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Motivators and Constraints that Influence
the Participation of Small Nations
Athletes in Bobsled and Skeleton

작은 국가의 봅슬레이와 스켈레톤 참여에 영향을
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Abstract

Motivators and Constraints that Influence the Participation of Small Nations Athletes in Bobsled and Skeleton

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Bobsled and skeleton are two winter sports that, for some reason, have had captive the hearts of some athletes from small nations since the early 1930s, and even though it has been almost a century since the first small nation participated, little research has been done to find out what motivates and constrains the participation in these two sports. If we want to understand how small the pool of athletes that practice them is, suffice it to

say that last season there were 300 active athletes all around the world from big and small nations.

The re-inclusion of skeleton at the Winter Olympics program in 2002 generated a small nations' athletes participation boom, that brought many athletes to the tracks in the following 4 years, but as the sport evolved, the rules changed and the equipment and technology started to be an essential part of the sport, many decided to quit, others to immigrate and a few kept pushing to create a real development program for their countries.

This study is aiming to examine small nations' athletes' motivators and constraints using two different survey types, with different respondents providing information to verify the findings in order to answer different research questions. The objective is to know the reality of the athletes and use this to generate an effective strategy to increase small nations' participation starting at the youth level, all the while taking advantage of the coming Winter Olympics at Pyeongchang in 2018.

The first survey was answered by 32 small nations' athletes or former athletes from bobsled and skeleton and was related directly to motivators and constraints. The results were analyzed with a T Test procedure, showing that there is always a difference in motivators for each group, with the exception of one of the factors, which is being a part of the

Olympic Games, which reached as high as 92.5%. The results of the constraints study showed that there were no differences in intrapersonal barriers and also that new athletes and senior athletes are under the same constraints. Other findings claimed that not getting enough access to tracks, anxiety and unfair rules were also consistent in the T test that has been ran with all the scenarios.

The second survey was answered by key people working with small nations in bobsled and skeleton to provide the information on how to increase the small nations' participation in bobsled and skeleton. The result findings indicate that technology is generating a big gap between small and big nations, considering many motivators and constraint in a consistent path with the findings of the first survey.

Sustainable programs with partnerships can be a short-term way to increase participation, followed by a change in sport rules, especially the spots available for the Olympics in order to attract more athletes to sport, and the standardization of the equipment to reduce costs and increase fairness on the competitions.

Keywords: Small Nations, Motivators, Constraints, Bobsled, Skeleton.

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Chapter 1. Introduction

1.1. General Sport Context

Sport is more alive than ever. The technology has helped to increase its worldwide popularity and, in some cases, bring attention to those forgotten, presenting a new opportunity for all the stakeholders. We have never been exposed to so many images, brands and competitions, and all this means that we spend time watching games, competitions or spectacles, spend money buying merchandise, tickets, flights, hotel accommodation to be a part of the sport world, where we can be athletes or referees, supporting families or spectators, sponsors or coaches. Needless to say, it is based on a basic economic principle: supply and demand.

We have access to almost every sport event around the world in seconds and the industry manages to surprise us every day with a new way to deliver sports and entertainment to us faster than ever.

But this concept has also made sports more profitable and, therefore, sports with more audience will get more sponsors, more sponsors means more money, more money may mean more athletes participating in those sports. When athletes decide which sport to choose, they often choose a sport that involves money, where they can get paid as soon as they can.

Sports media has affected all sports levels including the IOC and FIFA, which are a big power behind what is and what it not offered at international competitions. When athletes are immersed in a ruthless environment where success seems to be the only goal, they have to measure everything, most importantly their time as we live in a world of immediate success. These days, we have lost old inspirational stories that used to show intrinsic values of sports and it seems like we do not care about sports *per se* but only think about the profit it can provide.

1.2. Bobsled and Skeleton Context

Skeleton is a winter sport that started as an attraction for wealthy people at a resort in St. Moritz in Switzerland in the XIX century followed by bobsled several years later. They were practiced on a natural ice track that since then has been build every single year at the same place.

