

CHANGES IN LIIKUNNAN RIEMU'S FOOTBALL TEAM'S
COHESION DURING EUSA GAMES IN ROTTERDAM

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Memories of the unforgettable experience would not have been possible without the amazing team, Liikunnan Riemu. I want to thank the whole group that participated in the EUSA Games in Rotterdam and those who made the trip possible. Your co-operation and open-mindedness provided huge encouragement when choosing the subject. I'm grateful to belong to such an extraordinary group. This was a privilege and saviour of my studies to work Master's Thesis on Liikunnan Riemu.

I want to thank my parents for their support during my studies. Without love and a little push throughout my entire life, things would be different. I also want to thank my friends for helping to rest my thoughts every now and then. To have such great support around, it is easy to accomplish anything.

Liikunnan Riemu is better than...

TIIVISTELMÄ

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Tutkimuksen tarkoituksena oli tutkia Liikunnan Riemun jalkapallojoukkueen koheesion muutoksia European Universities Sports Association Games:ien aikana Rotterdammassa, Hollannissa. Tutkielma pohjautuu kvantitatiiviseen tutkimukseen, jossa käytetään Carronin ja hänen kollegoidensa (1985) kehittämää Group Environmental Questionnairea, suomeksi ryhmäilmapiiri mittaria, urheilujoukkueille. Ryhmäilmapiiri kyselylomake on jaettu neljään eri osa-alueeseen, jotka kuvaavat tarkemmin koheesiota. Korkean koheesion on todettu johdattavan menetykseen urheilussa ja päinvastoin (Carron et al. 2002; Rovio 2009; Voight & Callaghan 2001).

Tutkimukseen osallistuneet ovat Jyväskylän yliopiston opiskelijoita, joista suurin osa Liikuntatieteiden laitokselta. Yhteensä 26 vastausta saatiin kerättyä. Joukkue koostuu pelaajista, valmentajasta, huoltajasta ja kannattajista. Jäsenet ovat vuosikursseilta ensimmäisestä kuudenteen. Kaikki tutkimukseen osallistuneet olivat suomalaisia.

Joukkueen koheesioita mitattiin kahdessa otteessa. Ensimmäinen mittaus tapahtui lentokoneessa matkalla Helsingistä Amsterdamiin. Toinen ja viimeinen mittaus suoritettiin yhtä lailla lentokoneessa, mutta tällä kertaa matkalla toiseen suuntaan. Vastaukset kerättiin tutkijan toimesta ja keskiarvoja analysoitiin käyttämällä SPSS Statistics – ohjelmaa.

Saadut tulokset pääasiassa viittaavat positiiviseen muutokseen koheesiossa. Huomattavaa ovat erot muutoksissa jäsenten välillä, jotka ovat viettäneet vähemmän aikaa joukkueessa ja enemmän aikaa joukkueessa. Kokonaistuloksissa jäsenet, jotka olivat viettäneet vähemmän aikaa joukkueen kanssa, kohtasivat enemmän kehitystä koheesiossa turnauksen aikana.

Tutkimuksen tulosten avulla voidaan sanoa, että kymmenen päivän jalkapalloturnausmatka on hyväksi joukkueen koheesiolle. Turnauksen jälkeen joukkueen jäsenet tuntevat olonsa yhtenäisemmäksi ja kiintyneemmäksi, sekä sosiaalisesta että tehtävä orientoituneesti, kuin ennen turnausta.

Avainsanat: ryhmäkoheesio, ryhmäilmapiiri -kysely, ryhmäilmiö

ABSTRACT

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The aim of this study was to examine Liikunnan Riemu's football team's changes in cohesion during European Universities Sports Association Games in Rotterdam, Netherlands. The basis for this study was to quantitatively examine cohesion using Carron's and his colleagues (1985) developed Group Environmental Questionnaire for sport teams. The GEQ is divided into four dimensions which describe cohesion more accurately. High cohesion has been shown to lead to success in sports and vice versa (Carron et al. 2002; Rovio 2009; Voight & Callaghan 2001).

The participants were students from University of Jyväskylä, mostly from the department of Sport Science. Altogether 26 answers were collected. The team consisted of players, coach, masseuse and supporters. Students were from years from one to six. All the participants who took part in the study were Finnish.

The team's cohesion was measured in two occasions. Initial measurement took place on the airplane on the way from Helsinki to Amsterdam. Second and final measurement was also performed on the plane but on the way back to Helsinki. Answers were collected by the researcher and means were analyzed in this study using SPSS Statistics program.

The results indicate positive change in cohesion in almost all cases. Notable was the differences between changes of members with less time spent in the team and members with more time spent in the team. Overall members who had spent less time in the team faced more improvement in cohesion during the tournament.

With the results of this study it can be claimed that a ten days trip to play football is good for team's cohesion. After the tournament members of the team feel more clinginess and togetherness than before the tournament in both social and task perspective.

Keywords: team cohesion, group environmental questionnaire, group phenomenon

ABBREVIATION

EUSA	European Universities Sports Association
GEQ	Group Environmental Questionnaire
ATGT	Individual attraction to group – Task
ATGS	Individual attraction to group – Social
GIT	Group integration – Task
GIS	Group integration – Social

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1 INTRODUCTION

Liikunnan Riemu, founded 2011, is a sports club mainly consisting of sport science students from the University of Jyväskylä. Liikunnan Riemu has many different fields of sport where its members compete, but its roots burst from football. Nowadays, four years after the club was founded, football is still one of the biggest interests of the club. Every year the team participates in Finnish championship tournament for university students to fight for a place in the European Universities Sports Association (EUSA) Games. At this event the best university teams from all over Europe gather up to compete for the grand title. As this research took place, Liikunnan Riemu's football team was competing in the EUSA Games in Rotterdam, Netherlands, summer 2014.

As being a sports student and a member of the team it felt natural to work my Master's thesis on this particular occasion. The idea for this work came from the unique feeling of togetherness within the team. Togetherness, or more accurately cohesion, is something that this team relies on. Nevertheless most of us study in the same faculty or play futsal during winter time, EUSA Games tournaments are the ones that stand out when reminiscing memories of the time spent. These amazing trips attach the members and increase cohesion within. Over time team members stick together because of the unifying attributes of the occasion (Pescosolido & Saveedra 2012) and are motivated for the following competitions.

Cohesion is hard to describe as it is something that cannot be touched or grabbed on. More likely, it is a feeling. It is a feeling including emotions like feeling of togetherness, clinginess, and relationships within group members and/or motivation towards the group's goal (Gill 2000). Not surprisingly, cohesion has been said to be the key elements for group's success (Carron et al. 2002). According to research groups and group members benefit from cohesion (Gill & Williams 2008). Group phenomena have especially been researched within sport teams (Hoigaard 2006; Rovio 2009, 167) and also in military environment (Harinen 2012).

As cohesion clings up the group's elements, members and their attributes together and enables members to perform at their finest (Gill & Williams 2008) it was interesting to see how cohesion changes within Liikunnan Riemu's football team during the tournament. In

addition, changes between members with less time and more time spent in the team were observed. Research was done by using Group Environmental Questionnaire which is specially aimed for sport teams. It measures cohesion in four different dimensions: individual attraction to group – task, individual attraction to group – social, group integration – task and group integration – social. These different aspects give specific information about cohesion accurately in addition to overall cohesion. Also another measurement was used in the research to gather more information about personal motivational factors. However as this measurement tool was based on Buddhist wheel of life, its statistical reliability was rather weak. Thus, collected results were ignored.

Finally, the team is a place for younger students to stand out and make their way to this unique community. Being part of a group and being involved in a group is empowering and unifying for individuals. (Lundbom & Herranen 2011). During these tournaments new members are absorbed to the team and joint with the older members socially. This phenomenon creates continuity which is vital for team's future and success concerning upcoming tournaments.

Cohesion has been measured in various studies in the past (Carron et al. 2002; Beal et al. 2003). However, there have not been many studies where the change of cohesion has been measured in a specific team. In this thesis, the change of cohesion during a certain occasion is attempted to measure using the Group Environmental Questionnaire (Carron et al. 1985).

This Master's thesis was done by personal inspiration towards the subject of the research which was achieved after vigorous attempts of finding something truly fascinating. Having found the Group Environmental Questionnaire locked the theme of the study and the idea of using Liikunnan Riemu's football team as a research group. Now that it is in one piece, please enjoy reading it.

2 DEFINITION OF GROUP

First of all it is important to clear out what is a group and what it is not. This gives real understanding what is ought to be associated with the term group when mentioned in the text. It makes sure that people are discussing about the same phenomenon and that wrong connections are not done (Carron et al. 2005). After learning the meaning of group we can understand that groups are learning platforms in which people can bond and learn new skills.

What is not a group? Carron (et al. 2005, 10) presents a statement that: “groups are not just any aggregate of two or more people”. More likely, it was defined groups as “social aggregates that involve mutual awareness and potential mutual interaction.” He also detailed types of social aggregates that can’t be defined as groups for they lack criteria listed below. (Carron et al. 2005, 10.) According to McGrath, these were:

- *Artificial aggregates* such as *statistical group* formed on the basis of a common property such as age, sex, social class. (e. g., Polish orienteers),
- *Unorganized aggregates* such as a) *an audience* attending to a common set of stimuli, like a tennis match, b) *a crowd* that is in physical proximity attending to a common set of stimuli (e.g., in an amusement park), c) *a public* that has and is attending to a common set of issues, has indirect interaction on the issues but may not be in physical proximity (e.g., FIFA),
- *Units with patterned relationships* such as a) *a culture* where the members share common customs, language, etc. (e.g., Swedish), b) *a subculture* where members share common customs, language, etc. that are in contrast in specific ways to that of the surrounding culture (e.g., Finnish Swedes), or c) *a kinship group* where members are related by birth or marriage,
- *Structured social units* such as a) *a society* where members share a geographical region, political system, and relationships characterized by interdependence , or b) *a community* which is a subdivision of a society, and

- *Deliberately designed social units* such as a) an *organization* where a large aggregate of people is recruited for specific role (e.g., Red Cross), or b) a *suborganization*, which is a portion of a large organization (e.g., Red Cross of Jyväskylä),
- *Less deliberately designed social units* such as *association* which are formed for specific purposes and where interaction among members is present (e.g., Rugby's Five Nations Championships).
- Even highlighted examination of these listed above wouldn't change the fact that none of these are characteristic of a sport team (Carron et al. 2005, 10-11).

What is a group? In the world there are numerous types of groups such as: military groups, sport groups, social groups and so forth. All these groups are similar in one way but yet they are significantly different in various aspects. (Carron et al. 2005.) To be understood as a group, there are essential features that must be met. A group has been generally defined as a collection of individuals one of the key defining characteristics of a group is *interaction*. Group members must be aware of each other and be able to communicate through group processes. The members must have the ability to interact with each other during group processes. A group must contain at least two members but has to be small enough to provide interaction, mutuality and continuity over time. (Carron & Brawley 2000; Gill, 2000.)

Second key element emphasizes the fact that group members have a *common fate* (Carron & Brawley 2000). No matter how big the input of an individual is, the group loses or wins together for example in a football team. Carron defines common fate of the group as:

“as a set of individuals who share a common fate, that is, who are interdependent in the sense that an event which affects one member is likely to affect all.” (Carron et al. 2005, 11).

