour that is carried out to avoid punishment and/or for material benefits. For example, people in sports who are extrinsically motivated do not act out of personal interest but out of a desire to obtain rewards. The final form of motivation is amotivation, which is the state of no will to act. For example, people play sports without feeling intrinsically or extrinsically motivated, without yearning or interest (Ryan & Deci, 2002; Pelletier et al, 1995; Standage & Ryan, 2012).

CET was put forth by Deci (1975) to explain the effects of external events such as rewards, pressures and feedback on internal motivation. The theory focuses on competence
and autonomy while examining how external determinants affect intrinsic motivation. According to the theory, events or factors that are perceived to negatively impact a persons’ experience of autonomy and competence will lead to decrease in self-determined motivation, whereas events or factors that are perceived to support feelings of autonomy and competence will lead to increase in self-determined motivation (Deci, 1975; Ryan & Deci, 1985). In addition, CET specifies that feelings of competence need to be in the context of autonomy if it is to maintain or enhance intrinsic motivation (Ryan, Williams, Patrick & Deci, 2009). Whether external events or factors are perceived in a way which undermines or facilitates ones’ feeling of autonomy and competence, lies in the meaning of the information which is carried by the external force and not the physical placement of the force (Deci, 1971; 1981; deCharms, 1968). For example, an athlete who perceives the feedback from her/his coach as a positive source of information (e.g., praise) is more likely to experience greater autonomy and self-competence toward the activity rather than athlete who perceives the coaches’ feedback in a more controlling manner (e.g., criticise) which does not serve as an indicator of his/her ability. CET addresses several other contexts that either enhance or diminish an individuals’ autonomy.

Pelletier, Fortier, Vallerand, Tuson, Briere and Blais (1995) developed the sport motivation scale, where its purpose was to evaluate motivation of athletes towards their respected sport. Its construction was based on Ryan and Deci’s (1985) self-determination theory. Their scale measured seven different forms of motivation. It has been revised a couple of times since, SMS-II, SMS-6 (Mallett, Kawabata, Newcombe, Otero-Forero & Jackson, 2007; Pelletier, Rocchi, Vallerand, Deci & Ryan, 2013).

The Sport Motivation Scale-6 (SMS-6) was used in this research. The measurement has six subscales and they are four items each. Subscales are amotivation, external regulation, introjected regulation, identified regulation, integrated regulation and intrinsic motivation which is defined here above.

**Intrinsic Motivation**

Intrinsically motivated people engage in an activity for its inherent satisfaction and pleasure derived from doing it. This type of motivated behaviour is spontaneously satisfying so it persists without any reinforcement or rewards (Deci, 1975; Ryan & Deci 2000). For example, an individual that goes to the gym because of the enjoyment, fun or satisfaction it induced, is considered intrinsically motivated towards that activity. This self satisfying
behaviour has also been seen in people who experience, what Csikszentmihalya (1975) calls “flow”. Flow refers to a mental state were the positive experience derived from engaging in an activity (e.g., jogging) is intrinsically rewarded by itself. People become absorbed in the activity to the point that nothing else seems to matter and they lose track of time. For example, rock climber, on his best day, will be highly dedicated in his climbing, and feeling excited, engaged, and focused to reach the top (Weinberg & Gould, 2015; Massarella & Winterstein, 2009).

Early experiments on rats, monkeys (e.g., White, 1959), and toddlers (e.g., Harter, 1978), revealed that animals and humans engage in exploratory, playful and curious-driven behaviour, even in the absence of any reinforcement. Since these findings, later researchers have come to identify intrinsic motivation as organisms’ natural tendencies toward assimilation, spontaneous interest, mastery and exploration which has been considered important to social and cognitive growth, resulting in enjoyment and vitality throughout life (Ryan & Deci, 2000).

More recent studies have shed light upon the importance of exploring intrinsic motivation. For instance, several findings have associated intrinsic motivation with; greater happiness (Ryan, Deci & Grolnick, 1995), reduction in school dropouts (Vallerand & Bissonnette, 1992) and reciprocal relationship in sports and exercise (Buckworth, Lee, Regan, Schneider & Diclemente, 2007; Vink, Raudsepp & Kais, 2015). Furthermore, intrinsic goals have been linked with; greater health, well being and performance (Vansteenkiste, Simons, Lenn, Sheldon & Deci, 2004).

Vallerand and Bissonnette’s (1992) study on the role of intrinsic and extrinsic motivation in dropout-students in Canada (17-18 years old) showed some interesting results. The study consisted of 1042 students who completed questionnaires assessing intrinsic and extrinsic motivation at the beginning of the semester. At the end of the semester, students who had dropped out and those who had persisted were identified. Results showed that the dropout-students reported lower levels of intrinsic motivation and identification in the beginning of the semester but, higher levels of amotivation than the students that persisted. These findings reveal that intrinsic motivation plays a role in persistence in school.

In a more recent study on college students assigned in different exercises groups, Buckworth et al. (2007) found evidence for reciprocal relationship between exercise and intrinsic motivation. In the study, 184 students were randomly assigned in three different
groups; one control group (no exercise) and two exercises groups – PA (exercise for six months) and maintenance (exercise for longer than six months). The results indicated greater intrinsic motivation towards exercise in the exercise groups compared to the control group. In addition, comparisons on intrinsic motivation in the two exercise groups showed that those who exercised for longer than six months (maintenance) scored higher in intrinsic motivation than those who exercised only for six months (PA). Buckerworth and colleagues suggested that persistence is fostered by greater intrinsic motivation, and regular exercise is necessary to sustain intrinsic motivation. Implying reciprocal relationship between exercise and intrinsic motivation.

As mentioned before the construct of intrinsic motivation is related to greater performance, persistence and primarily to enjoyment, which are all important attributes that have been associated with success. Intrinsic motivation has been widely investigated in variety of contexts. Over the years researchers have come across some interesting results regarding the effect of external forces on intrinsic motivation.

**Determinants of Intrinsic motivation**

Systematic testings on the relationship between extrinsic rewards and intrinsic motivation began in the late 1960s with some classic studies. For example, DeCharms (1968) argued that the more an individual is extrinsically motivated, the less that person will be intrinsically motivated.

In a classic study on this issue, Deci (1971a, 1971b) distinguished between a determinant effect of monetary rewards (i.e., money) and verbal rewards (i.e., positive feedback) on intrinsic motivation in two separable experiments. Participants objective was to solve a puzzle in three sessions. Session one and three had the same control but in session two, participants in the experimental conditions received either 1 dollar (1971a) or positive feedback (1971b) for completing the puzzle within the time limit. In each session participants had a free time when the experimenter left. The amount of time they spent on the puzzle in session three, while the experimenter was gone, was used to measure their motivation. Results indicated that those who got paid 1 dollar in the experimental condition spent significantly less free time on the puzzle in session three compared to the control group, suggesting that monetary rewards have undermining effect on intrinsic motivation. However, those who received positive feedback in the experimental condition spent
significantly more free time on the puzzle in session three compared to the control group, suggesting that positive feedback facilitates intrinsic motivation.

Similar results have been seen in other studies regarding the different effects of external rewards and positive reinforcement on intrinsic motivation. For example, studies on toddlers have shown that expectancy for external rewards alone have been associated with a decrease in intrinsic motivation (e.g., Lepper & Greene, 1975). These findings are quite interesting because they reveal that not only do physical rewards undermine intrinsic motivation but also ones’ expectation of a reward.

A more recent series of meta-analytic studies have been conducted in attempt to better understand the relationship between extrinsic rewards and intrinsic motivation. Initial findings support the belief that extrinsic rewards have undermining effect on intrinsic motivation (Deci, Koestner & Ryan, 1999; Rummel & Feinberg, 1988; Wiechman & Gurland, 2009).

The undermining effect of external rewards on intrinsic motivation has been challenged by Cameron and colleagues in several meta-analyses. In Cameron and Pierce (1994) first study on the issue, they claimed that negative effects of rewards were limited and could easily be prevented in applied settings. Their meta-analyses were heavily criticized on the basis of methodological and interpretational errors by Deci et al. (1999a; 2001) and Kohn (1996). It was considered that their questions were inappropriate, that critical studies were excluded, that important negative effects were not detected, and that the techniques used in their meta-analysis were unsuitable. According to Deci’ et al. (1999a; 1999b) counter meta-analyses on the issue, only verbal praise enhanced intrinsic motivation and that different reward features undermined intrinsic motivation significantly (i.e., when a reward was tangible, expected and contingent on completion, engagement and performance). In a more recent meta-analysis on this issue, Cameron, Banko and Pierce (2001) reported some interesting findings. The findings indicated that external rewards can be used to cultivate interest in a task that initially holds little enjoyment. In addition, verbal reinforcement was found to enhance task interest, whereas external material rewards were found to have only minimal negative effects on intrinsic motivation when task interest was high.

Instill motivation and satisfaction for participating in an activity is a major goal in varied context (e.g., education and sports). For example, many students initially hold little enjoyment for academic activities. The findings above suggest that external rewards can be
used to cultivate academic interest among these students and increase their performance in academic activities. However, it is unclear whether the generated interest will sustain over time (Cameron, Banko & Pierce, 2001).