Skeleton has a *sui generis* history. It was the first of the two sport to be recognized as a part of the Olympic program at the St. Moritz Winter Olympics in 1928. After those games it disappeared to return to the St. Moritz Winter Olympics in 1948 to disappear afresh. In the years to come skeleton was not an Olympic sport until the Winter Olympics in Salt Lake City 2002 when it was considered as part of the Olympic program and has had remained since then.

For Bobsled the Olympic history began with a four-man competition in St. Moritz in 1928. Then at Lake Placid in 1932 a two-man competition was introduced and both have been in the Olympic program since then with just one exception – the 1960 Squaw Valley Winter Olympics. As incredible as it may seem, teams from small nations with warm weather have been a part of this sport (e.g. Mexico with a four-man sled in 1923, Mexico and Jamaica in Calgary in 1987).

Calgary 1987 gave bobsled a boost with the Jamaican team crashing at their 3rd Olympic run. Many people have seen the famous movie “Cool Runnings” that tells a story about this event, but it was still not enough. With the reappearance of skeleton in 2002, small nations like Brazil, Slovenia, Mexico, Ireland and Argentina trained athletes that after a long process, international competitions, training and a final test in the so-call Challenge Cup, earned their place and represented their countries at the Winter Olympics.

After 2002 small nations’ participation increased at the “ice tube” sports, many athletes decided to try winter sports, traveling over ninety six hours by bus, or at the back of a pickup truck in the middle of a snow storm, eating canned food, each one of them had their own dreams, their own ideas on how to achieve them, but sometimes that was not enough. Some even

decided to immigrate to Canada or the United States of America with the goal of training in real conditions for a longer time and improve their skills faster, but most of the times all their experience and knowledge got lost and there was no way of helping other fellow citizens.

Even with some problems 2002 seemed the beginning of a growth in the sport that gives you the possibility to fly on the ice and to travel while representing your country around the world.

Unfortunately the reality was different and the sport started losing adepts, some countries with bobsled tracks, with the excuse of high maintenance, decided to charge competitors from other countries very high amounts, thus reducing the days that they could afford to train, since each day of training with two drops on the ice will cost \$ 40 USD or more, so many young people after training a few months or years retire from the sport which ended up affecting races circuit. Races used to have over 30 athletes trying to get a change and rank at the International Federation archives, they had so many athletes that it was necessary to implement a Nations quotas for the races, but in the last four years the cities hosting some of the season races, specially the Americas Cup, had to ask some retired athletes to come out of their retirement or athletes from small nations that do not train much, to participate at the races, this due to the system of punctuation that requires

a minimum of participants in order to award full point, in the understanding that if the minimum of participants is not reached, the points awarded according to the final classification will be half or even worse, to declare the competition as deserted if they don't have the athletes from the number of nations they need. It would be easy to think of expanding or eliminating the quota of participants by nation, but that will not solve the problem and would make an international competition become a competition between the United States of America and Canada in America, Germany, Russia and the other 4 in Europe and a way different Olympic races.

In order to provide a better picture about the current situation of bobsled and skeleton in the light of the pyramidal model and the processes and programs in the development of the sport that we will analyze ahead, we can mention the following:

Pyramidal approach. Many governments invest large sums of money to obtain an Olympic medal, to show the world the power of their nation and to raise their flags at the top of the podium, some of them prefer to invest at the participation level, others at the elite level, but so far, there is no absolute truth what the best approach is.

We have seen programs all around the world trying to increase the participation of athletes in winter sports with an idea of having a greater

number of participants among whom to choose the best, that is to say, given a greater number of participants, a greater number of elite athletes, but this may not be a possibility for small nations with a tight or non-existing budget for winter sport development teams.

Even powerful nations like the United States with a large budget rely primarily on recruitment of athletes initially training for other sports, their bobsled team has been built substantially from elite athletes in other sports, specially related to strength and speed, like football, track or military training, they do not go out to reach thousands of athletes. They have developed a system (that seems to work), where they go to 7 cities in their territory and test the athletes in 30 meters sprints with a fixed start, 50 meters sprints with a fixed start and 50 meters sprints with a running start, also they have a power long jump test, a modified shot put, from there they move to the weight lifting with a clean test and a maximum weight 3 repetition squads where the athletes get point based on their performance and from the final ranking they are selected to be a part of teams in each level of international competitions, everything based on strength and speed.