Third category of defining groups is *mutual benefit*. Individuals, unlike in a crowd of people, have a mutual feeling of rewarding in the group. It is something different to be a part individuals waiting for a bus on a bus stop than to be a member of basketball team and enjoy the rewards and benefits that a team brings. (Carron & Brawley 2000; Carron et al. 2005.)

Fourth definition of a group is *social structure*. In every case groups are characterized by a stable pattern of relationship among group members. For example, different roles and social status are relevant and present in an ice hockey team but among a class that is meeting for the first time these matters are neither present nor relevant. (Carron & Brawley 2000; Carron et al. 2005.)

A *sport team* is a certain kind of a group. It has the same characterizing features as a normal group but in higher volume (Gill 2000). Carron (2005) defines a sport team as a collection of at least two members that seize common identity, have common goals and objectives, share a common fate, are personally and instrumentally interdependent, reciprocal interpersonal attraction, hold common perception about group structure and of course identify themselves as a group. Whether a team is playing on a high professional level or in an informal league, the common identity exists if individual team members, opponents and non-team member all view that the group as a unit distinguishable from other units (Carron et al. 2005).

It has been proposed all kinds of groups to go through four stages as they are developing and preparing to carry out group tasks. The process has been divided into processing, storming, norming and performing. The length of these four stages may vary for example depending on the coach's knowledge of team individuals or whether, it is possible to use different strategies to create better team harmony. Thus, other phases of developing a group can last longer than others. (Weinberg & Gould 2007.)

- In the initial stage of team development, *forming*, team members familiarize themselves within the group. Individuals assess one another's strengths and weaknesses. Learning their own place in the team is also part of this stage.
- The second stage of team development, *storming*, is noticed by how individuals react towards the group. Characteristic of this stage is resistance to the leader, resistance to control by the group and interpersonal collisions. These can occur for example when the coach establishes player's role within the group. In this stage it is important for team leaders for example coaches to be open and treat all the players equally objectively.
- *Norming* is the third stage. In this stage conflicts are resolved and feeling of unity increases. Individuals now work as a group to reach common goals instead of putting effort on their own well-being. Hostility has changed into co-operation and solidarity.

- In the final stage, *performing*, individual roles are now well structured, feeling of togetherness is high and team focuses their energies towards team's success. New ideas and problem solving is characterized by this stage. (Weinberg & Gould 2007.)

3 DEFINITION OF COHESION

Before we can dive into any deeper, it is vital that the term cohesion is defined. It has several ways to approach it. Cohesion is considered to be the mutual distinguishing element of successful groups. It can be notified in different types of groups such as work, military, sport and exercise groups (Carron et al. 2008). The actual word, cohesion, derives from a Latin word *cohaesus* meaning dividedness, clinginess and togetherness. It might seem to be an easy term to understand but defining it is more challenging. (Rovio 2009.)

The word cohesion has been used to replace other terms such as camaraderie, solidity, teamwork and chemistry (Hourula & Schneider 2010). For cohesion is an abstract, not something you can see or seize on but a feeling of togetherness, it is hard to measure or assess it. It exists in the minds of individual group members (Carron et al. 2002). Therefore, it has also been defined within group dynamics literature “as the total field of forces causing members to remain in the group” (Gill & Williams 2008, 255). On the other hand, it has been considered to have more sense if it was defined as the resistance for the group to disruptive forces. (Carron et al. 2005.) Later on, it was more accurately rephrased as “a dynamic process which is reflected in the tendency for a group to stick together and remain united in the pursuit of its instrumental objectives and/or the satisfaction of member’s affective needs” (Carron et al. 1998, 213; Gill & Williams 2008, 255). Setting it in this form, it is easier to approach cohesion in the matter of sport compared to more general statement (Gill 2000).

To be even more precise about the term cohesion, we can divide Carron’s definition into four more informative parts. “First, cohesion is *multidimensional*, resulting from many factors that may differ across groups” (Gill & Williams 2008, 256). In other words, this means that there is various amounts of different causes for a group to stick together and remain unite. This could mean that a group is very cohesive socially but lacking in task unity. (Carron et al. 2005.) “Second, cohesion is *dynamic*, changing over time through the dynamic process” (Gill & Williams 2008, 256). Thus, this can happen if a leader character of the group leaves after a successful period. Rest of the group is left with uncertainty and to a situation, where they need to find a new path creator. (Carron et al. 2005.) “Third, cohesion is *instrumental*; group members cohere for reasons, whether to be part of a

university basketball team or to maintain an exercise program” (Gill & Williams 2008, 256). This is one of the fundamentals in group forming. A purpose, usually task-oriented, brings people together creating groups with mutual goals. This is very appealing for example in military groups. Also groups with purely social meaning have an instrumental basis. Forming a group can improve or maintain social relationships. (Carron et al. 2005.) “Fourth, cohesion has an affective *dimension*; even in highly task-oriented groups such as sport teams, social cohesion generally develops through interactions and communications. Finally, cohesion is perceived differently by different groups and members.” (Gill & Williams 2008, 256.) Consistently this definition and nature of cohesion became the very foundation of cohesion measurement (Beauchamp & Eys, 2007).

Cohesion in team sports has been a field of many studies, researching effects of how team cohesion affects success and how success affects group cohesion. Generally there is an assumption that greater team cohesiveness is related to greater team success (Beal et al. 2003; Carron et al. 2001; Chiocchio & Essiembre 2009). However, there have been researches about disadvantage outcomes of cohesion in team sports (Rovio et al. 2009).

In addition, it is important to understand that every team’s performance is related to their task cohesion and/or social cohesion. In task cohesion team has a common meaning, something that they try reach or accomplish. For this reason the group is formed and has meetings to achieve this goal. For example a football team’s reason for going to practice and reason for action is the motivation towards playing football. Reason or mission is the primary force that sticks the team together. Furthermore, team’s cohesion can be related to social cohesion. This is a factor connected with individual social relationships, emotional feelings, within the group. Positive emotional feelings towards another team member are usually something that develops during time and is the force that sticks the group together. (Rovio 2009.)

4 ANTECEDENTS OF TEAM COHESION

Cohesion is not possible to understand without some major features. These features can be described as multidimensional, dynamic, instrumental and affective (Weinberg & Gould 2007). High cohesion should be improved because good cohesion increases the level of performance. Reciprocally when a team is performing well cohesion deepens. (Rovio et al. 2009.) These four factors are descriptive.

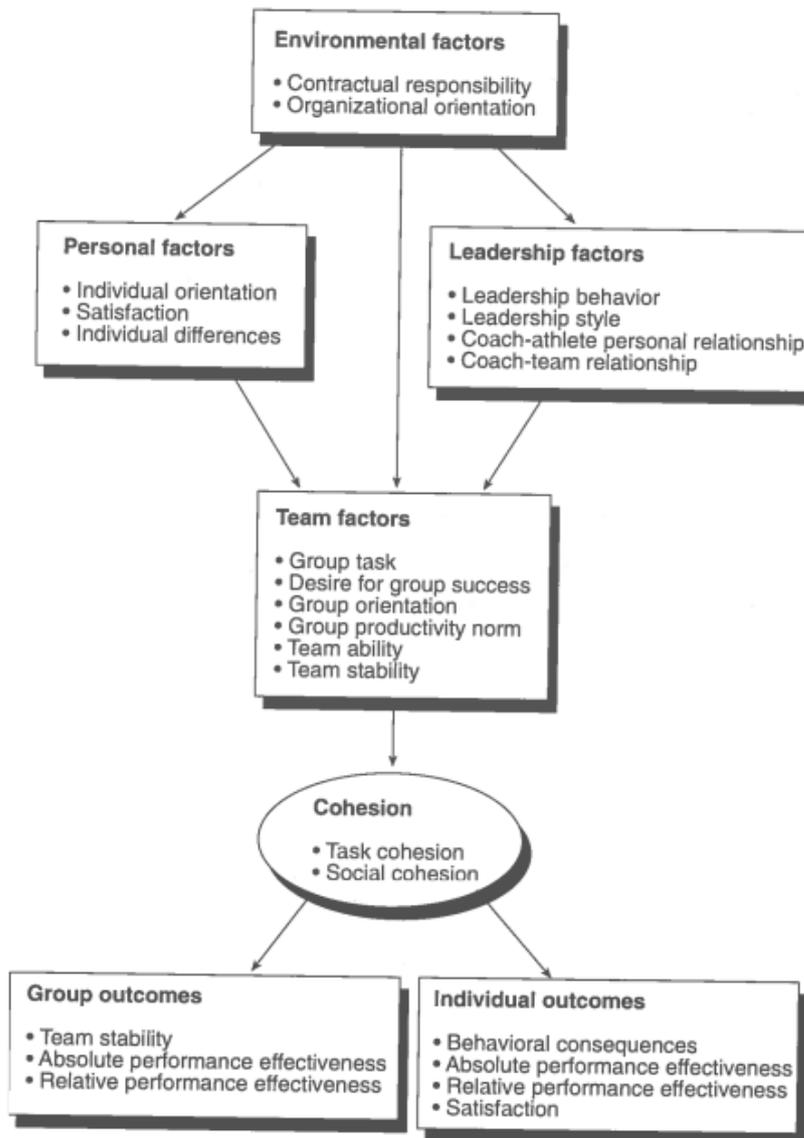


FIGURE 1. Conceptual System for Cohesiveness in Sport Teams (Gill 2000, 309).

However, cohesion is also related to four correlates. Typically these have been divided into four categories: (1) environmental factors, (2) personal factors, (3) leadership factors and (4) group (team) factors. See figure 1 (Gill 2000). This figure gives a more conceptual system for cohesiveness and it is easier to interpret contrary to just pure text (Carron et al. 1985). This model has been created specifically for sport teams and should be used outside of sport setting (Chang & Bordia 2001).

4.1 Factors Influencing Cohesion

Environmental factors include for example the size of the group. Group size is important when thinking about group's cohesion. Compared to work and social groups sport teams are capable of creating better feeling of togetherness, because the group size remains almost the same in all cases. (Carron et al. 2005.) Somehow it seems to be easier to communicate effectively and coordinate the team when there are less people (Carron et al. 2007). To money focused groups it is more natural to increase the amount of members, which creates difficulties in reaching high group cohesion (Carron et al. 2005).

Cohesion is influenced by personal factors through individual characteristics such as behaviour, cognitions, affect, commitment, attitudes, abilities and demographic attributes (Carron et al. 2007; Gill & Williams 2008). The most important correlates in personal factors are individual satisfaction and adherence behaviour. These two individual satisfactions have been recognized to be significant factor related to cohesion. (Carron et al. 2007.)

Roles represent a major structural component in all groups and especially in sport teams (Eys et al. 2007). How leadership factors meet with team's cohesion is piloted by the leader's style of behaviour and decision-making (Carron et al. 2007). These reflect relationships between players and coaches (Gill & Williams 2008). Using certain kinds of strategies and different variations of approaching the team, coaches can significantly affect for example team's task cohesion (Carron et al. 2007). For cohesiveness democratic style is found to be better than autocratic style and compatibility between leader and players in the team is also related to cohesiveness (Gill & Williams 2008).