The effects of external determinants on intrinsic motivation in the sport domain has received much attention through studies by Ryan (1977; 1980), and Amorose and Horn (2000; 2001). Their investigations on the relationship between scholarship and intrinsic motivation have shed light on some interesting results. In the first study on the issue, Ryan (1977) measured the amount of intrinsic motivation both in athletes who were on scholarships and athletes who were not on scholarships. In line with the undermining effect he predicted that scholarships would have diminishing effects on athletes’ intrinsic motivation because the players were being paid for doing an activity that was initially pleasing. The results supported his hypothesis, with scholarship athletes showing a lower degree of intrinsic motivation than athletes who were not on a scholarship.

Ryan (1980) replicated and extended his earlier research by including male subjects in both wrestling and football and female athletes from variety of sports. It was hypothesized (as before) that collegiate athletes on scholarships would score lower on intrinsic motivation than their teammates that are not on scholarships. Interestingly the results revealed that female athletes and male wrestlers on scholarships reported higher intrinsic motivation than teammates who did not have scholarships. However, the results also supported the scholarship undermining effect on intrinsic motivation, but only among football players. Ryan suggested that if many students were on scholarships (i.e., football athletes) then it will have undermining effect on their intrinsic motivation, compared to if only few were on scholarships (i.e., male wrestlers and female athletes). It was considered more desirable if only few collegiate athletes could get a scholarship than many. These additional findings indicate that it depends on how the scholarships are viewed by athletes whether it diminishes or facilitates their intrinsic motivation. This is in line with the assumptions of CET. Since so many collegiate football players were on scholarships, the scholarships were not perceived as encouraging and therefore not an indicator of their ability or competence in football. Rather the scholarships were perceived in a more controlling manner, resulting in decreased intrinsic motivation. However, since there were only few collegiate wrestlers and female athletes on scholarships, their scholarships were perceived as an indicator of their ability,
thus increasing their perception of competence and autonomy, and correspondingly facilitates their intrinsic motivation (e.g., internal locus of causality).

In a replicated study by Amorose and Horn (2000) it was hypothesized that nonsignificant difference would be found in intrinsic motivation between athletes on scholarships and athletes who were not on scholarships. In contradiction with Ryan’s (1977) study, no evidence was found to support the idea that scholarships decreased intrinsic motivation among collegiate athletes. In fact, the opposite pattern was found. Results indicated that athletes on full scholarships scored higher on perceived competence resulting in greater intrinsic motivation than athletes that are not on scholarships. Amorose and Horn argued that full scholarships were perceived as a mark of competence and autonomy which resulted in greater intrinsic motivation. However, nonsignificant difference was found in intrinsic motivation between athletes on partial scholarships and athletes not on scholarships. In addition, their results also supported their hypothesis that gender would not interact with scholarships status by showing that all interaction effect that include gender differences were nonsignificant.

In an extended study on the issue, Amorose and Horn (2001) examined changes in intrinsic motivation among first year collegiate athletes from pre- to post-season as a function of their scholarship status (full, partial or none) as well as the influence of their coaches’ behavior. As an attempt to support their earlier findings, they hypothesized that athletes on scholarships would show higher levels of intrinsic motivation than athletes that had no scholarships. The results indicated nonsignificant difference on intrinsic motivation between athletes on scholarships and athletes who were not on scholarships. The results failed to support their previous findings (Amorose & Horn, 2000) as well as Ryans (1977; 1980) contradictory findings. It was suggested that the reason for this inconsistency was because of the sample. In Amorose and Horn (2001) current study most of the athletes were on partial scholarships, whereas the previous samples (Amorose & Horn, 2000; Ryan, 1977; 1980) consisted mostly of athletes on full scholarships. According to their suggestions it is possible that partial scholarships may not be enough of a reward to be perceived by athletes as either an indicator of his/her ability or a major controller of his/her behaviour and, therefore, does not impact the athletes’ intrinsic motivation.

Despite different results from earlier studies (Ryan, 1977; 1980; Amorose & Horn, 2000; 2001), it has been shown that the same reward can affect peoples’ intrinsic motivation
differently depending on how it is perceived. The meaning of the information which is carried by the reward influence peoples’ perceptions of their ability and consequently regulates their intrinsic motivation. This is in line with CET (Ryan & Deci, 1985) that was postulated to help scholars understand how motivational processes work, especially to those (e.g, coaches and exercise leaders) whose roles involve mobilizing others to act.

However, it has also been shown that different coaching styles can have different effects on athletes’ intrinsic motivation. In next chapters, we will discuss these different coaching styles and its effects along with the multidimensional model of leadership that addresses five behavioral dimensions of leadership.

**Sport Leadership**

Leadership and management of people is an important part of the business world and sports. Leadership in sports refers to the process of individuals influencing athletes of a team to execute their tasks with excitement and proficiently to meet the goals of the team (Bridges & Roquemore, 1996; Weinberg & Gould, 2015). Accordingly, studies of athletic leadership in the field of sport psychology and sport management have increased (Chelladurai & Carron, 1983; Chelladurai, Imamura, Yamaguchi, Oinuma & Miyauchi, 1988; Gardner, Shields, Bredemeier & Bostrom, 1996). Chelladurai and Saleh (1978) developed the Multidimensional Model of Leadership (MML), which in turn became one of the most popular approaches to studying leadership in sports.

Chelladurai and Saleh’s (1978) MML provided a framework for studying possible influences of leadership behaviour on variables such as motivation, athletic performance and satisfaction of athletes. The focus of the theory is on three states of leader behaviour; (a) actual leader behaviour, (b) preferred leader behaviour and (c) required leader behaviour. According to the model, the effectiveness of leaders varies depending on the situation and athletes’ characteristics such as gender, age and experience. Chelladurai’ main assumption was that when these three types/dimensions of behaviour are in line with each other then positive outcomes are most likely (Weinberg & Gould, 2015). Chelladurai and Saleh (1980) developed the Leadership Scale for Sports (LSS) based on the MML to measure the three different leader behaviours in the sport setting.

Using three different samples from physical education students and varsity athletes, Chelladurai and Saleh (1980) formulated a five-dimensional Leadership Scale for Sports with 40 items. The LSS included five behavioural dimensions of leadership, one consists of
instructional behaviour (training and instruction), two dimensions consist of decision-making styles (democratic and autocratic behaviour) and two dimensions of motivational tendencies (social support and positive feedback). Training and instruction behaviour from the coach is when he encourages his athletes to improve their performance and skill through training. Democratic behaviour of coaches is them including athletes in decision-making, goal setting and giving them control in various situations. Autocratic behaviour is kind of the opposite of democratic behaviour, where coaches do not include athletes in decision-making or goal setting and they work independently of the athletes (Weinberg & Gould, 2015). Social supporting coaches have good relationships with their athletes and look to keep the athletes happy. Positive feedback on the other hand is how coaches give praise and reward for performances in the sport. LSS can be administered in three ways; (a) version for the coach to describe his own behaviour (required leader behaviour), (b) a perceived version were athletes describes the behaviours of their coach (actual leader behaviour), and (c) a version where athletes describe the type of coaching behaviour they prefer (preferred leader behaviour; Chelladurai & Saleh, 1980).

Much of the research based on the LSS, focuses on situational and personal factors that affect the leadership behaviour of the coach, such as gender, age, nationality, type of sport and psychological characteristics (Weinberg & Gould, 2015). Sherman, Fuller and Speed (2000) administered the preferred version of the LSS to 317 Australian athletes from three different sporting contexts (single-gender males, single-gender females, and dual-gender males and females). Results showed that athletes in all sporting contexts showed high level of preference for coaches that show high democratic behaviour, training and instruction and positive feedback. The athletes did on the other hand not prefer autocratic behaviour and social support. The results showed little difference between sporting contexts and preferred coaching behaviour. Thus, the results are an indicator that these three different sport environments (single-gender male, single-gender female, and dual-gender) have little or no effect on preferred coaching behaviour of the athletes. Horn (2002) also showed that males and females do not differ much in their preference for coaching behaviours, though small differences in preference were between autocratic and democratic behaviour of coaches. Males seemed to prefer coaches to be more autocratic and females prefer their coaches to be more democratic.
Cultural norms are a possible influence on preferred coaching behaviour. Chelladurai and Saleh (1980) compared Canadian athletes to Japanese athletes’ preference for coaching behaviour. They found that Canadian athletes preferred more training and instruction and Japanese athletes preferred more autocratic behaviour and social support from coaches. Additional findings in the study suggested that actual coaching behaviour was different between the Canadians and Japanese. Canadians perceived high levels of democratic behaviour, training and instruction and positive feedback while the athletes from Japan perceived high levels of autocratic behaviour.