Strategies. If we consider the strategy as a set of actions that are carried out to achieve a certain end, we can see that the possibilities are many. In the previous years, the strategies implemented by the International

Federation of Bobsled and Skeleton have been very varied, and we must recognize great advances in many aspects and failures in some others.

Let's start by mentioning the processes in chronological order. The attraction, where there is a great gap, since there is no campaign or a program that aims to attract athletes to participate in bobsled and skeleton, athletes find out either because they visited the facility, because some friend or professor told them about respect or to see in the television and to be a little curious of how to be able to practice it.

After getting the information, athletes from small nations have the option of their first contact with the reality of ice is the so-called "international schools", which consist of 5 days, where the participant learn about the track, the equipment, rules, everything in this days. The most important part is driving techniques to drive the sled and they practice two days from the middle of the track, if their skills develop fast enough the third day they can move up and start from two thirds of the track and if they are really good the fourth and fifth day they can go down from the start of the track, and that is it, we have five days to make the participants at the school fall in love with a sport that will require hundreds of descents, hits, bruises and a lot of commitment to be able to compete at a good level, but in order to be a part of this camp, they must have an approval from their

National Federation. For many small nations' athletes that is all the training they will have before they race in an international competition. For big nations, the process starts long before that, as mentioned earlier, they have the team trials, from there, after that they have their strength camps, and after that, they take the best athletes on the ice, sometimes the international school is their first contact with the ice, but after weeks of theoretical training.

In direct relation to the costs of training, we have little access to *facilities*: If athletes get to know the sport, convince their federations to allow them to train, have an economic possibility of being part of international schools, which incidentally, there are only two during the whole season, we have complicated access to the track. Before the start of the season, each track has to cover the training needs of the national teams of luge, bobsled and skeleton in all its categories, afterwards, the development programs and clubs and if there is some time left, To international trainings, this if the weather permits. Once the season begins, there may be more training time because teams go out to compete, but at the same time they have competitions in which it is necessary to close the track for athletes who are not a part of it.

The next step would be to pay the training fees, and some tracks around the world are helping small nations as home tracks, giving athletes special rates, but that does not always happen and not for all athletes. Also the International Bobsled and Skeleton Federation introduced some special program, where they are giving vouchers to small nations that apply for them and fulfill certain requirements, and are basically money so they can pay training or racing fees.

Once the athlete is ready, they can race, there are eight races at four tracks each season (November–March) at each level, Americas and European Cups, International Cup and World Cup, and each year, except the Olympic one, there is also a World Championship where all the levels of athletes may compete and get a little more exposure.

The scholars have mention a couple of this point, saying that we can see that sports that depend on expensive and scarce facilities, like bobsledding, might not build their competitive excellence from a broad foundation of participation. Nevertheless, those sports might require a broad foundation of participation in other sports to develop the bases of skill and conditioning that are prerequisites to excellence. (Green, 2005)

The United States of America Bobsled and Skeleton teams have athletes that where developed in other sport or areas, especially with a

football, track and, the military, they have been selected many years to participate at the international competition, it looks that it is easier to start with a pre-sport oriented athletes than build them but this may not be the best option.

Although a pool of experienced athletes to examine as potential recruits is desirable, it is conceivable that talent identification could occur early enough in the athlete's development (e.g., via somatotype and motor skills tests in the schools) to obviate the need for any system of broad participation (Green, 2005)

Research suggests, however, that performance potential in the long-term (i.e., several years hence) is neither readily nor accurately assessed (Abbott & Collins, 2002; Howe, Davidson, & Sloboda, 1998).

Effective systems for training, motivating, and supporting athletes are better predictors of success than are any measures intended to identify talent (Hodges, Kerr, Starks, Weir, & Nananidou, 2004; Williams & Reilly, 2000, (Cit. at Green, B Christine Green, 2005)

There are, of course, physical requirements for performance in many sports that are substantially determined by genetics, any system of sport built from early identification of talent, however, would have to predict more than size, physiology, and somatotype. It would be necessary

to predict long-range skill potential. We do not have the requisite technologies to predict skill levels or potentials over long spans of time (Abbott & Collins, 2002; Howe, Davidson, & Sloboda, 1998).