Team factors are associated with the team as a totality (Carron et al. 2007). This factor relates to the team's structure such as role and norms, processes such as goals and communication and the outcomes. When members understand their roles in the team (role clarity), accept their roles (role acceptance) and take responsibility of their roles (role performance), groups are more likely to be more effective and most of all, more cohesive. (Gill & Williams 2008.)

4.2 Consequences of High and Low Team Cohesion

Potential disadvantages of high team cohesion have not been studied much in the past. One reason for this and for the lack of facts of negative consequences of team cohesion is that players, coaches and even researches take it as granted, that it is always beneficial to have high team cohesion. Common thought is also that it should be encouraged whenever possible. (Rovio et al. 2009.) We all know that a team with great players can lose to a team with less skilled players. Is this caused by lack of team cohesion or by negative outcomes of cohesion between team members?

Cohesion may be associated with pressure to conform, to be similar with the norms and habits of the group. It is also been accompanied with terms groupthink, which means that group thinks as an independent unit with lowered contradictory thinking and deindividuation, losing one's self-awareness in a group. (Paskevich et al. 2001.) Collective failures in decision-making are often caused by members' unwillingness to express contradictory opinions (Packer 2009). These terms are valid when a group's cohesion is high. In addition, Hardy et al. (2005) researched that 56% of athletes reported high cohesion to have potential unfavourable outcomes to social cohesion and 36% to high task cohesion. Contradictory, in competitive level athletes reported to have lower potential disadvantages of high social or task cohesion, only 27% and 22% respectively. Finally, it was researched that high social cohesion of the team combined with low performance norms, would appear to have disadvantage outcomes on the team's performance (Rovio et al. 2009).

Potential advantages of high team cohesion can be written down just by common sense. It is not hard to determine whether it is better that a team is socially equal and members of it

get along fine than that team members do not get along with each other and communication within the group is difficult. Usually a team's mutual aim is accomplish a purpose. Therefore task cohesion and social cohesion play a significant part in group's performance (Rovio et al. 2009). High cohesion increases group's performance level and reciprocally success in performances increase cohesion (Carron et al. 2002). Not surprisingly, it is shown in Carron's et al. (2002) meta-analysis that a significant moderate to large relationship was found between cohesion and performance. Some social scientists have even presented cohesion to be the most important team variable (Carron et al. 2007, 118).

Yet there can be found studies showing no significant correlations in success and cohesion, there are several other aspects that may lead to high cohesion and therefore to success or vice versa. Cohesion has been found to adherence behavior, for example adherence to trainings schedules, conformity towards the group, taking responsibility for negative outcomes, dealing with negative impact and collective efficacy. (Rovio et al. 2009.) In addition, with my personal experience from team sports, I find high cohesion as the key element to success. Even if success isn't achieved, team's feeling of togetherness and shared emotions help to endure losses and to embrace for new challenges. If team members feel unity and attraction towards one another and to the task they are performing, the result of the performance is better (Rovio et al. 2009). In the words of former Manchester United football player Eric Cantona: "harmony in a team means everybody playing together and thinking as one" (Carron et al. 2005, 241).

The effects of *low team cohesion* have not been studied as a whole since formations without task or social cohesion rarely stick together. Researchers, coaches and athletes have mutual feeling that cohesion ought to be rehearsed always when possible and it should be developed and strengthen in every case. Groups that have no mutual interest in reaching some goal or lack passion to spend time with other members of the group are missing vital features that form a group. In sports, many clubs have had to stop their operation for the lack of any kind of interest towards team's social or task cohesion. Good relationships within a team encourage members to remain in the group for a longer period of time. (Rovio et al. 2009.)

5 MEASURES OF COHESION

Most definitions and measures of cohesiveness are multidimensional. This means that cohesiveness has usually been divided into interpersonal attraction, which is assessed in individual terms with friendship choices or other sociometric items, and a more direct attraction-to-group dimension, which are assessed with group-related items. (Gill 2000; Gill & Williams 2008; Rovio ym. 2009.) In the beginning measurement work involved mainly simple measures, attraction-to-group being the most common (Gill & Williams 2008.)

5.1 Instruments for measuring cohesiveness

Initial instrument developed to measure cohesiveness in sport was the *Sport Cohesiveness Questionnaire* (later SCQ). With this instrument it was possible to assess attraction among group members, attraction towards the group and perception of the entire group. Before 1984 SCQ was the only instrument to measure cohesiveness in sport. (Gill 2000; Gill & Williams 2008.) Nowadays researchers question the validity of SCQ because it was not built on a strong conceptual base and its psychometric properties have never been fully established. (Carron et al. 2001; Gill 2000; Gill & Williams 2008.)

Carron's conceptual model of cohesion (Figure 1.) launched two different sport-specific instruments (Gill 2000; Gill & Williams 2008.) *The Multidimensional Sport Cohesion Instrument* (later MSCCI) was the first one. It assesses both task and social perceptions of group cohesiveness. Disadvantages of using the MSCCI are to be concerned about. Items of this instrument are basketball specific and it was not developed from a conceptual model. Reliability and validity have not been established, thus the MSCCI has not been used subsequently. (Gill & Williams 2008.)

5.2 Group environmental questionnaire

Latest instrument developed is the *Group Environmental Questionnaire* (Later GEQ). This 18-item, four-scale measure is applicable to variety of different sport and exercise groups and it has sustainable internal consistency. (Gill 2000; Gill & Williams 2008; Rovio ym. 2009.) The GEQ is mostly used instrument to measure cohesiveness in sport and exercise psychology (Gill & Williams 2008). Adapted from Carron's conceptual model of cohesion (Figure 1.) the GEQ was divided into two general categories: Group integration and individual attraction to the group. Group integration defines perception of the group as a whole and individual attraction to the group is concentrated on the personal feelings. (Gill 2000.) Both of these categories have two subcategories: task and social aspect (Figure 2.). As a result it is possible to use the instrument in four related dimensions:

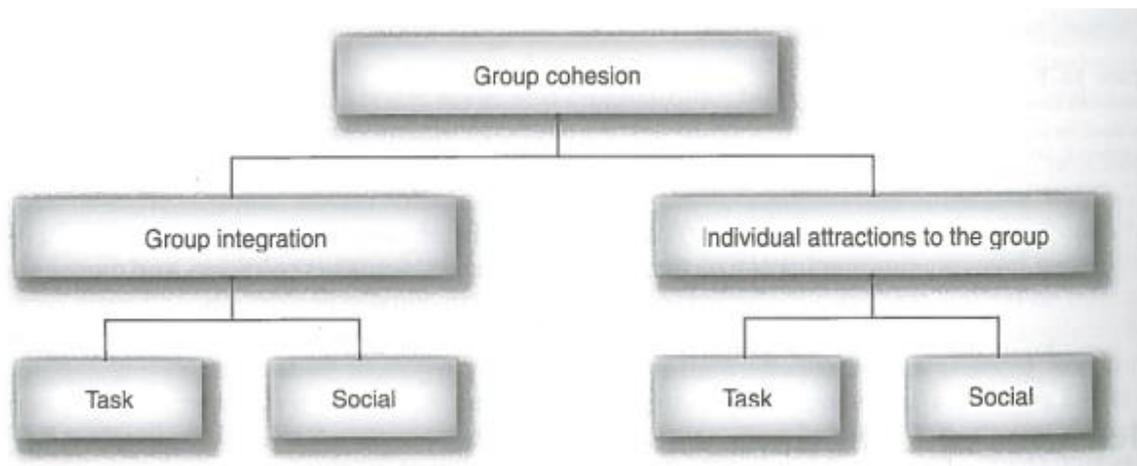


FIGURE 2. Conceptual model of group cohesion (Gill & Williams 2008, 258).

Instrument holding these four factors help to gather information about cohesiveness dynamically and collectively. Research done during the season allows to measure cohesiveness consistently perceptions of members. (Gill & Williams 2008.)

The clinginess of a group should be assessed regularly. Leader of the team should assess the task cohesion of the team. Willingness to join practice, how interesting the practices, exercises, personal and team task and tactics are preferred, progression of the task and

how unity is felt within the team. Correspondingly, social cohesion of the team should be assessed how important co-members of the group are felt, how are felt when with the members, how willingly the group is joined and how coherent the team is felt socially. (Rovio ym. 2009.)

Since the creation of the Group Environmental Questionnaire various studies concerning cohesion has been done (Carron et al. 2002; Beal et al. 2003). Mainly these researches have focused on aspects such as how cohesion is related to continuity (Auvinen & Karjalainen 2012), the relationship of cohesion and success (Carron, Bray & Eys 2002; Carron et al. 2002), cohesion and performance (Gully et al. 2002; Hourula & Schneider 2010) and roles within the team (Eys et al. 2007; Hoigaard et al. 2006) Hardly any previous research focuses purely on the changes in cohesion during a certain period of time. This aspect gives the opportunity to find the unifying occasions and how different members feel after successful or unsuccessful season or tournament.

6 PURPOSE OF THE STUDY

The purpose of this study was to research the change of cohesion within a team and individuals during an intense tournament. Because Liikunnan Riemu's football team doesn't play in any league the only chance to measure cohesion is during the EUSA Games tournament. Nevertheless it is the strongest factor that creates atmosphere and feeling of togetherness between members of the team.

By measuring cohesion with Group Environmental Questionnaire changes can be found. Having gathered this information, guidelines for high cohesion are possible to enhance. Collected data can be used by coaches, athletes and other members of any team for understanding group phenomena and other purposes.

Following three research questions were set:

1. What kinds of changes were found in the whole team's cohesion during tournament?
2. How do the results between younger and older members differ?
3. Which factors have influenced the changes in cohesion during the tournament?

7 STUDY DESIGN AND RESEARCH METHODS

Research group formed of Liikunnan Riemu's football team including coach, masseuse and supporters. Altogether 27 participants took part in this study but one of them was ignored for having left the permission sheet (Appendix 1) incomplete. Thus, 26 answers were considered in this research. All of the participants study or have studied in the University of Jyväskylä in the faculty of sport science.

This team was picked for this study because the spirit and atmosphere around it is something extraordinary. Almost every summer this team has attended European Universities Football Championship since 2007. Long traditions and lifelong friendships form in these trips and learning how cohesion is related to it is significant.

Results were collected in two phases, initially before the tournament and secondly after it. Cohesion was measured overall and in four separate parts. Then cohesion was compared with members who have been in the team longer and shorter time. Finally in the discussion part it is speculated what could have affected the results.

7.1 Collections of the data

Initially the data collection was operated on the way to the tournament venue and finally as returned from the tournament. Before taking the questionnaire a permission sheet to participate in this study was filled. The permission sheet (Appendix 1) contained of the explanation of the research and of an agreement part to use the answer in this thesis. Some of the members who didn't arrive in Rotterdam with the team filled the permission sheet and the questionnaire later. Also members, who didn't return with the team, filled and handed the questionnaire paper in later.

Questionnaire was gathered and safely possessed by the researcher of this thesis. Final answers were kept safe securely in University of Jyväskylä's computers and analyzed anonymously with SPSS Statistics processor.