The types of leadership behaviour that coaches employ to lead their teams can have consequences on the athletes and the team, affecting traits such as satisfaction, cohesion, performance, and intrinsic motivation (Weinberg & Gould, 2015). Studies of athletes’ satisfaction show that coaches’ behaviour can influence the degree of satisfaction. Riemer and Toon (2001) found connections between leadership behaviour on the LSS and satisfaction in a study on 148 tennis players, the biggest influence being training and instruction. According to Weinberg and Gould (2015), athletes’ satisfaction increases if their preferred coaching behaviour corresponds to the actual behaviour of their coach. Training and instruction, social support, and positive feedback seem to be the most important behaviours of the coach that has to correspond with the preference of the athlete, to lead to satisfaction in the sport.

Ramzaninezhad and Keshtan (2009) found a relationship between coaches’ leadership style and team cohesion in football teams in Iran. They had 264 football players answer questionnaires, the LSS (perceived coaching style) and measures of group cohesion. Results showed that athletes who perceive their team to be cohesive are more likely to have coaches who were exhibiting high levels of democratic behaviour, social support, training and instruction and positive feedback.

Gardner et al. (1996) found the same connections between cohesion and leadership style of coaches when testing a sample of 307 baseball and softball athletes. They suggested that coaches should convey positive feedback and keep athletes involved in goal setting and decision-making. They should also conduct their training sessions with focus on skill instruction for the whole group. The research above shows support for the influence that coaches can have on athletes, and what athletes seem to look for in their coaches’ behaviour.
Intrinsic motivation is the trait of athletes that is under investigation in this research and coaches’ behaviour is likely to influence athletes’ intrinsic motivation according to past research (Weinberg & Gould, 2015). The next chapter goes into detail about how coaches’ leadership styles affects or relates to intrinsic motivation of athletes.

**Effects of Coaches Behaviour on Intrinsic Motivation**

Athletes’ motivation is under many influences but one of the main influences is the coach (Horn, 2002; see Weinberg & Gould, 2015). For example, Mageau and Vallerand (2003) talk about how athletes’ experiences are negative or positive in part by how the coach’s behaviour influences them. For instance, coaches’ positive influences on motivation consists of providing instruction and positive feedback, praising the athletes, and providing them with choices, on the other hand coaches can be discouraging, reprimanding, and controlling. Therefore, motivation begins in some way with the coach (Amorose & Anderson-Butcher, 2007).

Autocratic (controlling) and democratic styles of coaches’ leadership have been researched quite a bit in relation to intrinsic motivation. Kimball (2007) conducted a qualitative investigation and found that levels of intrinsic motivation can depend on the athletes’ relationship with his coach. Extensive research on the relationship between coaches’ behaviour and athletes has been done in colleges across America. The focus of those investigations was on the controlling effects of scholarships and coaches on athletes’ intrinsic motivation (Amorose & Horn, 2000; 2001; Hollembeak & Amorose, 2005; Matosic, Cox & Amorose, 2014; Ryan & Deci, 1980; 1997). When coaches give little opportunity for communication and consulting for athletes they are said to be autocratic in their behaviour. Which is one way that coaches can have controlling effects on athletes (Bartholomew, Ntoumanis & Thorgersen-Ntoumani, 2009). According to the SDT and CET, those types of behaviours from the coach can certainly lower intrinsic motivation (Ryan & Deci, 1980). Amorose and Horn (2000; 2001) showed in studies conducted with college athletes that when coaches are autocratic, provide little feedback and are controlling, decreases in intrinsic motivation occur over time. Moreover, Pelletier, Fortier, Vallerand and Briere (2001) found correlations between athletes’ perceptions of autocratic behaviour from their coach and lower levels of intrinsic motivation. Furthermore, Matosic, Cox and Amorose (2014) study on college swimmers revealed interaction relationship between perceived
Matosic, Cox and Amorose (2014) also found that controlling behaviour of coaches such as autocratic behaviour and control with rewards could have negative effects on athletes’ intrinsic motivation. In their study on 162 male and female swimmers, athletes’ perception of their scholarships (being controlling or not controlling) was measured as well as their perception of their coaches’ leadership style (being controlling or not controlling). The results showed interaction between controlling behaviour (autocratic) of the coaches and athletes’ perception of the scholarships as being controlling. Thus, the more the athlete perceived his coach to be autocratic the more he perceived his scholarship to be controlling, and in line with CET he or she exhibited lower competence, resulting in decreased intrinsic motivation. On the other hand, those athletes who perceived their coach as less controlling demonstrated positive relationship between scholarship and perceived competence, resulting in greater intrinsic motivation.

Study conducted on a sample of 280 male and female American university athletes showed a similar relationship between perceived coaching behaviour and intrinsic motivation. Athletes completed measures that assessed their perception of their coaches’ behaviour such as positive feedback, social support, autocratic and democratic behaviour and measure of intrinsic motivation. The results showed coaching behaviour that is autonomy-supportive such as democratic behaviour had a positive effect on intrinsic motivation and autocratic behaviour had negative effect on intrinsic motivation (Hollembeak & Amorose, 2005).

Amorose and Horn (2000) set out to examine what could affect intrinsic motivation in college athletes. In a sample of 386 male and female college athletes, effects of gender, scholarship status and perceived coaches’ behaviour on intrinsic motivation were assessed. They found gender differences in levels of intrinsic motivation, where male athletes seemed to report higher levels of intrinsic motivation. They also found that athletes’ intrinsic motivation related to their perception of their coach. The results from their regression analysis suggested that coaches’ behaviour that encourages intrinsic motivation is; a lot of positive feedback, not ignoring good or bad performances and low levels of autocratic behaviour. They conducted a study a year later that assessed the same things but with differences over time. Amorose and Horn (2001) found positive correlations between
training and instruction and intrinsic motivation. They found negative correlations between autocratic behaviour and intrinsic motivation, which is in line with CET. Further results were on the other hand not in line with CET, democratic behaviour did not relate to changes in intrinsic motivation for example. In addition, positive feedback did not relate to changes in intrinsic motivation, which contrasts with past research based on CET.

Positive feedback from coaches seems to influence the intrinsic motivation of athletes. Black and Weiss (1992) found that feedback from their coaches positively affected intrinsic motivation of swimmers, specifically feedback such as encouragement and informative feedback following good or bad performances. In a study on 50 hockey players, Vallerand (1983) allowed his subjects to test their decision-making abilities in a simulated hockey situation. The players received either six, 12, 18, 24 or no positive verbal feedback regarding their performance. Results showed that subjects receiving positive verbal feedback displayed much higher levels of intrinsic motivation and experienced more feelings of competence than subjects in the control group.

The positive relationship between positive feedback and intrinsic motivation has been seen in other studies (Allen & Howe, 1998; Amorose & Horn, 2000; Mouratidis, Vansteenkiste, Lens & Sideridis, 2008) where the results consistently demonstrated the importance of parents and coaches feedback which serves as an important source of competence information (i.e., adequate ability) for individuals. Horn (1987; see Amorose & Horn, 2000) suggested that informational feedback was the kind of feedback that would facilitate intrinsic motivation. The feedback would come after errors in performance and would give athletes ways of improving and at the same time give them more control over their own actions. Amorose and Horn’s (2000) results showed that coaches’ feedback that was perceived as positive, encouraging and informational correlated to increases in levels of intrinsic motivation. These results and suggestions from the literature show that feedback from coaches has significant impact on athletes’ intrinsic motivation.

Training and instruction part of the MML relates to intrinsic motivation (Amorose & Horn, 2001). Horn (1987; see in Amorose & Horn, 2000) proposed that following instruction from coaches, athletes receive methods to train and compete which makes them feel more competent in the sport and indirectly facilitates their intrinsic motivation. On the other hand, coaches who do not provide these instructions in training and ignore athletes’ performances leave them feeling incompetent and with that follow decreases in levels of intrinsic
motivation. Amorose and Horn (2001) supported this proposition by Horn (1987). They examined changes in intrinsic motivation among first year college athletes from pre- to post-season, influences of their coaches’ behaviour was assessed. They found a positive relationship between athletes’ levels of intrinsic motivation and training and instruction over time.

The purpose of the studies
The purpose of this study was to investigate motivation among athletes in Iceland and assess variables that relate to or affect their intrinsic motivation. Variables such as coaches’ behaviour, contract status and differences in gender and age were the focus in this study, which was partly based on the framework set by the SDT and CET. Researchers conducted two studies with two separable samples. The first represented football players from three different divisions in Iceland, while the other one represented college athletes at the University of Iceland that practice under guidelines of coaches from variety of sports.

In the first study, the Sport Motivation Scale-6 was asserted to measure the football players’ intrinsic motivation and the hypothesis are outlined here below (study 1). Influence of contract status was based on comparisons of athletes in the top divisions and athletes in the fourth division. Gender differences were based on comparisons on male and female football players in the top divisions and the age differences were based of the whole sample.

The second study included a more diverse sample of 110 college athletes from variety of sports. In addition, to measure athletes’ intrinsic motivation with SMS-6 questionnaire, researchers measured athletes’ perceived behaviour of their coach with Leadership Scale for Sports (LSS). This was done to see if there was any relationship between coaches’ leadership styles and athletes’ intrinsic motivation. The hypotheses can be seen here below (study 2)

Study 1
The purpose of this study was to assess what effects intrinsic motivation in Icelandic football players. The focus was on the effects of age differences, differences between divisions and gender differences. Three hypotheses were presented.