The limitations of our technologies for long-range forecasting of individual potentials counsel against an elite performance system based solely on early talent identification and conscription (Green, B Christine Green, 2005).

As a summary, we can see that the future of the bobsled and skeleton seems gray if we do not do something to change it now, because there are other affecting factors. We can see how new winter sports like snowboarding are attracting more athletes since early ages to a way cheaper sport, with more training time available and an opportunity of having fun in many cities around the world. We also see the sedentary life and the electronic games that are making the young people forget to get an enjoyment of sports while actively practicing, none through an electronic device, so there are great challenges and we want these sports to survive.

1.3. Research Significance

Scholars have develop theoretical models about the constraints, participation, motivation and factors involved at the participation in leisure and sports, but there is not many information about empirical researches

about this, moreover, if there is research that addresses the issues, they have been carried out with participants from developed countries such as Canada and the United States.

This research will present significance in two areas:

First, at the academic point of view, where will show the actual factors that athletes which influenced the participation and decisions made by participants, coaches, managers and also the elements that were used as a basis for developing current strategies. Furthermore, it will give elements that affected both developed and developing nations athletes and give us the possibility of comparing them and may provide new elements for the design of new models supported in practice or present elements that support some of the existing models, and because of the different ages of the people who are part of these wonderful sports, it will also give us the opportunity to see if there is a change in the factors through time, which are still valid, which have changed and have different opinions about what is the course to be taken, it should also be recognized that an adequate explanation of constrained leisure, in all its facets, is not possible by investigating one type of constraint alone. Instead, it will be necessary in future studies to investigate the entire array of constraints (intrapersonal, interpersonal, and structural) simultaneously.

Second, the research also will have practical importance, while providing the actual facts, the evolution through the time and possible explanations about the factors, will give us the necessary tools to develop a real strategy and make suggestions which may serve to modify the strategies in any part of the fault, the processes that are realized of the form of the construction and / or give elements to support an innovative idea to include in a permanent, real and efficient way to the small ones; As nations in their participation In the bobsled and the skeleton.

1.4. Research Questions

Our research will seek to answer the following questions:

1. What are the socio-demographic characteristics of small nation athletes who have participated in bobsled and Skeleton?
2. What motivates and constraint Athletes from small nations to Participate in Bobsled and Skeleton?
3. How to increase the Small Nations Participation in Bobsled and Skeleton?

Chapter 2. Literature Review

2.1. Sport Development

When we talk about sport, we will consider it as “well established, officially governed competitive physical activities in which participants are motivated by internal and external rewards” (Coakley 2009, p.6) and sport development as “a process whereby effective opportunities, processes, systems, and structures are set up to enable people in all or particular groups and areas to take part in sport and recreation or to improve their performance to whatever level they desire” (Collins, Cit at Eady, 1993,p. 8).

Eady (1993) and Collins (cited at Eady, 1993) consider that sport development is a dynamic process, in which sport development stakeholder involvement provides the necessary sport development strategies and pathways to facilitate the attraction, retention/transition and nurturing of sporting participants. In order to establish strategies and pathways there should be an objective or objectives.

Sport development systems have two main objectives:

1. To increase the number of participants actively engaged in sport and
2. To enhance the quality of performances in sport (Green, B Christine 2005).

In the last decades sport development has become a main concern for sport managers and sports organizations all over the world, who have looked for researchers and literature to strengthen the quality of their decisions, but even when this researches have provide significant insight, they have been ad hoc and lacked of a theoretical framework, that has also impeded the progress of sport development research (Geen 2005).

Previous researches efforts to represent the sport development structure in a simple way gave as a result many models with different elements and interaction as we may be able to analyze.