7.2 Measurement tool

The data was collected by using Group Environmental Questionnaire that Carron, Widmeyer and Brawley (1985) developed. It is specially aimed for measuring cohesion in sport teams (Gill & Williams 2008). The GEQ consists of 18 questions which are categorized in different aspects of cohesion. It is formed on the basis of Likert scale and participants chose answers between 1 (strongly disagree) and 9 (strongly agree). Items 1, 2, 3, 4, 6, 7, 8, 11, 13, 14, 17 and 18 are reverse scored. For this study they were recoded to the other direction so that the high score in the items representing all sub-scales would represent positive outcome. (Metsämuuronen 2000). Carron et al. (1985) divided the questionnaire in four categories which are:

- Individual attraction to the group – Task (ATGT)
- Individual attraction to the group – Social (ATGS)
- Group integration – Task (GIT)
- Group integration – Social (GIS)

First group ATGT is formed from questions 1, 3, 5, 7 and 9. ATGT examines individual attraction to the group's task. For example, how motivated an individual is to win. Second category is ATGS for which questions number 2, 4, 6 and 8 are aimed for. Here individual attraction to the group is measured in social aspect for example, satisfaction towards the team.

Third and fourth group focuses on the group's integration. In these groups the team is assessed as a whole. GIT measures group's cohesion towards the task. An example of task could be winning a tournament. In GEQ questions 10, 12, 14, 16 and 18 are aimed to indicate the level of GIT. Fourth category, GIS, is examined in questions 11, 13, 15 and 17. This category describes the social aspect of integration within the team (Carron et al. 1985).

The team and its individuals were compared considering these four different categories. Initially, the team was analyzed as a whole. What kinds of changes have happened during the tournament in cohesion? Secondly, it was examined how the changes in cohesion among the members with shorter and longer period of time in the team differ. Members were divided into two groups based on time spent in the team. First group consists of members that have spent one to two years in the team. The other group consists of members that have been in the team at least 3 years. Here was examined has the cohesion increased as gradually in both cases or has either of them raised more. Finally, it was discussed what kinds of events during the tournament could have influenced cohesion, for example winning or partying together.

7.3 Reliability and validity of the study

The reliability is directly proportional to the reliability of the measurement tool which has been traditionally described with reliability and validity. Content of the reliability indicates the repeatedness of the study. Validity however refers if the study is measuring what it is meant to be measured. (Metsämuuronen 2003.)

Validity can be divided into inner and outer validity. Outer validity examines how the research can be generalized. Inner validity instead has traditionally examined are we measuring what is meant to be measured. Inner validity is more conceptual or theoretical than a measurable feature of a research (Metsämuuronen 2003). Group environmental questionnaire used in this study has been used in many earlier researches where it has been proven to be contently logical tool to describe cohesion in this study (Rovio 2000).

The reliability of GEQ was measured through inner consistency. One of the most used once is with Cronbach's alpha. Reliability counted with Cronbach's alpha grounds on high correlation between variables. (Auvinen & Karjalainen 2012.) Cronbach's alpha for the whole study was 0,757 in pre measurement and in the post 0,723. These coefficients meet the acceptable reliability coefficient value minimum of 0,6. This is considered to be the lowest value for social studies. (Metsämuuronen 2003; Auvinen & Karjalainen 2012; Bonett & Wright 2015.) However, if Cronbach's alpha is $> 0,5$, it is still useable.

7.4 Sum of the variables and reliability

In many researches it is preferable to create a sum of variables. Often measurement tools, in this case the GEQ, examine the same phenomena in different light. (Metsämuuronen 2003; Auvinen & Karjalainen 2012.) This means that variables measuring the same attribute are merged.

Carron, Widmeyer & Brawley (1985) constructed the Group Environmental Questionnaire to measure four different sums of variables at the same time as it measures the whole cohesion of the team. GEQ is a convenient way of examining cohesion and the transformation of it. The questionnaire measures both individual and group cohesion through task and social perspective (Rovio, Lintunen & Salmi 2009). This model was also implemented in this research.

TABLE 1. Cronbach's alpha for sums of variables in pre measurement and mean. (n=26)

Sum variable	Cronbach's alpha	mean
Individual attraction to the group – Task	0,51	7,79
Individual attraction to the group – Social	0,72	7,64
Group integration – Task	0,62	7,95
Group integration – Social	0,72	7,73

Performing the sums of variable with these statements the value of Cronbach's alpha was accepted. If statement 1. had been concealed Cronbach's alpha would have been 0,74. This however was not necessary as ATGT was already reliable (Table 2.). The mean in this

measurement group was 7,644 (Table 1.). It indicates members to feel fairly orientated towards social matters.

TABLE 2. ATGS items with Cronbach's alpha.

Individual attraction to group - Social	Cronbach's Alpha if Item Deleted
I do not enjoy being a part of the social activities of this team	0,74
I am not going to miss the members of this team when the season ends	0,63
Some of my best friends are on this team	0,66
I enjoy other parties rather than team parties	0,65
For me, this team is one of the most important social groups to which I belong	0,65
Overall alpha (n=26)	0,72

Cronbach's alpha for this sum of variable was 0,51. This value is relatively low compared to others reliabilities in Table 1. If concealing the statement number 2. Cronbach's alpha would have been 0,61 (Table 3.). Nevertheless, in this study the value 0,51 was accepted. Statement number 2 is situation reliant because it measures something that is relative. A member of the team may be satisfied to less time on the pitch than others or a member of the team that did not make it to the playing group can be totally unsatisfied. If left this statement out of the study, other results would have been affected. Thus, it was included. Mean for this sum of variables was 7,79 which indicate members being rather determined towards good performance (Table 1.).

TABLE 3. ATGT items with Cronbach's alpha.

Individual attraction to group - Task	Cronbach's Alpha if Item Deleted
I'm not happy with the amount of playing time I get	0,61
I'm unhappy with my team's level of desire to win	0,41
This team does not give me enough opportunities to improve my personal performance	0,21
I do not like the style of play on this team	0,49
Overall alpha (n=26)	0,51

Cronbach's alpha for this sum of variable was 0,72 (Table 4.). Reliability would not have changed if any of the statements were concealed. Research group's mean for this sum of variables was 7,73 (Table 1.). It indicates team to have good initial atmosphere between individuals.

TABLE 4. GIS items with Cronbach's alpha.

Group integration – social	Cronbach's Alpha if Item Deleted
Members of our team would rather go out on their own than get together as a team	0,69
Our team members rarely party together	0,57
Our team would like to spend time together in the off season	0,71
Members of our team do not stick together outside of practice	0,62
Overall alpha (n=26)	0,72

Cronbach's alpha in this sum of variables was 0,62. If statement 14 had been concealed in the study reliability for GIT would have been 0,66 (Table 5.). However, the difference between these two values was marginal so it was not taken into consideration. Otherwise, it would have affected other results. The mean for this sum of variables was 7,95 which indicates good strive towards unite goal (Table 1.).

TABLE 5. GIT items with Cronbach's alpha.

Group integration - Task	Cronbach's Alpha if Item Deleted
Our team is united in trying to reach its goal performance	0,49
We all take responsibility for any loss or poor performance by our team	0,59
Our team members have conflicting aspirations for the team's performance	0,66
If member of our team have problems in practice, everyone wants to help them so we can get back together again.	0,47
Our team members do not communicate freely about each athlete's responsibilities during competition or practice	0,61
Overall alpha (n=26)	0,62

Based on read literature usually only the initial measurement is taken under consideration in researches. If the first measurement is reliable often following reliability calculations are not needed. Nevertheless, performing later measurement reliabilities, stability and permanence towards the study can be enhanced. In this research initial values for Cronbach's alpha were good. However, same values in the second measurement varied a lot.

In measurement after the tournament social group integration and task related individual attraction to the group were low in Cronbach's alpha. They got values of 0,15 and 0,31. These numbers are under the reliability coefficient value 0,6 (Metsämuuronen 2003; Auvinen & Karjalainen 2012; Bonett & Wright 2015). Other values reached the needed

reliability level. Radical changes between the first and second measurement can be explained by low number of participants. This creates fluctuation in results which is realized in the stability and permanence of used measurement tool. In this research reliabilities in the after measurement were ignored because it is both invalid and unnecessary. In addition it voids the research.

8 RESULTS

Results were collected in two phases, initially before the tournament and secondly after it. Cohesion was measured overall and in four separate parts. Then cohesion was compared with members who have been in the team longer and shorter time. Finally in the discussion part it is speculated what could have affected the results.

8.1 Overall cohesion

Cohesion of the whole team was measured by using the GEQ. Instead of dividing the questionnaire in parts, it was used as a whole. This way it was effortless to analyze.

TABLE 6. Team cohesion means and standard deviations before and after the tournament using the group environmental questionnaire. (n=26).

Cohesion of the whole team	Before	After	Sig.
	7,80	8,14	0,00
Std. Deviation	0,59	0,50	

In table 6. it can be noticed that mean cohesion before the tournament was 7,80. After the tournament it had increased to 8,14. T-test showed significant ($p=.000$) improvement indicating that the tournament had a good effect on team's feeling of unity. Standard deviation is fairly low which reflects on the small variation of the given answers.

8.2 Fields of cohesion

The Group Environmental questionnaire is divided into four sectors. Separately they assess different phenomena of group's cohesion. In this study these sectors were analyzed overall and later in the perspective of members with longer and shorter period of time in the team before and after the tournament. The four sectors are:

- Individual attraction to the group – Task (ATGT)
- Individual attraction to the group – Social (ATGS)
- Group integration – Task (GIT)
- Group integration – Social (GIS)

8.2.1 Individual attraction to group - Task

Individual attraction to group's task cohesion increased from the pre measurement compared to the post measurement. Mean for ATGT before the tournament was 7,64. In the initial questionnaire minimum was 5,25 which is already above mathematical mean. Maximum was 9,00. Standard deviation was 0,96 which indicate that 68% of the answers locate +/- 0,962 from the mean. Answers did not vary a lot in other words.

TABLE 7. Descriptive table of the individual attraction to group's task cohesion. ATGT1 shows results gathered before the tournament. ATGT2 after the tournament. (n=26).

	Minimum	Maximum	Mean	Std. Deviation
ATGT1	5,25	9,00	7,64	0,96
ATGT2	5,75	9,00	7,92	0,78

After the tournament mean of the ATGT was 7,92. This indicates that the tournament has improved individual's task cohesion ($p < 0.05$, see figure 4.) which could be winning the tournament. For the second measurement minimum had increased to 5,75. This explains the improvement in mean. Also decrease to 0,78 in standard deviation reflects in mean. Maximum was clear 9.00 in both occasions. Altogether 26 answers were analyzed.

8.2.3 Individual attraction to group - Social

Individual attraction to group's social cohesion rose from the initial measurement compared to the second measurement. Table 8. defines the changes in ATGS. Before the tournament mean was 7,82 which is rather high. Maximum value was 9,00 and minimum was 5,60 which is fairly high also. Standard deviation before the tournament in ATGS was 1,04.

In Table 8. it can be found that mean grew to 8,19 which indicate rise in attraction towards group's social cohesion individually. Minimum had also risen to 6,40 and maximum remained the same. Standard deviation had decreased nearly by 0,30 to 0,80. This indicates that the answers of participants are located closer to mean than earlier.

TABLE 8. Descriptive table of the individual attraction to group's social cohesion. ATGS1 shows results gathered before the tournament. ATGS2 after the tournament. (n=26).