The first hypothesis states that semi-pro male athletes (top division) would have higher levels of intrinsic motivation than amateur athletes (fourth division). The hypothesis is put forth parallel to Amorose and Horn (2000) findings that collegiate athletes on
scholarships report higher intrinsic motivation than athletes that are not on scholarships. Also, we suggested that because top division athletes practice more frequently than fourth division athletes, they would develop greater intrinsic motivation toward their sport. This is in line with reciprocal relationship theory put forth by Buckerworth et al. (2007), were exercise maintenance is fostered by greater intrinsic motivation, and regular exercise is necessary to sustain intrinsic motivation.

The second hypothesis states that female footballers (top division) have higher levels of intrinsic motivation than male footballers (top division). The hypothesis is in line with results from past research that found female college athletes reporting higher intrinsic motivation than their male counterparts (Amorose & Horn, 2000).

The third hypothesis proposes that there is a negative relationship between age and intrinsic motivation. In other words, there is a negative correlation between age and intrinsic motivation. It is worth mentioning that few investigations have been conducted on this relationship. The hypothesis was put forth in this study to find out if a relationship between the variables truly exists.

**Study 2**
The purpose of this study was to assess the relationship of college athletes’ perception of their coach’s behaviour and their intrinsic motivation. A couple of hypothesis were put forth.

The first hypothesis states that college athletes who perceive their coaches’ leadership style to be democratic rather than autocratic report higher levels of intrinsic motivation. Initial findings support that there is a positive relationship between athletes’ perception of democratic behaviour of coaches and intrinsic motivation, whereas negative relationship has been found between autocratic behaviour and intrinsic motivation (Amorose & Horn, 2000; Matosic, Cox & Amorose, 2014)

The second hypothesis states that college athletes who perceive their coaches to show behaviour of social support and positive feedback will have higher levels of intrinsic motivation than athletes who do not perceive their coaches showing such behaviour. There is a positive correlation between social support and positive feedback and intrinsic motivation. This hypothesis was made in line with results from research by Black and Weiss (1992).

The third hypothesis states that college athletes who perceive their coaches to show frequent training and instruction behaviour will have higher levels of intrinsic motivation than athletes who do not perceive their coaches showing such behaviour. This is in line with
Amorose and Horn (2000) results which indicated positive correlation between training and instruction and intrinsic motivation. Several other studies have also shown this relationship between these variables.
Method - Study 1

Participants
In study 1 there were 311 participants, 224 males (72.0%) and 87 females (28.0%). The sample consisted of 116 male football players from the top division in Iceland, 87 female football players from the top division, and 108 male football players from the fourth division. Athletes range of age was from 18 to 45 years (M = 23.9, SD = 4.5). The sample was a convenience sample; teams that were playing in top divisions and fourth division, located in the Reykjavik area were the only teams contacted to take part in the study. Seven teams from top division male took part in the study, seven teams from top division females and seven teams from the fourth division. There were 21 teams in total. There was no compensation for participation in the study.

Measures

Demographic Information and questions about reasons of sport participation
Information about participant’s age, gender, and questions about reasons for sport participation, questions such as, e.g., I play football for the attention I get or I play football for the friendship (see Appendix 1).

Sport Motivation Scale-6 (SMS-6)
The Sport Motivation Scale-6 (SMS-6; Mallett et al., 2007) measured the athletes’ motivation (see Appendix 2). The scale has 24 items, answered on a 7-point scale ranging from 1 (Does not correspond at all) to 7 (Corresponds exactly), where the items are preceded by “Why do you practice your sport“. The SMS-6 has six different sub-scales, and they have four items each. The sub-scales measure amotivation (e.g., “I don’t seem to be enjoying my sport as much as I previously did“), external regulation (e.g., “To show others how good I am at my sport“), introjected regulation (e.g., “Because I must do sports regularly“), identified regulation (e.g., “Because training hard will improve my performance“), integrated regulation (e.g., “Because participation in my sport is an integral part of my life“) and intrinsic motivation (e.g., “For the pleasure of discovering new performance strategies“).
Procedure
Researchers contacted coaches by phone. All coaches gave permission for the researchers to attend practices and distribute the questionnaire. Informed consent from all athletes was obtained (see Appendix 1). Athletes completed the questionnaires in a group setting either before or after a practice session. Collection of data occurred during the pre-season in Icelandic football (March to April). The questionnaires included the Sport Motivation Scale-6 and questions of age, gender, and other questions about reasons of sport participation (see Appendix 3).

Design and data analysis
The research design of study 1 was a survey design. Independent variables were age, gender, and level of professionalism (top division or fourth division). The dependent variable in the study was scores on the SMS-6. Analysis of the data was carried out with IBM SPSS Statistics 24.

The data was analysed by using Cronbach’s alpha coefficients, the coefficient assessed the internal consistency of the scales. Coefficients above .70 are considered sufficient (Nunnally & Bernstein, 1994). Descriptive statistics were computed. One-way Anova’s were also computed to assess the differences between the three groups on the SMS-6 subscales. To find between which groups differences in means were, post-hoc tests were used. Person product-moment correlation assessed the relationship between ages of the athletes and intrinsic motivation levels.

Results and Brief Discussion
The six subscales of the Sport Motivation scale-6 were found to be moderately reliable. The amotivation subscale had Cronbach’s alpha of .80. Alpha for the external regulation subscale was .69, alpha for the introjected regulation subscale was .63, alpha for the identified regulation subscale was .61, alpha for the integrated regulation was .74, and alpha for the intrinsic motivation subscale was .75. According to Nunnally and Bernstein (1994) sufficient coefficients are .70 and above. The subscales for external regulation, introjected regulation and identified regulation did not meet these demands. However, as they were not off by a large margin further analysis were still conducted.
Descriptive statistics

Table 1 shows the mean scores, standard deviations and 95% confidence intervals on the subscales of the SMS-6 for top division males, top division females and fourth division males. Lowest mean scores were found on the amotivation scale for female athletes in top division (M=1.74, SD=1.03), 95% CI (1.52, 1.96). Highest mean scores were found on the intrinsic motivation scale for female athletes in top division (M=5.76, SD=0.93), 95% CI (5.56, 5.96). Suggestion made from data in table 1 are, that football players in those three divisions are mostly intrinsically motivated and second, show little signs of amotivation.

Table 1. Means, standard deviations and 95% confidence intervals for subscales of the SMS-6 for each division (scores ranging from 1 = Does not correspond at all, 7 = Corresponds exactly)

<table>
<thead>
<tr>
<th>Division</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>Lowerbound CI</th>
<th>Upperbound CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amotivation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top - male</td>
<td>116</td>
<td>1.86</td>
<td>1.04</td>
<td>1.67</td>
<td>2.05</td>
</tr>
<tr>
<td>Top - female</td>
<td>87</td>
<td>1.74</td>
<td>1.03</td>
<td>1.52</td>
<td>1.96</td>
</tr>
<tr>
<td>4th - male</td>
<td>108</td>
<td>2.14</td>
<td>1.19</td>
<td>1.91</td>
<td>2.36</td>
</tr>
<tr>
<td>External Regulation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top - male</td>
<td>116</td>
<td>3.72</td>
<td>1.19</td>
<td>3.51</td>
<td>3.94</td>
</tr>
<tr>
<td>Top - female</td>
<td>87</td>
<td>3.99</td>
<td>1.37</td>
<td>3.70</td>
<td>4.29</td>
</tr>
<tr>
<td>4th - male</td>
<td>108</td>
<td>3.66</td>
<td>1.11</td>
<td>3.45</td>
<td>3.87</td>
</tr>
<tr>
<td>Introjected Regulation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top - male</td>
<td>116</td>
<td>4.15</td>
<td>1.18</td>
<td>3.93</td>
<td>4.37</td>
</tr>
<tr>
<td>Top - female</td>
<td>87</td>
<td>4.24</td>
<td>1.31</td>
<td>3.96</td>
<td>4.52</td>
</tr>
<tr>
<td>4th - male</td>
<td>108</td>
<td>4.80</td>
<td>1.10</td>
<td>4.79</td>
<td>5.01</td>
</tr>
<tr>
<td>Identified Regulation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top - male</td>
<td>116</td>
<td>4.50</td>
<td>1.08</td>
<td>4.31</td>
<td>4.71</td>
</tr>
<tr>
<td>Top - female</td>
<td>87</td>
<td>4.84</td>
<td>1.04</td>
<td>4.62</td>
<td>5.06</td>
</tr>
<tr>
<td>4th - male</td>
<td>108</td>
<td>4.45</td>
<td>1.06</td>
<td>4.25</td>
<td>4.65</td>
</tr>
<tr>
<td>Integrated Regulation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top - male</td>
<td>116</td>
<td>5.49</td>
<td>0.94</td>
<td>5.32</td>
<td>5.66</td>
</tr>
<tr>
<td>Top - female</td>
<td>87</td>
<td>5.72</td>
<td>0.94</td>
<td>5.52</td>
<td>5.92</td>
</tr>
<tr>
<td>4th - male</td>
<td>108</td>
<td>5.23</td>
<td>1.14</td>
<td>5.01</td>
<td>5.45</td>
</tr>
<tr>
<td>Intrinsic Motivation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top - male</td>
<td>116</td>
<td>5.17</td>
<td>1.07</td>
<td>4.98</td>
<td>5.37</td>
</tr>
<tr>
<td>Top - female</td>
<td>87</td>
<td>5.76</td>
<td>0.93</td>
<td>5.56</td>
<td>5.96</td>
</tr>
<tr>
<td>4th - male</td>
<td>108</td>
<td>4.82</td>
<td>1.14</td>
<td>4.60</td>
<td>5.03</td>
</tr>
</tbody>
</table>
Comparisons between groups, top division males, top division females and fourth division players

To determine if the means are statistically different between the three groups on the subscales of the SMS-6, one-way ANOVA was used. Table 2 shows results from the comparisons for each of the subscales. Significant differences were found on five of six the subscales. Differences in means on the External regulation subscale were nonsignificant, suggesting that no difference was between the three groups on that subscale.