2.2. The Pyramid Model

Although concerns about sport participation, its rate, frequency, duration and type are conceptually distinct from concerns about competitive standards, they both are linked by the effort to create a deep pool of athletes from which groups of elite competitors can develop (Broom, 1991; Green & Oakley, 2001; Stokvis, 1989). From this standpoint, the objective is to recruit people (particularly children and adolescents) into sports and then to develop a percentage of them into high level athletes. This is the origin of the often noted but rarely analyzed pyramid analogy. (Green, 2005)

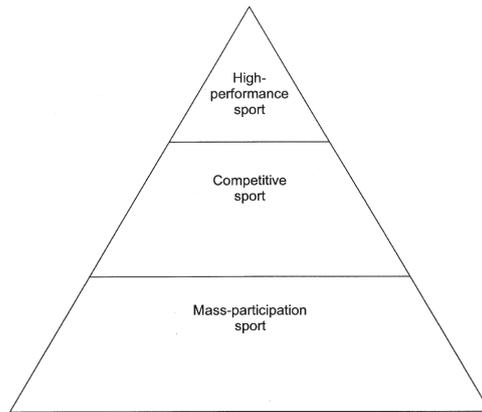


Figure 1. Pyramid Model of Sport Development

The sport development pyramid is not an empirically derived model. It has shaped the thinking, conceptualizing, and planning (Sotiriadou, K., Shilbury, D., & Quick, S., 2008) and three tasks necessary for an effective pyramid model are: athlete recruitment, athlete retention, and athlete transitions. (Green, B Christine Green, 2005)

With all the complexity of the sport will be naive to think that all they have the same goals and paths, some international studies have focused in research about development through sport with and the social objectives achieved through physical activity (e.g., Jones & Symon, 2001; Nichols, 2004; Skille, 2004; Tregaskis, 2003), others examined development of sport and its applications to elite athlete development (Green, 2005; Green & Houlihan, 2004; Green & Oakley, 2001; Thibault & Babiak, 2005).

Something important is to consider is that even when resulting efforts have

provided significant insight about sport development, has so far lacked a theoretical framework. This lack of empirically based theory has also impeded the progress of sport development research” (Green, 2005), therefore will be really important to analyze the pyramid model of sport development more closely.

“Sport development policies based on a pyramid model must address at least three key matters: athlete entrance, athlete retention, and athlete advancement. Specifically, how do we bring athletes into the sport system? How do we keep them involved and enhance their commitment to the sport? In addition, once they are involved, how can we best ensure their advancement, particularly the advancement of athletes whose development shows promise?” (Green, 2005)

2.3. The Sport Development Metaphor

Some researchers added a new element in this pyramid, the “continuum” in schematic form which is an attempt to illustrate the way in which the pyramid model provides pathways for individuals “to progress to the level of performance which is appropriate/available to them” (Bramham, Hylton, Jackson, and Nesti (2001) and with a specific structure, Houlihan (2000) recognized the following four levels in the continuum:

1. Foundation is the base of the pyramid, and involves the vital first steps of learning basic movement skills.
2. Participation is one level up from the foundation, and involves exercising one's leisure option, taking part in sport for health, fitness, friends and fun.
3. Performance is one level higher than participation and involves the challenge of increasing proficiency by striving to improve personal standards of participation.
4. Excellence is reaching the top of the pyramid and involves accomplishing nationally and publicly recognized standards of performance.

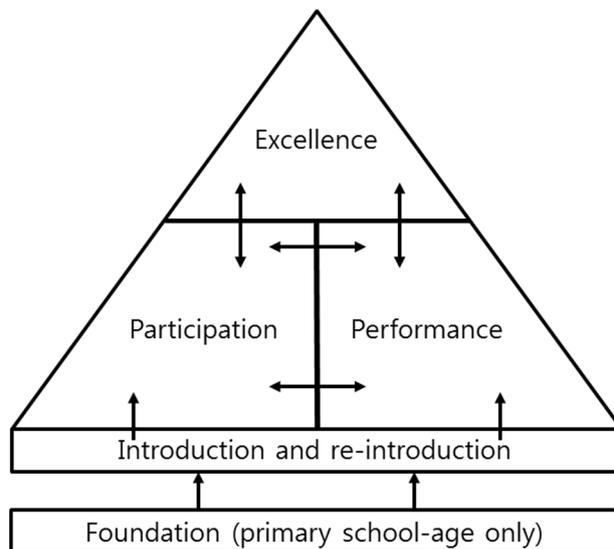


Figure 2. Sport Development Pyramid with the continuum elements

This figure shows the different directions individuals can take within the system and illustrates how individuals can move up and down the