	Minimum	Maximum	Mean	Std. Deviation
ATGS1	5,60	9,00	7,82	1,04
ATGS2	6,40	9,00	8,19	0,80

8.2.4 Group integration – Task

Group integration to task cohesion rose in the final measurement compared to the initial one. In Table 9. changes between these two measurements are shown. Mean in the first measurement was 7,73 which is fairly high. Minimum was an moderate 6,00 and maximum 9,00. Standard deviation was 0,76 which is again adequately high.

In the second measurement mean had risen to high value of 8,08. In this sector the mean had rised the most. Minimum and maximum both remained the same. Standard deviation had decreased marginally to 0,76. This was the only measurement where standard deviation was lower in the initial occasion than in the second. However, the change doesn't reflect to any other values. Significant in GIT is that mean in group integration to task cohesion had risen.

TABLE 9. Descriptive table of the group integration to task cohesion. GIT1 shows results gathered before the tournament. GIT2 after the tournament. (n=26).

	Minimum	Maximum	Mean	Std. Deviation
GIT1	6,00	9,00	7,73	0,76
GIT2	6,00	9,00	8,08	0,76

8.2.5 Group integration – Social

Group integration to social cohesion was measured with four questions. Positive change was observed between the initial and second measurement. These changes are shown in Table 10. In the first measurement mean was 8,02 which is very high for initial examination. Minimum was 5,75 which above half and maximum was 9,00. Standard deviation was low 0,80.

In the second measurement mean was 8,36. It had risen more than 0,3 between the measurements. In addition minimum had also increased significantly to 7,00. This value reflects in improved mean and decreased standard deviation which had lowered to 0,553. Maximum remained the same. Altogether 26 answers were analyzed.

TABLE 10. Descriptive table of the group integration to task cohesion. GIS1 shows results gathered before the tournament. GIS2 after the tournament. (n=26).

	Minimum	Maximum	Mean	Std. Deviation
GIS1	5,75	9,00	8,02	0,80
GIS2	7,00	9,00	8,36	0,55

8.3 Changes in cohesion between members with more and less time in the team

The changes between team members' means were analyzed in the perspective of time spent in the team. In other words, changes in cohesion were examined between members with longer and shorter period of time spent with the team. This gives data of how the cohesion varies differently within these two groups and how they reflect each other's. The groups were divided by years spent in the team. First group consisted of younger member with one to two years in the team. The other group consisted of older members, having being at least three years in the team. Changes were analyzed initially overall of the group. Subsequently, the four sectors are introduced separately.

Specific data of every individual item is shown at the end of this work. Members with less time spent in the team in appendix 4. and members with more time spent in the team in appendix 5.

8.3.1 Overall change in cohesion

Overall changes in the whole team's cohesion compared to years spent in Liikunnan Riemu can be seen in table 12. Blue line indicates the group with less time in the team and green line the group with more time in the team. Members with more years in the group measured in the initial measurement of overall cohesion 7,85 and in the second 8,32. Total improvement in this group was 0,47. Group with members with less time in the team measured in the first occasion 7,51 and in the second 7,97. Total increase in this group was 0,46. Both groups had improved their overall cohesion to the post measurement.

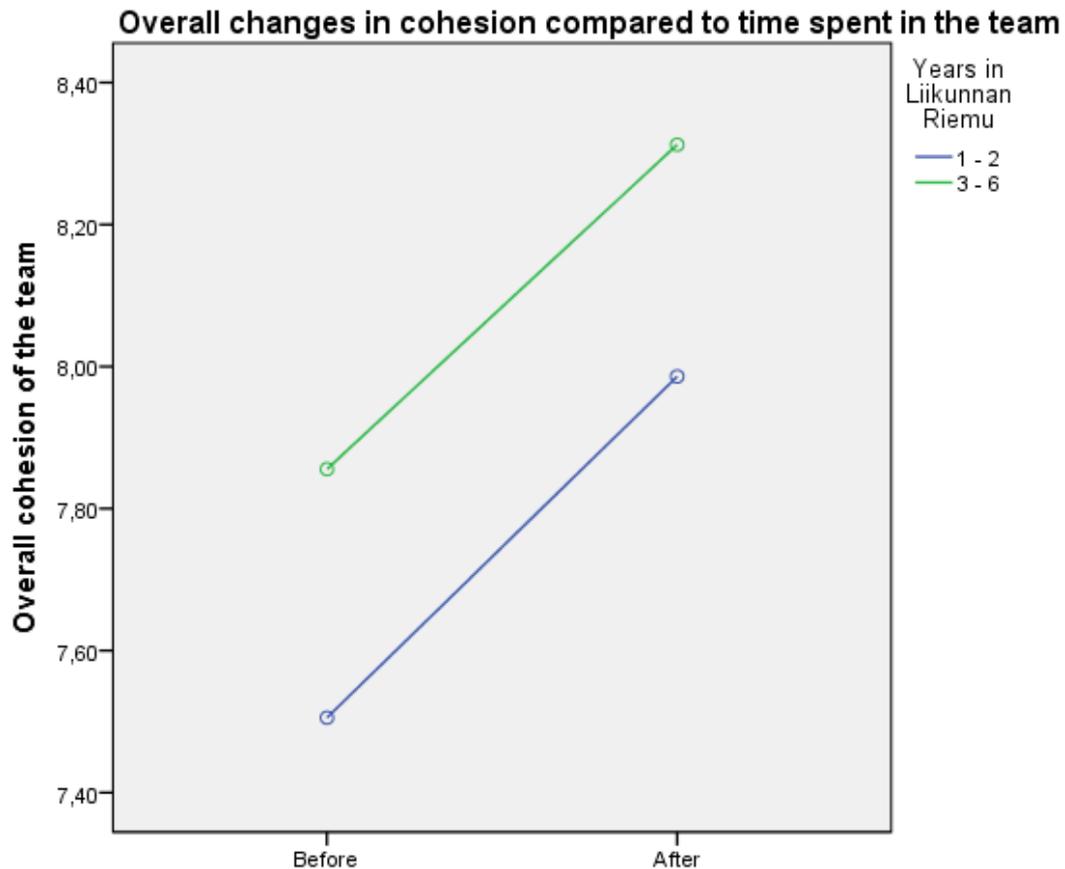


FIGURE 3. Overall changes in mean in Liikunnan Riemu’s team cohesion before and after the tournament.

Improvements in both groups were statistically significant as members with less time in the team got $p=.011$ and members with more time in the team got $p=.003$ in T-test. These results indicate tournament to have a good impact on group’s cohesion in both age sectors.

8.3.2 Individual attraction to group - Task

Individual attraction to group’s task cohesion was compared between members with less and more time spent in the team. The results are shown in figure 4. Group with less years in Liikunnan Riemu initially measured ATGT mean of 7,68 which was surprisingly more

than members with more time spent in the team. However, to the second measured their mean decreased to 7,55. Difference between the two measurements is very marginal yet the only one that measured negative changes in cohesion.

Members with more time spent in the team measured in the initial measurement the value of 7,63. Unlike in the other group where the value decreased, here mean for the second measurement increased up to 8,16. This indicates that individuals of this group have more passion for example to win the tournament than the other group.

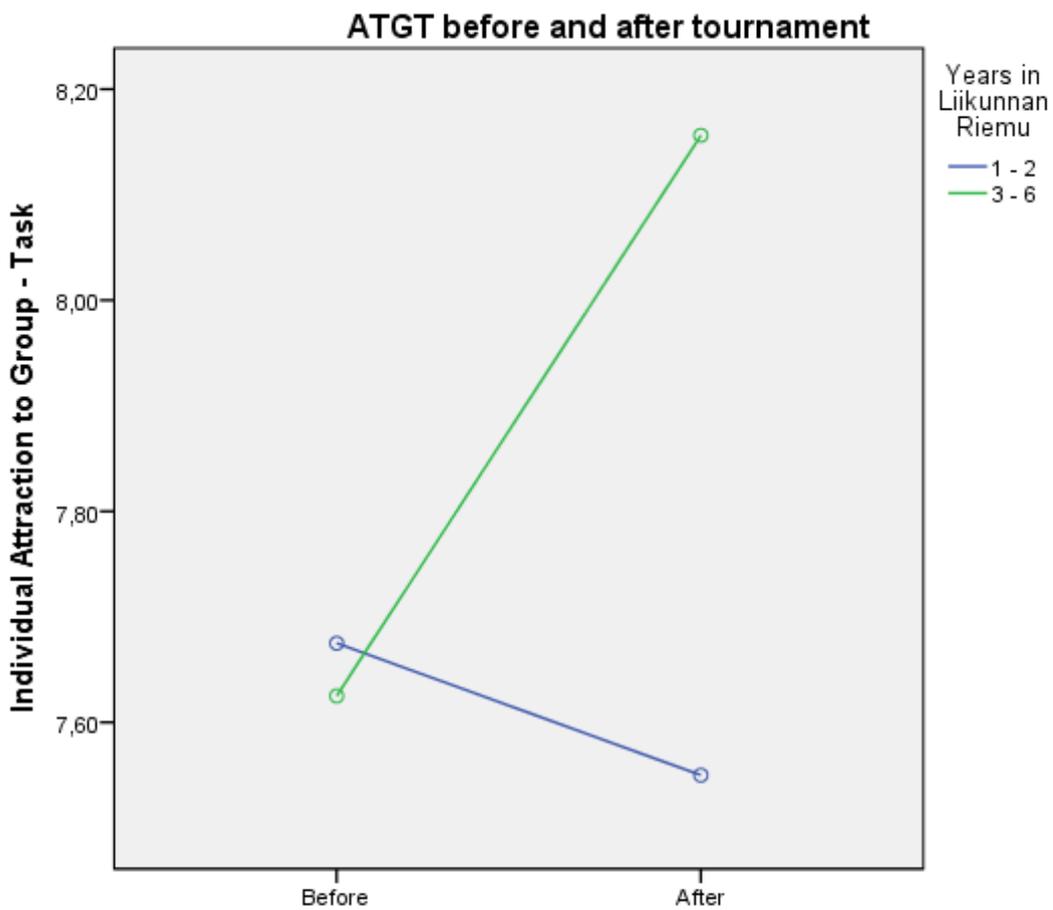


FIGURE 4. Changes in mean in individual attraction to group's task cohesion between members with less and more time spent in the team.

Differing information can be reasoned by the low number of participants examined in this study. In addition, the difference between members with less and more time spent in the team in individual attraction to group's task was not statically significant as sig. < 0,05. (Table 11.)

TABLE 11. Difference in cohesion between members with less and more time in the team.

		t	df	Sig. (2-tailed)
Pair 1	ATGS1 - ATGS2	-3,055	25	0,005
Pair 2	ATGT1 - ATGT2	-1,796	25	0,085
Pair 3	GIS1 - GIS2	-2,618	25	0,015
Pair 4	GIT1 - GIT2	-2,604	25	0,015

8.3.3 Individual attraction to group - Social

Individual attraction to group' social cohesion was compared between members with less and more time spent in the team. The data is shown in table 21. Members with less time spent in the team measured in the initial measurement mean of 7,010. In the second occasion, opposed to ATGT, ATGS measured positive change with the mean of 7,70. This is notable increase, yet not extraordinary finding as members were new in the group.