Table 2. One-way ANOVA test for differences between means of top division males, top division females and fourth division males

<table>
<thead>
<tr>
<th>Subscales of SMS-6</th>
<th>One-way ANOVA test</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>df</td>
<td>F</td>
<td>p-value</td>
</tr>
<tr>
<td>Amotivation</td>
<td>2, 308</td>
<td>3.39</td>
<td>.032</td>
</tr>
<tr>
<td>External regulation</td>
<td>2, 308</td>
<td>2.00</td>
<td>.137</td>
</tr>
<tr>
<td>Introjected regulation</td>
<td>2, 308</td>
<td>9.44</td>
<td>&lt;.000</td>
</tr>
<tr>
<td>Identified regulation</td>
<td>2, 308</td>
<td>3.69</td>
<td>.026</td>
</tr>
<tr>
<td>Integrated regulation</td>
<td>2, 308</td>
<td>5.74</td>
<td>.004</td>
</tr>
<tr>
<td>Intrinsic Motivation</td>
<td>2, 308</td>
<td>19.31</td>
<td>&lt;.000</td>
</tr>
</tbody>
</table>

To see the directions of effects post-hoc tests were used. Bonferroni post-hoc comparisons were used. Mean differences are significant at the 0.05 level.

Post hoc comparisons using the Bonferroni test suggested that the mean score for top division males (M = 1.86, SD = 1.04) was not significantly different from top division females (M = 1.74, SD = 1.03) or fourth division males (M = 2.14, SD = 1.19) on the amotivation subscale. However, mean scores for top division females were significantly lower than fourth division males on the amotivation subscale, p = .036.

Post hoc comparisons using the Bonferroni test suggested that the mean score for top division males (M = 4.15, SD = 1.18) was significantly lower than fourth division males (M = 4.80, SD = 1.10) on the introjected regulation subscale p < .000. In addition, there was a significant difference between top division females (M = 4.24, SD = 1.31) and fourth division males where female athletes scored lower, p = .004. No significant differences were found between top division males and females.
Bonferroni test suggested that the mean score for top division males (M = 4.50, SD = 1.08) was not significantly different from fourth division males (M = 4.45, SD = 1.06) on the identified regulation subscale. Top division females (M = 4.84, SD = 1.04) did not differ significantly from top division males. There was on the other hand significant differences between top division females and fourth division males where females scored higher, \( p = .034 \).

Bonferroni test suggested that the mean score for top division males (M = 5.49, SD = 0.94) was not significantly different from fourth division males (M = 5.23, SD = 1.14) and not significantly different from top division females (M = 5.72, SD = 0.94) either on the integrated regulation subscale. However, there was a significant difference between top division females and fourth division males where, females scored higher, \( p = .003 \).

Bonferroni test suggested that the mean score for all divisions significantly differed on the intrinsic motivation subscale. Top division males (M = 5.17, SD = 1.07) were significantly higher than fourth division males (M = 4.82, SD = 1.14) on the intrinsic motivation subscale, \( p = .038 \). In addition, there was a significant difference between top division females (M = 5.76, SD = 0.93) and fourth division males, \( p < .000 \). Significant differences between top division males and females, \( p < .000 \). Females scored higher than top division males and fourth division males.

Based on these post-hoc comparisons, top division female athletes differ from fourth division male athletes on five of the six subscales, suggesting that these two groups are quite different in motivation. All three groups differ on intrinsic motivation subscale suggesting that intrinsic motivation does vary across these divisions.

**Relationship between age and intrinsic motivation**

Person product-moment correlation calculations assessed the relationship between age of athletes and scores on the Intrinsic Motivation subscale (see figure 1). Nonsignificant negative correlation was found between the variables, \( r (311) = -.035, p = .536 \). This suggests that differences in levels of intrinsic motivation do not relate to age.
Brief discussion of study 1

The first hypothesis stated that top division athletes would have higher levels of intrinsic motivation than fourth division athletes. The difference in intrinsic motivation was found to be significant, where the top division athletes reported higher intrinsic motivation than fourth division athletes. The second hypothesis stated the differences in intrinsic motivation would vary across genders. The results indicated significant difference showing male athletes scoring lower on intrinsic motivation than female athletes. The third hypothesis stated that a positive relationship would be between age and intrinsic motivation. No relationship was found between age and intrinsic motivation. So, the results suggest that how old athletes are has no relationship with intrinsic motivation.
Method - Study 2

Participants
Participants consisted of 110 students in the University of Iceland who completed a survey, 50 males (45.5%), 60 females (54.5%). Age ranging from 17 to 51 (M = 23.9, SD = 4.6). Participants had to take part in any sport or physical activity with a coach at least twice a week. Participants were involved in variety of sports or physical activities, ranging from football to roller derby. The most common sports were football (n = 37), handball (n = 11) and basketball (n = 9). Questions that came before the LSS and SMS-6 screened out participants who did not play sports under guidance of a coach, and in further analyses, they were excluded.

Measures
Participants in the study had to answer two questionnaires, few questions about sport participation (see Appendix 2, 4 and 6) and questions of demographic information (age and gender; see Appendix 3), 70 questions in total. Sport Motivation Scale-6 (SMS-6) was used, the same as in study 1 (see measure chapter Study 1).

Leadership Scale for Sports (LSS)
The Leadership Scale for Sports (LSS; Chelladurai & Saleh, 1980) was used to measure athletes’ perceived behavior of their coaches. The LSS is made up of 40 items and is divided into 5 sub-scales. Thirteen items for Training and Instruction, 9 items for Democratic Behaviour, 5 items for to Autocratic Behaviour, 8 items relate to Social Support, and 5 items relate to Positive Feedback. The items in the questionnaire are answered on a 5-point Likert scale, always (100%), often (75%), occasionally (50%), seldom (25%) and never (0%) (Chelladurai & Saleh, 1980).

The LSS was translated to Icelandic for this study (see Appendix 5). It was directly translated to Icelandic and psychometric research has not been done to assess reliability for samples in Iceland. On the other hand, many studies have assessed the LSS reliability in English speaking samples and one Japanese-speaking sample (Chelladurai et al. 1988; Sherman, Fuller, & Speed, 2000). Chelladurai and Saleh (1980) applied the questionnaires to two samples of physical education students and internal consistency estimates of the LSS were $\alpha = .76$ for training and instruction, $\alpha = .77$, for democratic Behaviour, $\alpha = .66$ for autocratic behaviour, $\alpha = .72$ for social support and $\alpha = .79$ for positive feedback. Hastie
(1993; 1995) reported similar reliability coefficients in his two studies with volleyball players; reliability was between .70 and .80 for all sub-scales of the LSS.

**Procedure**

Researchers created an online survey using the online survey software Questionpro and it was administered to students of The University of Iceland through the school email registry, instructions came first (see Appendix 6). Questions were used to screen out athletes who did not participate in organized sports (see Appendix 4) followed by the LSS and SMS-6.

**Design and data analysis**

Independent variables in the study were scores on the LSS and the dependent variables were scores on the SMS-6. IBM SPSS Statistics 24 was used to analyse and process the data. Descriptive statistics were computed, and Cronbach’s alpha were calculated to assess the internal consistency of subscales of both the SMS-6 and LSS. Bivariate correlations were computed in SPSS to explore the relationship between subscales of LSS and SMS-6. Pearson’s product-moment correlation coefficients were used to represent the relationship.

**Results study 2**

Reliability of the LSS and SMS-6 were assessed using the Cronbach's alpha coefficient. Subscales of the LSS were highly reliable expect the autocratic subscale; Training and Instruction α = .91, Autocratic α = .66, Democratic α = .88, Social Support α = .89, and Positive Feedback α = .86.

Alpha coefficients of SMS-6 were found to be acceptably reliable; amotivation α = .83, external regulation α = .71, introjected regulation α = .70, identified regulation α = .68, integrated regulation α = .77 and intrinsic motivation α = .71. According to Nunnally and Bernstein (1994) sufficient coefficients are .70 and above. The subscale for identified regulation was the only scale in this sample that did not meet that demand. It was off by a small margin so further analysis was conducted.