system, but those paths do not imply an advance by the fact of being possible, then we will face another element, a conscious decision made to remain or advance from at a particular level of performance for the time being (Eady, 1993). Therefore, this model allows the possibility of the participants leaving and reentering the sport, stay in one level or advance to a higher one, based on what they aspire to achieve over time, and also shows the possibility of them to return to an earlier level. This model is based on the direct relationship between participants and athletes, the greater number of participants, the greater possibility of elite athletes, Donnelly (1991) suggested, “A broadly based system of participation can form the base of a pyramid out of which the elite athletes will emerge”.

Theoretically, the wider the base the greater the number of participants at each level above in the pyramid model (Donnelly, 1991; Eady, 1993) and that may be the reason many countries invest a lot of money at the bottom level of the pyramid. B.C. Green (2005) suggested, however, that even if the athletes develop the necessary skills in order to advance to elite success, the transition up the pyramid is not automatic and it is possible to imagine ways of building high level competition systems without relying on a broad participation base. For example, sports which depend on “expensive and scarce facilities, like bobsledding, might not

build their competitive excellence from a broad foundation of participation” (Green, 2005). The pyramid can be examined from another perspective, when government resources are allocated directly at the top of the pyramid and a top-down or trickle-down effect is expected (Australian Sports Commission, 1994). This effect asseverates that successful performances by elite athletes encourage people to take part in physical activity and lead to an increase in mass participation numbers at the base of the pyramid.

There are those who believe that sport development should supplement a contemporary community agenda, which responds to broader cultural, economic, political, and social needs. Then there are people who claim that “sport for its own sake” is the only legitimate motto and still others who see sport as able to defend itself on both fronts. (Sotiriadou, K., Shilbury, D., & Quick, S., 2008)

Shilbury et al. (2006) observed that the sport pyramid assumes that people progress logically to the next level of sport participation without any movement between recreational competitions and semi-elite or elite competitions. Hence, the sporting pyramid presents a static perspective. Moreover, B.C. Green (2005) argued that the provision of sequential levels for advancement within the sport development pyramid is insufficient to

advance our knowledge of program planning, implementation, and evaluation

Yet pyramid models neither explain the pathways nor show who is involved in them, and in what ways, to facilitate sport development opportunities. (Sotiriadou, K., Shilbury, D., & Quick, S. 2008)