Other group consisting of members who have spent more time in the team measured in the initial occasion mean of 8,30 which is very high. Nevertheless, in the measurement made after the tournament mean of 8,50 was collected. These results indicate members to have been extremely oriented towards social cohesion right after the tournament.

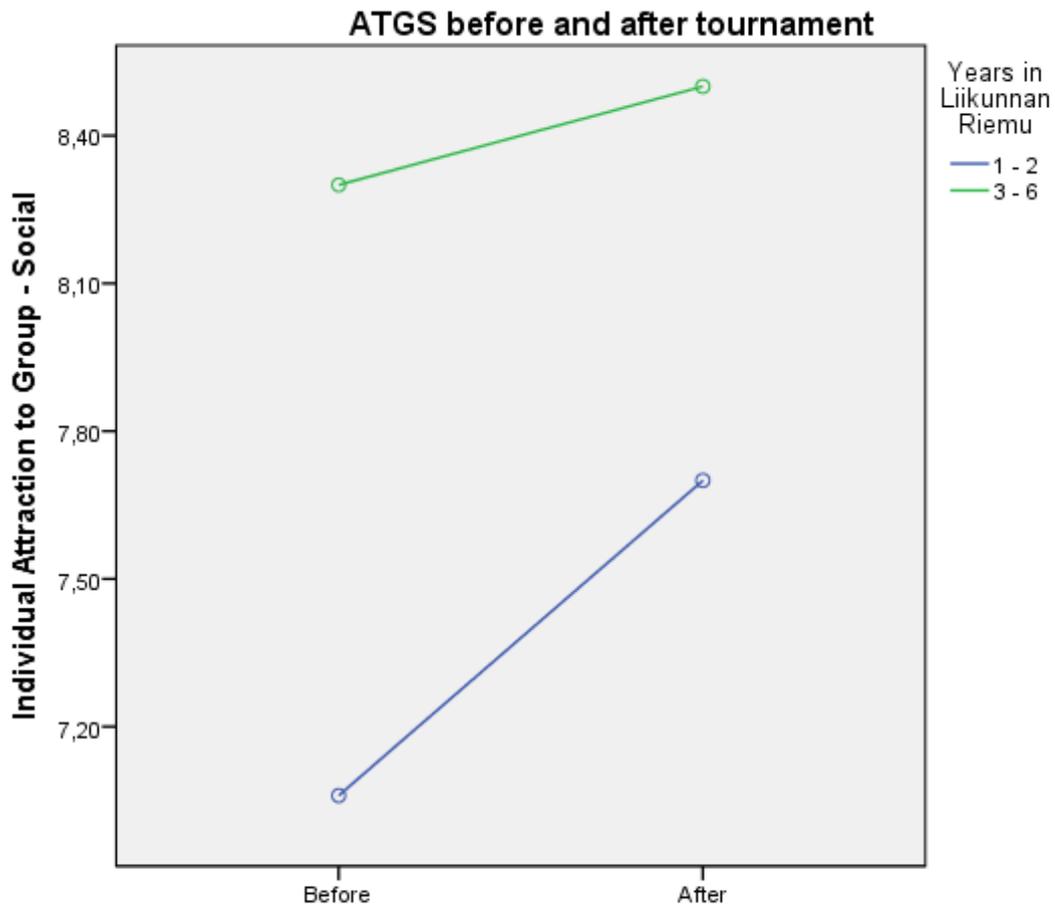


FIGURE 5. Changes in mean in individual attraction to group's social cohesion between members with less and more time spent in the team.

The difference between members with less and more time spent in the team in individual attraction to group's task was statically significant as sig. < 0,05. (Figure 5.) In other words answers given for ATGS differed between short-term members and long-term members.

8.3.4 Group integration - Task

The change in group integration to task cohesion between members with less and more time in the team was quite equal as seen in figure 6. Both means increased from the initial measurement to the second. Members with less time in the team collected the mean of 7,66 in the first measurement. To the second measurement the mean of group integration to task cohesion of member with lesser time in the team was increased to 7,98. Thus, clear improvement was collected.

As mean increased with members of lesser time spent in the team so it did with the long-term group. This group measured in the initial occasion mean of 7,78. For the second measurement it had increased up to 8,14. Improvements in both groups reflect to improvement in group's integration towards task cohesion such as winning the tournament. In addition, difference in answers between member of lesser and more time spent in the team was showed to be statistically significant as $\text{sig} < 0,01$. (Table 11.)

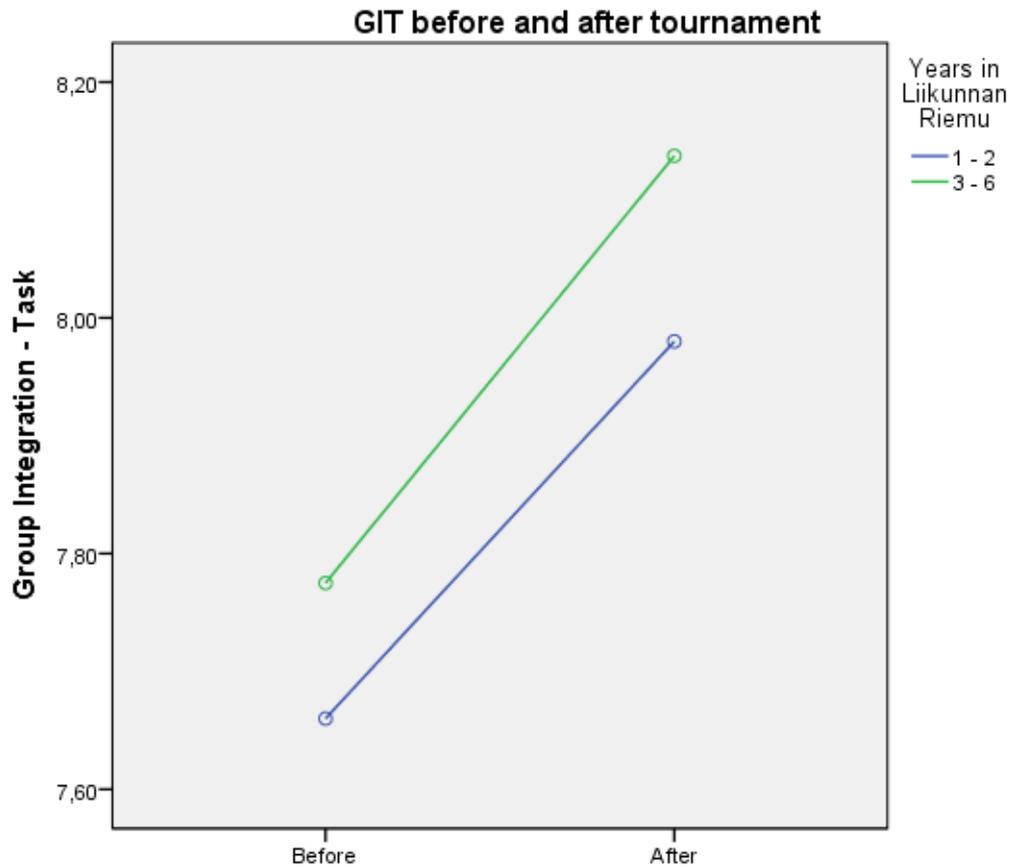


FIGURE 6. Changes in mean in group integration to task cohesion between members with less and more time spent in the team.

8.3.5 Group integration - Social

Group integration to social cohesion between members of less and more time in spent in the team was increased in both groups. (Figure 7.) More positive change was discovered in the younger group. Group consisting of members with less time spent in the team measured in the initial measurement mean value of 7,70 and in the second 8,20. The other group measured in the first occasion mean value of 8,22 and in the second 8,45. Values collected in both groups are notably high especially the initial values.

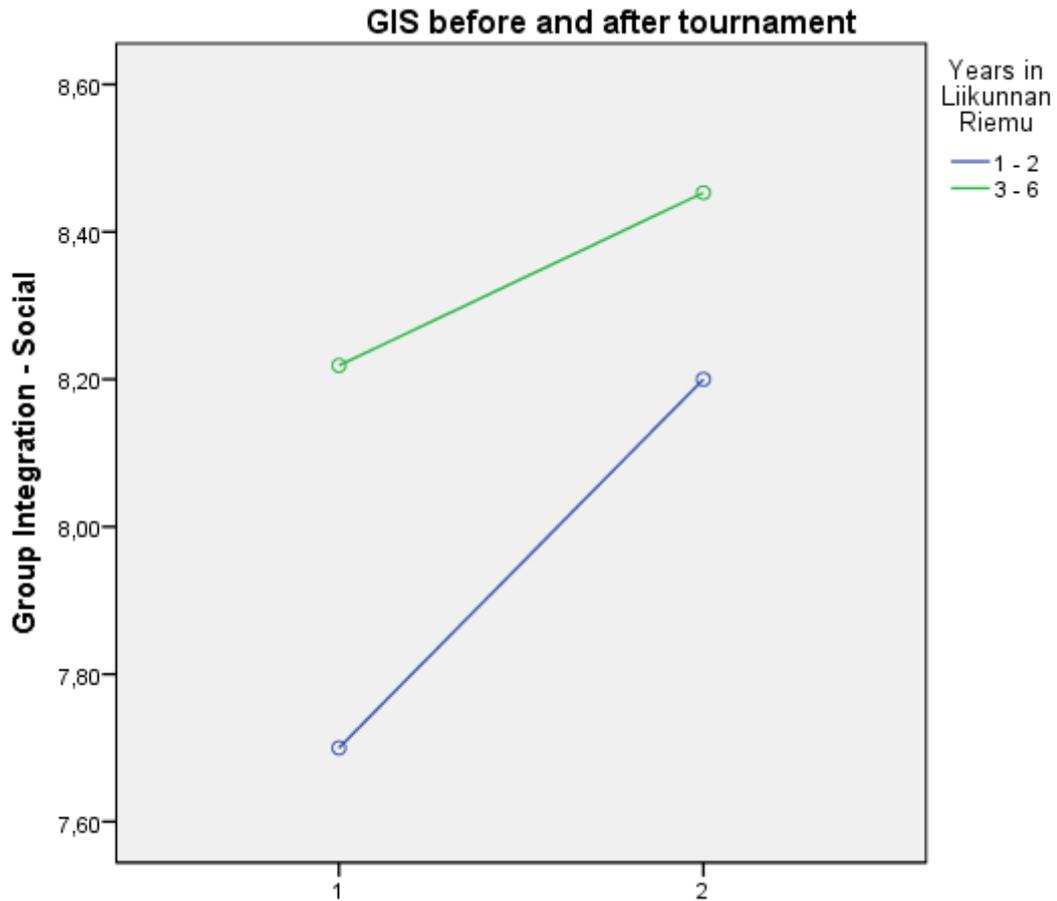


FIGURE 7(table 17). Changes in mean in group integration to social cohesion between members with less and more time spent in the team.

In addition, T-test shows difference in answers between member of lesser and more time spent in the team was showed to be statistically significant as $\text{sig} < 0,05$. (Table 11.) Most of the items grew in the comparison of pre and post measurements.

9 DISCUSSION

The aim of the study was two-fold. The first focus was to measure how the whole group's cohesion was influenced by the tournament. This was observed in four dimensions in the Group Environmental Questionnaire (Carron et al. 1985). Second focus was to distinguish the difference in changes of cohesion between members who have spent more time and members who have spent less time in the team. Also for the second measurement the Group Environmental Questionnaire was used. Both of these measurements were performed by using quantitative methods as the questionnaire consists of 18 questions on a Likert scale. In addition, the 18 questions were divided into four dimension measuring different attributes.