**Descriptive statistics**

Table 3 displays mean scores and standard deviations of the sample on the subscales of the LSS. The highest reported mean score was on the subscale positive feedback and the lowest was on the subscale autocratic behaviour. This suggests that college athletes perceived coaches to show most of positive feedback and the least of autocratic behaviour.
Table 3. Mean scores on the subscales of LSS and standard deviations (1 = never, 5 = always)

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training and instruction</td>
<td>110</td>
<td>3.74</td>
<td>0.76</td>
</tr>
<tr>
<td>Autocratic Behaviour</td>
<td>110</td>
<td>2.40</td>
<td>0.70</td>
</tr>
<tr>
<td>Democratic Behaviour</td>
<td>110</td>
<td>3.26</td>
<td>0.81</td>
</tr>
<tr>
<td>Social Support</td>
<td>110</td>
<td>3.00</td>
<td>0.81</td>
</tr>
<tr>
<td>Positive Feedback</td>
<td>110</td>
<td>3.82</td>
<td>0.74</td>
</tr>
</tbody>
</table>

Table 4 shows mean scores and standard deviations on the subscales of SMS-6. The scores were lowest for the amotivation subscale and highest on the intrinsic motivation subscale, suggesting that college athletes are low in amotivation and high in intrinsic motivation.

Table 4. Mean scores on subscales of SMS-6 and standard deviations (1 = Does not correspond at all, 7 = corresponds exactly)

<table>
<thead>
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<th>N</th>
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<td>1.99</td>
<td>1.16</td>
</tr>
<tr>
<td>External Regulation</td>
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<td>3.45</td>
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</tr>
<tr>
<td>Introjected Regulation</td>
<td>110</td>
<td>4.62</td>
<td>1.23</td>
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<tr>
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<td>4.78</td>
<td>1.20</td>
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<td>Integrated Regulation</td>
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<td>5.45</td>
<td>1.12</td>
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<tr>
<td>Intrinsic Motivation</td>
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<td>5.55</td>
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Relationship between Leadership behaviours and forms of Motivation

The Pearson correlation coefficient assessed the relationship between scores on subscales of the LSS and the SMS-6. The first hypothesis stated that perceptions of democratic behaviour and intrinsic motivation had a positive correlation and results showed, \( r (110) = .27, p < .01 \) (see Table 6). Nonsignificant negative correlation between autocratic behaviour and intrinsic motivation, \( r (110) = -.180, p = .06 \) (see Table 5).

The second hypothesis stated that positive correlations would be found between intrinsic motivation and positive feedback also, between social support and intrinsic motivation. Significant positive correlations were found between intrinsic motivation and
both positive feedback and social support, $r (110) = .218, p < .05$ for positive feedback and $r (110) = .227, p < .05$ for social support (see Table 5).

The third hypothesis states that positive correlations would be found between intrinsic motivation and training and instruction. Significant positive correlation was found between intrinsic motivation and training and instruction, $r (110) = .260, p < .01$ (see table 5).

**Table 5. Correlations between subscales of the LSS and the SMS-6.**

<table>
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<tr>
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<td>1. Train/Instruct.</td>
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<td>.536**</td>
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<td>-.25**</td>
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<td>.504**</td>
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<td>-.104</td>
<td>-.167</td>
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<td>.002</td>
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<td>-.133</td>
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<td>7. External</td>
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<td>.437**</td>
<td>.370**</td>
<td>.385**</td>
<td>.110</td>
<td></td>
<td></td>
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<tr>
<td>8. Introjected</td>
<td>1</td>
<td>.440**</td>
<td>.506**</td>
<td>.306**</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>9. Identified</td>
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<td>.592**</td>
<td>.421**</td>
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<td>10. Integrated</td>
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<td>11. Intrinsic</td>
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</tbody>
</table>

*Note.**. Correlation is significant at the 0.01 level (2-tailed). *Correlation is significant at the 0.05 level (2-tailed).

**Brief discussion of study 2**

In line with our primary hypothesis, the relationship between democratic leadership styles of coaches and intrinsic motivation was found to be positively correlated, the more that athletes perceived their coaches to be democratic the higher the levels of intrinsic motivation. However, no relationship was found between autocratic leadership styles of coaches and intrinsic motivation. The second hypothesis stated that athletes who perceive their coaches to show behavior of social support and positive feedback would have higher levels of intrinsic motivation than athletes who do not perceive their coaches showing such behavior. Positive correlation was found between social support and positive feedback and intrinsic motivation, suggesting that both social supporting behavior and positive feedback plays a role in peoples’ intrinsic motivation. The third hypothesis was supported by the results since a positive correlation was found between higher training and instruction behavior among coaches and athletes’ intrinsic motivation. Thus, the results imply that there is a relationship between frequent training and instructions behavior and increases in intrinsic motivation among athletes.
General discussion

The purpose of this study was to investigate intrinsic motivation among athletes in Iceland and assess variables that relate to or affect their intrinsic motivation. The focus was on gender differences, differences between divisions and relationship with coaches’ leadership behaviour. Two different samples were addressed in two separable studies. First sample consisted of football players in the top division and the fourth division in Iceland. The second sample consisted of collegiate athletes at the University of Iceland that practiced under the guidance of a coach from variety of sports.

In the first study, intrinsic motivation was measured in male football players in top division and fourth division along with female football players in top division in Iceland. The top league consists of semi-pro and professional footballers who many have contracts with material benefits (e.g., salary, bonuses and/or gear equipments), whereas fourth division consists of amateur footballers where most do not have any kind of contract. It was predicted that male footballers in the top division would score higher on intrinsic motivation than players in the fourth division. The results supported this hypothesis showing a significant difference in intrinsic motivation between players in these divisions. Both male and female football players in top division reported higher intrinsic motivation than football players in the fourth division.

The present findings add confidence in results of previous studies on relationship between scholarship status and athletes’ intrinsic motivation. Amorose and Horn (2000) reported that athletes on scholarships score significantly higher on perceived competence resulting in greater intrinsic motivation compared to athletes on that do not have scholarships. This is consistent with our current findings that football players in top division (on a contract) score significantly higher on intrinsic motivation than football players in the fourth division (no contract). It is suggested that both scholarship athletes and the top division football players perceive their contract being an indicator of their ability and competence in the sport, resulting in higher intrinsic motivation.

Moreover, the current findings can also be explained by the reciprocal relationship between exercise and intrinsic motivation where exercise maintenance is fostered by greater intrinsic motivation, and regular exercise is necessary to sustain intrinsic motivation (Buckerworth et al., 2007). The top division consists of semipro and professional footballers that practice more frequently, play more games over the season and are generally more
invested in football, compared to amateur footballers in the fourth division who practice on average once or twice a week.

It was also predicted that intrinsic motivation would vary across genders in the top division in Iceland. The results supported our hypothesis showing a significant difference in intrinsic motivation between male and female players in the top division. The female players scored slightly higher than their male counterparts on the subscale; intrinsic motivation and introjected motivation, suggesting that female players have greater intrinsic motivation than male players in the top division in Iceland. These findings reveal that gender influences levels of intrinsic motivation. In line with past research that also found that females had higher intrinsic motivation than males, Amorose and Horn (2000) reported that 3% variability in intrinsic motivation was explained by gender differences. The difference seems to be small but significant.

Finally, it was predicted that intrinsic motivation would vary across ages among both male and female athletes’ football player in top division. Our results did not find any evidence to support this hypothesis. Nonsignificant negative correlation was found between footballer’s ages and their intrinsic motivation, suggesting that age does not seem to have any effect on intrinsic motivation among football players in top division. Although it should be emphasized that research on motivation of younger athletes should be on the forefront in the future.

The results imply that football players in Iceland do vary across different context, but they seem to all score relatively high in intrinsic motivation on average. As noted earlier this is one of the first studies that have been done on football players in the top division in Iceland regarding their intrinsic motivation, so additional studies need to be done with larger and more diverse samples.

Study 2 assessed the relationship between leadership styles of coaches and motivation of college athletes at the University of Iceland. Relationships were found between perceived leadership styles of coaches and intrinsic motivation in college athletes. Democratic behavior of coaches related positively to intrinsic motivation as was assumed by researchers prior to the study. This was in line with Amorose and Horn’s (2000) research. So, the hypothesis was supported and further supports the CET, as democratic behavior is seen as supportive and that kind of behavior leads to more intrinsic motivation according to CET. However, no links were found between autocratic behavior and intrinsic motivation in
this research which was not in line with the hypothesis. Autocratic behavior was thought to be negatively related to intrinsic motivation as has been found in past research. For example, Matosic, Cox and Amorose (2014) found that controlling behavior such as autocratic behavior had negative effects on intrinsic motivation.

The second hypothesis stated that positive relations would be between social supportive behavior and positive feedback from coaches and intrinsic motivation. Positive relations were found between both kinds of behavior. Black and Weiss (1992) found positive relations between intrinsic motivation of athletes and positive feedback of coaches. So, the results support past research in the literature. Social supportive behavior was also positively related to intrinsic motivation.