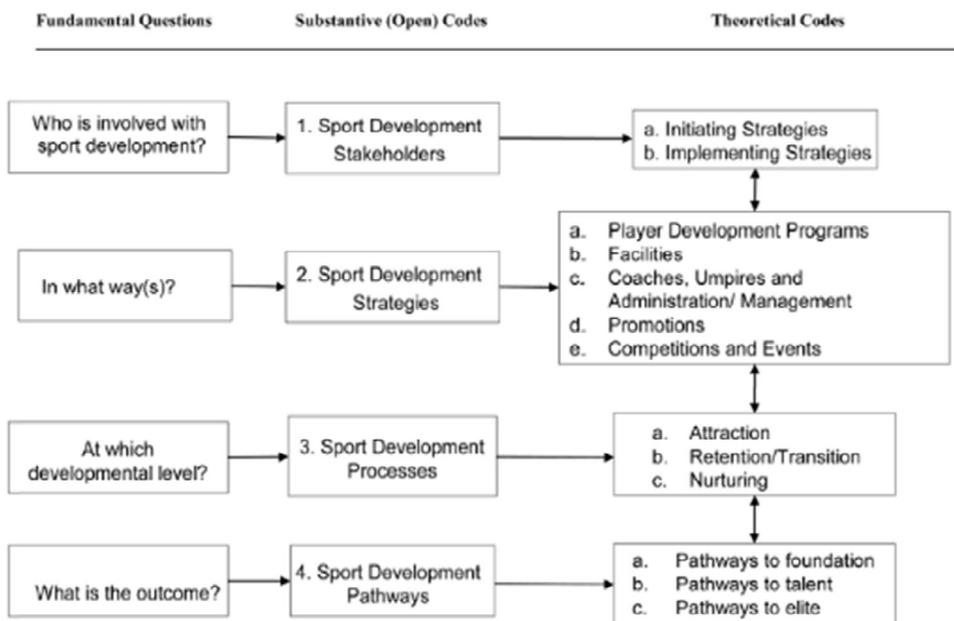


Figure 3. Fundamental Questions, substantive (open), and theoretical codes. (Sotiriadou, K., Shilbury, D., & Quick, S., 2008)

Figure 3 shows Sotiriadou, K., Shilbury, D., & Quick, S. (2008) outcomes of their study and it displays the fundamental questions driving their study, the substantive (open) and theoretical codes identified and their

relationships. For them open coding revealed four categories: sport development stakeholders, sport development strategies, sport development processes, and sport development pathways, where sport development stakeholders and their strategies come together to facilitate three sport development processes: attraction, retention/transition, and nurturing process

These terms agree with those proposed by B.C. Green (2005) at the normative theory for sport development, with a different terminology, “athlete recruitment” is evident through the attraction process, “retention” is the equivalent of the retention/transition process described in this study, and the nurturing of athletes is consistent with “advancement”.

Sports development processes can adapt to different segments, but they share two important attributes it requires ways to allow and facilitate movement between processes and each process creates opportunities for the creation of pathways to the attraction process, the retention/transition process and the nutrition process.

2.3.1. Sport Development Stakeholders

A core category as it acts as a platform for the other categories and their properties. More specifically, sport development stakeholders, their relationships, and type of involvement in sport lead to the availability,

implementation and evaluation of sport development strategies, and the provision of appropriate sport development pathways for sport development processes. (Sotiriadou, K., Shilbury, D., & Quick, S., 2008)

As stakeholders, we may recognize the Government at all its levels, SOs at all their levels and significant others as participants, volunteers, paid staff and sponsors.

At the Sotiriadou, K., Shilbury, D., & Quick, S. (2008) research, they found a common characteristic across the results, it was that all types of stakeholders, in working closely together, aim to achieve the following sport development goals, increase participation through programs for various groups, and achieve international elite athlete success through sports excellence and high performance programs. The two overarching concerns manifest themselves when governments and sport governing bodies contemplate sports policies. One concern is to enhance the rate of sport participation (Palm, 1991; Stahl et al., 2002); the other is to enhance the competitive standards that sport participants attain (Broom, 1991; Green & Oakley, 2001).

Green, B Christine Green (2005) summarized the concerns to enhance sport participation and realized it has been supported by three key legitimations: (a) health promotion (Seefeldt, 1986; Seidentop, 2002), (b)

economic benefits of enhanced fitness (Shephard, 1986; Wang, Pratt, Macera, Zhi- Jie, & Heath, 2004), and (c) enlargement of the nation's pool of athletes who can be developed into international competitors (Congressional Record, 1964, pg. A1451; 1974, pp. 32433-32449; Green & Oakley, 2001; McNeill, Sproule, & Horton, 2003)

2.3.2. Sport Development Strategies

Lyle (1997), in his conceptualization of the United Kingdom's system of managing excellence in sports performance, acknowledged the importance of sport development programs, facilities, competitions, and other factors for the structural progression of athletes.

Sport development strategies are the means and courses of action taken by the sport development stakeholders for successful sport development.

(Sotiriadou, K., Shilbury, D., & Quick, S. 2008). This scholars also recognized three types of programs, those formulated for participation development needs, those relate to talent identification and transition to elite levels and programs that are specifically developed for elite athletes Facilities. In a few words, we will consider facilities as the area provided with the necessary means to carry out a professional or leisure sport activity. From this we can mention the three types of facilities, recreational, training facilities and venues.

Coaches, Umpires and Administration/Management. A complex area, worthy of being a particular study, but for the moment we only mention it as part of the structure of which intervenes, without analyzing it

Promotions. A successful development program must include a proper promotion, with a constantly changing technology be up to date is a critical part to stay in the preferences of the public.