First dimension was individual attraction to the group – task (ATGT). Second dimension was individual attraction to the group – social (ATGS). Third dimension was group integration – task (GIT) and the last group integration – social (GIS). In the first measurement, dimensions resulted reliabilities of 0,512; 0,719; 0,621 and 0,715, respectively. This indicates dimensions to have good reliabilities except in ATGT. Reason for this low, yet still manageable, number could be that also all the supporters were included in the questionnaire. Answers in mutual goal, as in winning the tournament, could vary if supporters' main focus was to celebrate rather than achieve success. Yet it was used as it is statistically accepted to have $> 0,5$ value Cronbach's alpha in reliability.

In the second measurement reliability rates were even worse not only in ATGT but also in GIS. In this occasion values were 0,146 and 0,305, respectively. Radical changes in reliabilities can be explained by the low number of participants. Having more answers more stability and permanence could be reached. However, usually in researches the initial measurement for reliabilities is sufficient. Consequently, reliabilities in the second measurement were ignored in the result of this study.

General results of the study show improvement in cohesion after the European Universities Sports Association Games. According to Pescosolido & Saveedra (2012), multiple studies and meta-analyses over the years show the connection between cohesion

and success. Team cohesion has said to be most important small group variable (Hardy et al. 2005). Researches also state other studies to have found mixed results about the relationship between cohesion and success (Pescosolido & Saveedra 2012).

In this study both of these aspects were found. Generally improvements in cohesion were discovered despite one dimension which suffered negative results. Therefore, this enforces earlier studies about the relationship between cohesion and success. However it is still fairly hard to distinguish whether cohesion was affected by success or success by high cohesion.

9.1 Overall cohesion

Overall cohesion of the team was finally 8,137 which increased by 0,336 from the initial to the second measurement. As predicted, the tournament had a positive influence to the team's overall cohesion. In addition, improvement was discovered in all four dimension of the Group Environmental Questionnaire. ATGT, ATGS, GIT and GIS all resulted 8,00 +/- 0,10 except GIS being highest of 8,356. Overall it can be said that team's cohesion was affected positively by the tournament.

Members of the group felt more cohesive towards all dimension. Explanation for improvement might be good result from the tournament. Liikunnan Riemu placed fifth in the EUSA Games which is the best result ever. Other explanations could be spending time intensively with the group. Team lived on the same floor in apartments with three rooms and six beds for ten days. Members communicated with each other daily in and outside of the field. Also members went together to parties to have a good time which was something completely unrelated to sports.

9.2 Changes in cohesion between members with more and less time in the team

All the dimensions of the Group Environmental Questionnaire increased in both research groups except in individual attraction to group – task (ATGT). On this category, members who had spent more time in the team resulted positive change but members who had spent less time in the team scored negative change. In addition, this was the only dimension that did not score statistically significant result in the difference between member with less and more time in the team.

In both group integration dimensions, GIT and GIS, notable was that members with less time spent in the team scored higher result in the second measurement than members with more time spent in the team scored in the initial measurement. This indicates “younger” members to feel more cohesive in relation to “older” members, which means them to be more group oriented in task and social perspective. Especially high results in group integration to task were measured in “younger” members. However, members with more time spent in the team measured clearly higher scores in all four dimensions. Yet, this is understandable as these members have spent more time with the team and have become more unite with the group.

Also notable here is that overall cohesion with members with less time in the team scored higher than initial measurement scored for members with more time spent in the team. This promises bright future for the team.

9.3 Limitations and improvements

The biggest limitation of the study was the fact that number of participants was fairly low. Group consisted of 31 members of which only 18 were players. Rest of the group consisted of coach, masseuse and supporters. As the Group Environmental Questionnaire is aimed for sport teams, the questions of the questionnaire were a little misleading for some of the group for example question of satisfaction towards given playing time. This was then shown as weak reliabilities in the study and as negative results. Yet, only 26

valid answers were collected due to different return routes or unfulfilled sheets. In addition, there has been a few occasions where researcher have questioned the validity of the GEQ (Eys et al. 2009; Sullivan et al. 2002).

Better results to cover low number of participants could have been achieved with more teams to evaluate. This tournament was a difficult place to examine several teams. For future improvements team or teams should be tested during long season and only players should be included in the test. As in this thesis also supporters and other staff members of the team were included, some of the questions became invalid. Thus, results were not completely stable.

In the question sheet was initially two different types of forms of questionnaires. First one was the Group Environmental Questionnaire which then stayed to be the only source of information. The second was a customized version of Buddhist wheel of life. Yet, as the wheel of life is rather holistic, its results were left out. However, it could have been replaced with something more qualitative to collect more information about the reasons of why cohesion was increased within the group. In addition, this would have given reasons how members of the team think differently or alike about success and parties of the group.

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APPENDIX 1

Tiedote ja suostumuslupa seuran jäsenien kirjalliselle materiaalille

HYVÄ LIIKUNNAN RIEMUN JÄSEN, JOKA OSALLISTUT EUSA GAMES TURNAUKSEEN HOLLANTIIN, ROTTERDAMIIN,

Joukkuehenki on yksi tärkeimmistä asioista joukkueiden menestyksiin eri lajeissa. Joukkuehenkeä voidaan myös kuvata sanalla koheesio, joka on suorana käännöksenä tarkoittaa kiinteyttä. Koheesio tulee latinankielen sanasta cohaesus, joka tarkoittaa yhteenkuuluvuutta ja/tai kiintyvyyttä. Kuluneen vuoden jalkapallon MM-kisoissa Saksan maajoukkuevalmentaja Joachim Löw kehui muun muassa joukkueen yhteishenkeä sekä Suomen jääkiekkjoukkueen valmentaja Erkka Westerlund ylisti joukkuehengen merkitystä jääkiekon MM-kisojen aikana. Tällä lomakkeella pyrin keräämään tietoa joukkueen koheesiokehityksestä turnausmatkan aikana. Tämä on ainutlaatuinen tilaisuus, sillä joukkueessa on tällä hetkellä uusia tulokkaita sekä vanhoja tekijöitä. Näiden uusien ja vanhojen jäsenten kiintymisen yhteen joukkueena on mielenkiintoinen prosessi ja kuinka se vaikuttaa joukkueen koheesioon. Tässä tutkimuksessa Sinä autat selvittämään, miten se on mahdollista.

Miten käytännössä tutkitaan?

Pro gradu –tutkielma aineistonkeräys tapahtuu turnausmatkan aikana ja kaikki seuran jäsenet matkalla mukana saavat osallistua. Tutkimus koostuu Group Environmental Questionary –lomakkeesta eli ryhmän ilmapiiri kyselylomakkeesta. Siihen vastataan meno- ja tulomatalla ja vastauksista analysoidaan joukkueen koheesiota kuvaavaa materiaalia. Lisäksi, täytetään ominaisuuspiirakka, jolla selvitetään tämän hetkisiä henkisiä ja fyysisiä ominaisuuksia henkilökohtaisella tasolla.

Osallistuminen on täysin vapaaehtoista. Pro gradu –tutkielmaan osallistumisen voi keskeyttää milloin tahansa ja mistä tahansa syystä ilman mitään seuraamuksia. Mikäli suostut osallistumaan, pyydän sinua rastittamaan seuraavalla sivulla olevat laatikot, joissa myönnät oikeuden vastauksiesi käyttämiseen pro gradu –tutkielmassani.

Tietosuoja

Kaikki antamasi tieto on luottamuksellista. Antamasi vastaukset jäävät ilman tunnistetietoja ainoastaan tutkimuksen suorittajan Pauli Pylvänäisen käyttöön. Tutkimustuloksia käytetään vain pro gradu -tutkielmassani. Vastauksia säilytetään Jyväskylän yliopiston verkkoympäristössä käyttäjätunnukseni ja salasananani takana salassa muilta. Kenelläkään muulla kuin pro gradu –tutkielman laatijalla ei ole niihin pääsyä.

SUOSTUMUSLOMAKE PRO GRADU -TUTKIELMAAN OSALLISTUMISEKSI

Olen saanut riittävästi tietoa Liikunnan Riemun EUSA Games turnausmatkaa koskevasta joukkueen koheesio tutkimuksesta. Ymmärrän, mikä tutkimuksen tarkoitus on ja mitä tutkitaan. Tiedän, että osallistuminen on täysin vapaaehtoista ja että voin keskeyttää osallistumiseni missä vaiheessa tahansa tutkimusta tai kieltää antamani tietojen käytön ilman, että se vaikuttaa kohteluuni nyt tai vastaisuudessa. Olen tietoinen, että voin missä tutkimuksen vaiheessa tahansa kysyä lisätietoja liikuntatieteen ylioppilaalta Pauli Pylvänäiseltä.

Ymmärrän, että tutkimukseen antamani vastaukset käsitellään luottamuksellisesti ja vain tilastollisesti sekä numeraalisesti. Osallistun vapaaehtoisesti tähän tutkimukseen ymmärtäen, ettei tutkimuksen tekijä luovuta vastauksiani kenellekään ulkopuoliselle. Olen tietoinen kaiken kerätyn tiedon säilyttämisestä siten, että hankkeen ulkopuoliset eivät pääse siihen käsiksi.

Rastittamalla seuraavat ruudut ja allekirjoituksellani annan vapaaehtoisesti suostumukseni siihen, että seuraavia tuottamiani materiaaleja saa käyttää tutkimusaineistona:

1) Ryhmän ilmapiiri kyselylomake

2) Ominaisuuspiirakka

Paikka ja päiväys

Allekirjoitus

Nimen selvennys

KIITOS OSALLISTUMISESTA!

Pauli Pylvänäinen, 0440856602, pauli.pylvanainen@jyu.fi

APPENDIX 2

TAUSTAKYSYMYKSET

Sukupuoli: Mies Nainen

Vuosikurssi: _____

Kauanko olet ollut Riemun toiminnassa mukana: _____ vuotta

Oletko turnauksessa (ympyröi oikea):

Pelaaja Valmentaja vai
Kannattaja

Muu, mikä: _____

Kauanko olet pelannut jalkapalloa: _____ vuotta

En ole koskaan pelannut

Pelaatko edelleen: Kyllä En

Monesko opiskelijoiden EM-kisamatka tämä on sinulle: _____

Nimi: _____

RYHMÄILMAPIIRIKYSELY

(The Group Environment Questionnaire, GEQ; Carron, Widmeyer & Brawley, 1985)

Tämän kyselyn tarkoituksena on kartoittaa joukkueesi ilmapiiriä. Vastaukset käsitellään luottamuksellisesti. Ne jäävät pro gradu –tutkielman laatijan haltuun ja pidetään salassa muilta. Saadun tiedon avulla pyritään analysoimaan joukkuematkan merkitystä joukkueen koheesiolle.

Seuraavien kysymysten tarkoituksena on arvioida Sinun tuntemuksia omasta osallistumisestasi tämän joukkueen toimintaan. Ympyröi se numero, joka parhaiten vastaa tämänhetkistä käsitystäsi.