Training and Instruction was hypothesized to be positively related to intrinsic motivation, the results supported the assumption. Past research also supports this, Amorose and Horn (2001) found a positive relationship between training and instruction and intrinsic motivation over time. Suggesting that more instruction by coaches could lead to learning of new techniques and at the same time encourage more control in athletes own performance, which leads to more intrinsic motivation as was suggested by Horn (1987).

These results do have some implications about coaches in Iceland, perceptions of them seem to be that they show on average most of positive feedback behavior and training and instruction. Results suggest that coaches show these behaviors often, but this can not be generalized across all contexts as the sample is not representative for athletes’ perceptions of coaches in Iceland. The relationship between perceived coaches’ behavior and intrinsic motivation of the athletes suggests that athletes that perceive their coaches to be democratic, social supportive, instructive and give positive feedback have higher intrinsic motivation. But as this is only based on athletes’ perceptions of their coaches it can not be said that this is the essential behavior of the coach to increase intrinsic motivation.

It is worth mentioning that in study 1 we only used SMS-6 to measure football players’ intrinsic motivation. One future direction could be to add LSS (as was done in study 2) in a replicated study on football players in Iceland with a more diverse and larger sample. Investigating the relationship between coaching styles and footballers’ intrinsic motivation in the top divisions in Iceland can provide important informations for many types of scholars. This can help Icelandic football to develop to greater extent. Interesting investigations could
be made to see if leadership styles of coaches of successful teams differ in some degree from coaches that manage teams that are not successful.

Limitations

The participants of study 1 were only comprised of football athletes. It could be possible that athletes from other sports would show different results, so it would be wise to study intrinsic motivation in different sport domains. Study 2 does not have this limitation as athletes from a variety of sports participated in that study. Limitation of both studies was that random sampling procedure was not used, that prevents accurate generalizations to athletes across all sports in Iceland. Another key limitation of the studies was the use of the measurements LSS and SMS-6. They were translated into Icelandic for this study, so they are not yet proven as valid instruments for Icelandic samples. Further psychometric research must be done with these measurements to assess the validity with Icelandic samples.

Because these studies were only conducted at one time, not over a period of a season it is not possible to assess if differences in time could be occurring in the measurements, as was done in Amorose and Horn’s (2001) study. Also, the results from study 2 were correlational, so cause and effect can not be determined in the relationship between coaches’ behaviour and athletes’ motivation.

Future research and directions

As this is one of the first investigations on athletes’ motivation in Iceland, the focus on future research should be on establishing a solid framework for empirical and well controlled research. The focus should be put on psychometric investigations of the measurements to ensure that research with Icelandic samples is valid and reliable. When the framework for research has been set then it would be interesting to see changes in motivation over time. Amorose and Horn (2001) made measurements of college athletes’ levels of intrinsic motivation two times over the course of a season, one measurement at the beginning of the season and one after the season. This method could be used, where SMS-6 could be administered at the beginning of the season as well at the end. The measurements could then be compared and assessed if any changes in motivation would occur over time. The LSS could be administered along side the SMS-6 and they could be compared, and try assessing if one of the behaviors that the LSS measures has a positive effect on intrinsic motivation across the time of one season. It would also be interesting to see if athletes of teams that
achieve success over the season would score higher in intrinsic motivation after the season than teams that do not achieve success. In line with that research direction one could try and assess what kind of leadership styles coaches of successful teams show.

As noted above, the LSS has three forms of leadership styles perceived, preferred and actual. Chelladurai and Saleh (1980) Multidimensional model of leadership assumes that when these three forms are in line with each other satisfaction of athletes would be highest. So, in line with that assumption one direction of research would be to administer the three different forms and compare how well they align. Then see if teams who align well across the three forms score higher on variables such as team cohesion, satisfaction, performance, or motivation.

When summarising the results in this paper suggestions can be made that coaching behaviour relates to motivation of college athletes in some way. Also, gender differences and differences between divisions do in some way affect levels of intrinsic motivation. But extensive research on intrinsic motivation is required in Iceland to further extend the knowledge of motivation in athletes.
References


Upplýst samþykki fyrir svari við spurningalista fyrir rannsókn á Bsc verkefni við Háskóla Íslands

Rannsakendur vilja með þessari rannsókn auka þekkingu á íslenskum íþróttamönnum. Að sjá hvað stýrir áhugahvött fótboltaleikmanna er mikilvægur þátttur í framvindu rannsókna í íþróttasáfíræði, þá sérstaklega hér á landi þar sem fáar rannsóknir um þetta samband hafa verið gerðar.

- Hjörtur Þórisson og Magnús Pálmi Gunnarsson eru rannsóknaraðilar þessarar rannsóknar. Hægt er að ná í þá í gegnum tölvupóst: hth215@hi.is & mpg4@hi.is
- Í þessari rannsókn er verið að skoða fótboltaiðkendur á Íslandi.
- Þátttakendum ber ekki skylda að taka þátt og er frjálst að hætta þátttöku hvenær sem er.
- Hugað er að trúnaði við þátttakendur og ekki er hægt að rekja svör til einstaka þátttakanda.
- Ef einhver spurning kann að valda þátttakanda óþægindum ber honum engin/nn skylda að svara þeirri spurningu.
- **Spurningar eru á báðum bliðum skjalsins**

Mér hefur verið kynntur tilgangur þessarar vísindarannsóknar og í hverju þátttaka mín er fólgin. Ég er samþyk(ur) þátttöku.
Appendix 2

Sport motivation scale- 6

Með því að nota kvarðan hér að neðan merkið við hversu vel hver staðhæfing á við ástæður þess að þú ert að æfa íþróttir. Gerðu hring utan um töluna sem á við þig.

<table>
<thead>
<tr>
<th>Á alls ekki við</th>
<th>Á ekki við</th>
<th>Á hæfilega við</th>
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<th>Á mjög vel við</th>
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<tr>
<td>1</td>
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<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Af hverju æfir þú íþróttir?

1. Vegna spennunar sem ég finn þegar ég er algjörlega niðursokkin(n) í verkefninó  
2. Af því þetta er hluti af því hvernig ég hef valið að lifa mínu lífi  
3. Af því það er góð leið til að læra marga hluti sem gætu gagnast mér á öðrum sviðum lífsins  
4. Af því þær gera mér kleift að vera vel liðin af fólki sem ég þekki  
5. Ég veit það ekki lengur; ég upplifi mig ekki geta náð árangri í þessari íþrótt  
6. Ég upplifi mikla persónulega ánægju meðan ég næ fullkomnum tökum á ákveðnum tæknilega erfiðum æfingum  
7. Af því það er algjörlega nauðsynlegt að æfa íþróttir ef maður vill vera í formi  
8. Af því þetta er ein af bestu leiðunum sem ég hef valið til að þróa aðrar hliðar lífs míns  
9. Af því það er hluti af mér  
10. Af því ég verð að æfa íþróttir til að líða vel með sjálfan mig  
11. Vegna virðingarinnar sem ég hlýt fyrir að vera íþróttamaður  
12. Ég veit ekki hvort ég vilji halda áfram að eyða tíma mínun og orku í íþróttir lengur  
13. Af því að taka þátt í íþróttum er í samræmi við mín innstu gildi  
14. Vegna ánægjunnar sem ég upplifi þegar ég fullkomna eigin getu
15. Af því þetta er ein af bestu leiðunum til að viðhald greiða sambandi við vini mína

16. Af því mér myndi líða illa ef ég væri ekki að eyða tíma í þróttir

17. Það er ekki nógu skýrt lengur; ég held að það henti mér ekki að vera í þróttum

18. Vegna ánægjunar að uppgötva nýjar leiðir til að bæta frammiðstöðu

19. Fyrir efnislega og/eða félagslega ávinningin af því að vera þróttamaður

20. Vegna þess að æfa vel bætir frammistöðu mína

21. Af því þátttaka í þróttum er ómissandi hluti af mínu lífi

22. Mér finnst ég ekki þóta minnar þróttar eins og ég gerði áður

23. Af því ég vel að stunda þróttir reglulega

24. Til að sýna öðrum hvað ég er góð/ur í minni þrótt
Appendix 3

Aldur (Age): ______ ára (years old)

Ég er samningsbundinn íþróttafélaginu mínu (I am currently on a contract with my club):
  Já (Yes)
  Nei (No)

Mér finnst að efnisleg fríðindi (s. dæmi; laun, bónusar eða æfingabúnaður) hafi áhrif á að ég æfi/spila ennþá að (I feel that material benefits (such as; salary, gear equipment or bonuses) effect the reason why I still practice/play):
  Mjög sammála (Strongly Agree)
  Sammála (Agree)
  Nokkuð sammála (Agree somewhat)
  Hvorki né (Undecided)
  Nokkuð ósammála (Disagree somewhat)
  Ósammála (Disagree)
  Mjög ósammála (Strongly Disagree)

Ég æfi/spila knattspyrnu ánaeðjunnar vegna (I play football for the pleasure of it):
  Mjög sammála (Strongly Agree)
  Sammála (Agree)
  Nokkuð sammála (Agree somewhat)
  Hvorki né (Undecided)
  Nokkuð ósammála (Disagree somewhat)
  Ósammála (Disagree)
  Mjög ósammála (Strongly Disagree)