1. En nauti osallistumisesta tämän joukkueen yhdessä oloon

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

2. En ole tyytyväinen saamaani peliaikaan

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

3. Minun ei tule ikävä tämän joukkueen pelaajia, kun kausi on ohi

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

4. En ole tyytyväinen joukkueeni tahtoon voittaa

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

5. Jotkut parhaista ystäväistäni kuuluvat tähän joukkueeseen

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

6. Tämä joukkue ei anna minulle riittävästi mahdollisuuksia kehittää taitojani

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

7. Nautin muista juhlista enemmän kuin tämän joukkueen juhlista

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

8. En pidä tämän joukkueen pelityylistä

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

9. Minulle tämä joukkue on yksi tärkeimmistä ryhmistä, joihin kuulun

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

Seuraavien kysymysten tarkoituksena on arvioida käsityksiäsi joukkueestasi kokonaisuutena.
Ympyröi se numero, joka parhaiten vastaa käsitystäsi.

10. Joukkueemme on yhtenäinen pyrkiessään saavuttamaan tavoitteensa

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

11. Joukkueen jäsenet menevät illalla mieluummin ulos yksin kuin yhdessä joukkueena

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

12. Me kaikki otamme vastuun joukkueen häviöstä tai huonosta suorituksesta

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

13. Joukkueemme jäsenet juhlivat harvoin yhdessä

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

14. Joukkueella on ristiriitaisia toiveita joukkueen suorituksen suhteen

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

15. Joukkueemme haluaisi viettää yhdessä aikaa kauden loputtua

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

16. Jos joukkueemme jäsenillä on vaikeuksia harjoituksissa, niin kaikki haluavat auttaa heitä, jotta saamme harjoitukset taas toimimaan hyvin

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

17. Joukkueemme jäsenet eivät ole yhdessä harjoituksen ja pelien ulkopuolella

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

18. Joukkueemme jäsenet eivät keskustele vapaasti jokaisen pelaajan vastuusta otteluissa ja harjoituksissa

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

Nimi: _____

OMINAISUUSPIIRAKKA

Tämän piirakan tarkoituksena on mitata henkilökohtaisia ominaisuuksiasi. Täytä piirakka tämän hetkisen käsityksesi mukaan. Väritä ympyrän lohko keskeltä kohti ulkoreunaa. Mitä lähemmäksi ulkoreunaa värität sitä vahvempi tunne on. Väritä jokaista lohkoa vähintään yksi kerros. Jos jokin asia on epäselvä, älä epäröi kysyä neuvoa.



APPENDIX 3

Nimi: _____

RYHMÄILMAPIIRIKYSELY

(The Group Environment Questionnaire, GEQ; Carron, Widmeyer & Brawley, 1985)

Tämän kyselyn tarkoituksena on kartoittaa joukkueesi ilmapiiriä. Vastaukset käsitellään luottamuksellisesti. Ne jäävät pro gradu –tutkielman laatijan haltuun ja pidetään salassa muilta. Saadun tiedon avulla pyritään analysoimaan joukkuematkan merkitystä joukkueen koheesiolle.

Seuraavien kysymysten tarkoituksena on arvioida Sinun tuntemuksia omasta osallistumisestasi tämän joukkueen toimintaan. Ympyröi se numero, joka parhaiten vastaa tämänhetkistä käsitystäsi.

1. En nauti osallistumisesta tämän joukkueen yhdessä oloon

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

2. En ole tyytyväinen saamaani peliaikaan

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

3. Minun ei tule ikävä tämän joukkueen pelaajia, kun kausi on ohi

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

4. En ole tyytyväinen joukkueeni tahtoon voittaa

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

5. Jotkut parhaista ystäväistäni kuuluvat tähän joukkueeseen

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

6. Tämä joukkue ei anna minulle riittävästi mahdollisuuksia kehittää taitojani

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

7. Nautin muista juhlista enemmän kuin tämän joukkueen juhlista

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

8. En pidä tämän joukkueen pelityylistä

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

9. Minulle tämä joukkue on yksi tärkeimmistä ryhmistä, joihin kuulun

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

Seuraavien kysymysten tarkoituksena on arvioida käsityksiäsi joukkueestasi kokonaisuutena. Ympyröi se numero, joka parhaiten vastaa käsitystäsi.

10. Joukkueemme on yhtenäinen pyrkiessään saavuttamaan tavoitteensa

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

11. Joukkueen jäsenet menevät illalla mieluummin ulos yksin kuin yhdessä joukkueena

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

12. Me kaikki otamme vastuun joukkueen häviöstä tai huonosta suorituksesta

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

13. Joukkueemme jäsenet juhlivat harvoin yhdessä

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

14. Joukkueella on ristiriitaisia toiveita joukkueen suorituksen suhteen

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

15. Joukkueemme haluaisi viettää yhdessä aikaa kauden loputtua

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

16. Jos joukkueemme jäsenillä on vaikeuksia harjoituksissa, niin kaikki haluavat auttaa heitä, jotta saamme harjoitukset taas toimimaan hyvin

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

17. Joukkueemme jäsenet eivät ole yhdessä harjoituksen ja pelien ulkopuolella

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

18. Joukkueemme jäsenet eivät keskustele vapaasti jokaisen pelaajan vastuusta otteluissa ja harjoituksissa

1 2 3 4 5 6 7 8 9

**Täysin eri mieltä
mieltä**

Täysin samaa

Nimi: _____

OMINAISUUSPIIRAKKA

Tämän piirakan tarkoituksena on mitata henkilökohtaisia ominaisuuksiasi. Täytä piirakka tämän hetkisen käsityksesi mukaan. Väritä ympyrän lohko keskeltä kohti ulkoreunaa. Mitä lähemmäksi ulkoreunaa värität sitä vahvempi tunne on. Väritä jokaista lohkoa vähintään yksi kerros. Jos jokin asia on epäselvä, älä epäröi kysyä neuvoa.



APPENDIX 4.

Paired samples test for members who have spent less time in the team. Pairs on the left of the table represent the number question. Negative change in mean indicates growth between pre and post measurement. Positive change indicates decrease. (n=10)

		Paired Differences		t	Sig. (2-tailed)
		Mean	Std. Deviation		
Pair 1	Yhdessäolo - Yhdessäolo	,000	,471	,000	1,000
Pair 2	Peli aika - Peli aika	1,000	1,414	2,236	,052
Pair 3	Ikävä_pelaajia_kauden_jlk - Ikävä_pelaajia_kauden_jlk	-1,500	2,224	-2,133	,062
Pair 4	Tyytymätön_joukkueen_voitontah toon - Tyytymätön_joukkueen_voitontah toon	,000	,816	,000	1,000
Pair 5	Parhaat_ystävät - Parhaat_ystävät	-,700	1,703	-1,300	,226
Pair 6	Joukkue_kehitä_taitojani - Joukkue_kehitä_taitojani	-,600	1,776	-1,068	,313
Pair 7	Nautin_muista_juhlista - Nautin_muista_juhlista	-,600	1,350	-1,406	,193
Pair 8	En_pidä_pelityylistä - En_pidä_pelityylistä	,100	1,287	,246	,811
Pair 9	Tärkein_ryhmä - Tärkein_ryhmä	-,400	,966	-1,309	,223
Pair 10	Joukkue_yhtenäinen_vrt_tavoite - Joukkue_yhtenäinen_vrt_tavoite	,000	,943	,000	1,000
Pair 11	Jäsenet_mieluummin_yksin_ulko na - Jäsenet_mieluummin_yksin_ulko na	-,100	,568	-,557	,591
Pair 12	Kaikki_vastuussa_häviöstä - Kaikki vastuussa_häviöstä	-,500	1,080	-1,464	,177
Pair 13	Harvoin_juhlimme_yhdessä - Harvoin_juhlimme_yhdessä	-1,000	1,155	-2,739	,023
Pair 14	Ristiriitaiset_toiveita_suorituksiin - Ristiriitaiset_toiveita_suorituksiin	,200	,919	,688	,509
Pair 15	Yhdessäolo_kauden_jälkeen - Yhdessäolo_kauden_jälkeen	-,700	1,337	-1,655	,132

Pair 16	Kaikki auttavat kaikkia - Kaikki auttavat kaikkia	-,700	,823	-2,689	,025
Pair 17	Jäsenet eivät yhdessä toiminnan ulkopuolella - Jäsenet eivät yhdessä toiminnan ulkopuolella	-,200	,789	-,802	,443
Pair 18	Jäsenet eivät keskustele vapaasti - Jäsenet eivät keskustele vapaasti	-,600	,699	-2,714	,024

a. riemu2 = 1

APPENDIX 5.

Paired samples test for members who have spent more time in the team. Pairs on the left of the table represent the number question. Negative change in mean indicates growth between pre and post measurement. Positive change indicates decrease. (n=16)

		Paired Differences ^a		t	Sig. (2-tailed)
		Mean	Std. Deviation		
Pair 1	Yhdessäolo - Yhdessäolo	-,063	,250	-1,000	,333
Pair 2	Pelikaika - Pelikaika	-,688	1,621	-1,696	,111
Pair 3	Ikävä_pelaajia_kauden_jlk - Ikävä_pelaajia_kauden_jlk	-,438	,629	-2,782	,014
Pair 4	Tyytymätön_joukkueen_voitontah toon - Tyytymätön_joukkueen_voitontah toon	-,750	1,125	-2,666	,018
Pair 5	Parhaat_ystävät - Parhaat_ystävät	-,188	,834	-,899	,383
Pair 6	Joukkue_kehitä_taitojani - Joukkue_kehitä_taitojani	-,500	1,633	-1,225	,240
Pair 7	Nautin_muista_juhlista - Nautin_muista_juhlista	-,500	1,095	-1,826	,088
Pair 8	En_pidä_pelityylistä - En_pidä_pelityylistä	-,188	,750	-1,000	,333
Pair 9	Tärkein_ryhmä - Tärkein_ryhmä	,188	1,682	,446	,662
Pair 10	Joukkue_yhtenäinen_vrt_tavoite - Joukkue_yhtenäinen_vrt_tavoite	,063	1,652	,151	,882
Pair 11	Jäsenet_mieluummin_yksin_ulko na - Jäsenet_mieluummin_yksin_ulko na	-,250	,775	-1,291	,216
Pair 12	Kaikki_vastuussa_häviöstä - Kaikki vastuussa_häviöstä	,000	,730	,000	1,000
Pair 13	Harvoin_juhlimme_yhdessä - Harvoin_juhlimme_yhdessä	,000	,730	,000	1,000

Pair 14	Ristiriitaiset toiveita suorituksiin - Ristiriitaiset toiveita suorituksiin	-1,188	1,047	-1,716	,485
Pair 15	Yhdessäolo kauden jälkeen - Yhdessäolo kauden jälkeen	-375	1,204	-1,246	,232
Pair 16	Kaikki auttavat kaikkia - Kaikki auttavat kaikkia	-500	1,033	-1,936	,072
Pair 17	Jäsenet eivät yhdessä toiminnan ulkopuolella - Jäsenet eivät yhdessä toiminnan ulkopuolella	-313	,602	-2,076	,055
Pair 18	Jäsenet eivät keskustele vapaasti - Jäsenet eivät keskustele vapaasti	-1,188	2,167	-2,192	,045

a. riemu2 = 2