Ég æfi/spila vegna þeirrar athygli sem ég fæ (t.d frá fjölmiðlum). (I play football for the attention í get (for example from the media)).
  Mjög sammála (Strongly Agree)
  Sammála (Agree)
  Nokkuð sammála (Agree somewhat)
  Hvorki né (Undecided)
  Nokkuð ósammála (Disagree somewhat)
  Ósammála (Disagree)
  Mjög ósammála (Strongly Disagree)

Ég æfi/spila knattspyrnu félagskapparins vegna (I play football because of the friendship)
  Mjög sammála (Strongly Agree)
  Sammála (Agree)
Nokkuð sammála (Agree somewhat)
Hvorki né (Undecided)
Nokkuð ósammála (Disagree somewhat)
Ósammála (Disagree)
Mjög ósammála (Strongly Disagree)

Ég hef það að markmiði að komast á hærra stig (s. dæmi; betra líð, betri deild, atvinnunømmnu eða landslíð). (My goal in football is reaching higher levels (for example; better league, professional level, better team or national team)
Mjög sammála (Strongly Agree)
Sammála (Agree)
Nokkuð sammála (Agree somewhat)
Hvorki né (Undecided)
Nokkuð ósammála (Disagree somewhat)
Ósammála (Disagree)
Mjög ósammála (Strongly Disagree)

Ástæða þess að ég æfi/spila ennþá knattspyrnu er til að halda mér í góðu líkamlegu formi (The reason I still play football is to keep myself in good physical shape).
Mjög sammála (Strongly Agree)
Sammála (Agree)
Nokkuð sammála (Agree somewhat)
Hvorki né (Undecided)
Nokkuð ósammála (Disagree somewhat)
Ósammála (Disagree)
Mjög ósammála (Strongly Disagree)
Appendix 4

1. Hvað ertu gömul/gamall?
   _____ ára

2. Kyn
   o Karl
   o Kona

3. Hvaða íprótt íðkar þú að jafnaði? (Hakaðu við þá ípróttgrein þar sem þú hefur þjálfara)
   o Akstursíþróttir
   o Badminton
   o Blak
   o Borðtennis
   o Dans
   o Fimleika
   o Frjálsar íþróttir
   o Glímu
   o Golf
   o Handbolta
   o Hjóleiðar
   o Hnefaleika
   o Íshokkí
   o Júdó
   o Karate
   o Keilu
   o Knattspyrnu
   o Kraftlyftingar
   o Körfulbolta
   o Hestamaður
   o Lyftingar
   o Mótorhjóla- og snjósleiðahíbróttir
   o Siglingar
   o Skautaþróttir
   o Skiði
   o Skotíþróttir
   o Skylmingar
   o Sund
   o Taekwondo
   o Tennis
   o Þríþraut
   o Tilgreindu íþrótt hér ef hún er ekki að ofan: ____________________

Hvaða íþrótt ætlar þú að miða þig við í þessari íþrótt?

Tilgreindu hér: ____________________
4. Hvenær byrjaðir fyrst að iðka íþróttina?
   o Á aldrinum 4-10 ára
   o Á aldrinum 11-15 ára
   o Á aldrinum 16-20 ára
   o Eftir 20 ára aldur

5. Hversu oft í viku æfir þú að jafnaði (i þeirri íþrótt sem þú iðkar mest)?
   o 1-2 sinnum í viku
   o 2-3 sinnum í viku
   o 4-5 sinnum í viku
   o 6-7 sinnum í viku
   o Oftar en 7 sinnum í viku

6. Hversu oft í viku æfir þú með aðalþjálfaranum þínnum að jafnaði (i þeirri íþrótt sem þú iðkar mest)?
   o 1-2 sinnum í viku
   o 2-3 sinnum í viku
   o 4-5 sinnum í viku
   o 6-7 sinnum í viku
   o Oftar en 7 sinnum í viku
Appendix 5

Leadership Scale for Sports (LSS)

Með því að nota eftirfarandi kvarða, vinsamlegast gerðu hring um tölu frá 1 til 5 til að tilgreina hversu sammála þú ert hverri fullyrðingu varðandi DJÁLFARA þinn.

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<th>5</th>
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<td>Sjaldan</td>
<td>Stundum</td>
<td>Oft</td>
<td>Alltaf</td>
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<tr>
<td>Aldrei</td>
<td>Sjaldan</td>
<td>25% tilvika</td>
<td>50% tilvika</td>
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Pjálfarinn minn...

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<th>1. Sér til þess að sérhver iðkandi vinni á sinni getu</th>
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<th>Sjaldan</th>
<th>Stundum</th>
<th>Oft</th>
<th>Alltaf</th>
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<tr>
<td>2. Útksýrir aðferðir og taktík íþróttarinn fyrir öllum iðkendum</td>
<td>1</td>
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<td>3. Veitir því sérstaka athygli að leiðréetta mistök iðkenda</td>
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<td>4. Sér til þess að allir iðkendur skilji hlutverk þjálfarans í liðinu</td>
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<td>5. Leiðbeinir öllum iðkendum persónulega varðandi þá tækni sem íþróttin krefst</td>
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<td>6. Skipuleggur fyrirfram hvað skuli gera</td>
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<td>7. Útksýrir fyrir hverjum iðkanda hvað hann á að gera og hvað hann á ekki að gera</td>
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<td>8. Ætlast til af hverjum iðkanda að hann vinni verkefni sín til smæstum smáatriða</td>
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<td>9. Bendir hverjum iðkanda á veikleika og stykrleika sína</td>
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<td>10. Gefur nákvæmar leiðbeiningar til hvers iðkanda um hvað eigi að gera í öllum</td>
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<td>11. Sér til þess að framlag sé samhæft</td>
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<td>12. Útskýrir hvernig framlag hvers og eins iðkanda passar inn í heildarmyndina</td>
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<td>13. Tilgreini í smáatriðum til hvers er ætlast af hverjum iðkanda</td>
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<td>14. Vinnur títölulega sjálfstætt óháð iðkendum</td>
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<td>15. Útskýrir ekki gjörðir sínar</td>
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<td>16. Neitar að gera málamiðlanir á ákvarðanatöku</td>
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<td>17. Heldur sig út af fyrir sig</td>
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<td>18. Miðlar upplýsingum á þann hátt að hann skuli ekki vera dreginn í efa</td>
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<td>19. Biður um álit iðkenda á aðferðum fyrir ákveðnar keppnir</td>
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<tr>
<td>20. Fær samþykki höpsins um mikilvæg málefni áður en hann tekur ákvarðanir</td>
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<td>21. Leyfir iðkendum að segja sitt álit í ákvarðanatökum</td>
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<td>22. Hvetur leikmenn til að koma með tillögar um leiðir varðandi framkvæmd æfinga</td>
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<td>23. Leyfir hópnum að setja sér sín eigin markmið</td>
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<td>24. Leyfir iðkendumum að prófa sínar egin leiðir jafnvél þó þeir geri mistök</td>
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<td>25. Biður um álit iðkenda á mikilvægum þjálfunarmálaum</td>
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<td>26. Leyfir iðkendum að vinna á þeirra eigin hraða</td>
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<td>27. Leyfir iðkendum að ákveða keppnisáætlun/leikkerfi sem nota á í keppni</td>
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Appendix 6

Góðan daginn ágæti þátttakandi og takk fyrir að gefa þér tíma til þess að taka þátt í þessari rannsókn.

Rannsóknin er ætluð þeim sem stunda íþróttir undir handleiðslu þjálfara. Ekki skiptir máli hvort um er að ræða einstaklingsíþrótt eða hópíþrótt. Rannsóknin er hluti af lokaverkefni til Bs prófs í sálfræði við Háskóla Íslands.

Margar ástæður geta legið að baki íþróttaiðkun fólks. Í þessari rannsókn er verið að skoða ástæður fyrir íþróttaiðkun og upplifun fólks af stjórnunarstíl þjálfara og er það markmið rannsakenda að auka þekkingu hér á landi á þessu sviði.

Rannsóknin inniheldur tvo spurningalista sem þátttakandi þarf að svara. Sá fyrri er 40 atríða spurningalisti (Leadership Scale of Sports) þar sem þátttakandi metur þjálfunarstíl þjálfara síns, en sá seinni er 24 atríða spurningalisti (Sport Motivation Scale-6) sem metur áhugahvöt þátttakanda við íðkun tiltekinnar íþróttar. Áætlaður þátttökutími er í kringum 10 mínútur. Þarf að ýta á Continue til að byrja.

Med þveðju, Hjörtur Þórisson og Magnús Pálmi Gunnarsson Sálfræðideild Háskóli Íslands.

Ábyrgðarmaður rannsóknarinnar er Ragnar P. Ólafsson, dósent við Sálfræðideild Háskóla Íslands, Sími 525-4502, tölvupóstur: ragnarpo@hi.is. Unnið er undir handleiðslu Halls Hallssonar doktorsnema og kennara við sálfræðideild Háskóla Íslands, tölvupóstur: hah10@hi.is.