Soccer Australia (2000) saw promotion as critical to its aim to become a “progressive marketable sport with a high domestic profile” NSOs in Australia also perceive their sports’ profile as dependent upon media exposure, sporting events, or a combination of the two. Then, the types of media used for marketing and promotional purposes must include both conventional media and the new technology media, having clear the specific target we want to reach.

A well-established promotion plan may consider the sport consumption at tis various levels, such as volunteering, the spectator attending the competitions, following them through the internet, TV or reading about after, the consumer who enjoys purchasing merchandise and sport products and the most important, the participation, and frame all this in a context that takes into account age, gender, skills, access and benefits that they may obtain.

Competitions and Events. Thinking about sport development a key stone are the competitions due their versatility and ability to serve more than one goal, because it can be used as a skill development measurement, a training tool placing the participant in a “elite competition mode” environment and also give us the possibility of using it as a athletes eligibility criteria, either to know if the participant has the necessary skills to advance a higher level or to represent his country in some international competition

In addition, all Australian NSOs agree that competitions/events are essential for promoting and boosting the profile of sport and its popularity key benefits derived from competitions/events are divided into two types: player benefits received through competitions and promotion benefits that events generate for sports.

Sport marketing, exposure and opportunities to increase profile resulting from events/competitions relate to general membership/participation growth, increasing sport supporters, spectators, and sports’ finances. (Sotiriadou, K., Shilbury, D., & Quick, S., 2008)

2.3.3. Sport Development Processes

The structure created for sport development must have a clear idea about the processes involve and it is considered important to mention them.

2.3.3.1. The Attraction Process/Exposure.

Entrance refers to the ways in which athletes are first introduced to sports. (Green, B Christine Green, 2005). Indeed, evidence exists to suggest that contextual factors relating to young athletes' initial exposure to sport may have an important impact on both their continued sport participation and their chances for attaining athletic success (Côté et al., 2007).

Australian NSOs suggest that the attraction process involves sport members, participants, supporters, and spectators regardless of the demographic and socioeconomic factors that define them.

The attraction process is achieved through the various strategies that sport development stakeholders create and enforce. The funds, programs and strategic plans and leading behaviors will affect the attraction process and all the sports organization, play a key role in the attraction process as they work toward attracting members and increase participation numbers. (Sotiriadou, K., Shilbury, D., & Quick, S., 2008), but let's not forget also de power of the media and the other stakeholders.

The effort of these stakeholders to increase general participation and public support and involvement with sport is supported by a number of strategies, such as sport development programs, modified sports that present

a more fun side of the game, and competitions. (Sotiriadou, K., Shilbury, D., & Quick, S., 2008)

Kirk & Gorely (2000) exhibit the importance of these strategies in attracting participants, spectators and supporters in sport. These strategies reflect the requirements and needs of the public, and they are modified to facilitate awareness, accessibility and increased opportunities for people to become involved and stay motivated and interested in consuming sport.

2.3.3.2. The Recruitment Process.

Recruitment requires the assistance of significant others, as well as the proliferation of many smaller, local-level sport programs. (Green, B Christine Green, 2005)

Stevenson (1990) Cit. at Green (2005) found that although athletes' introductions to their sport are indeed "sponsored" by significant others, it is the new relationships and role identities the sport can provide that are influential in the decision to enter a given sport Interestingly, new relationships might also be important to significant others and Green (1997a) found that relationships with likeminded others were identified as a salient factor in parents' decisions to enroll their children in particular youth sport programs.

Considering the scholars elements involved at the recruitment we can see the importance of the recruitment because in one hand, a minimum of participants is needed to obtain the economic break-even point for the programs and, on the other hand, the participants need a larger number of participants to develop the relationships that they expect or at worst, they need to attract people with whom already have ties, then they will encourage them to take part of the same activities that they.

New relationships and role identities, however, can be insufficient in and of themselves to bring athletes into a sport because other forces like jobs, social life or other activities pull the athletes away. Research has shown that these conflicts increase as the athlete enters adolescence (Butcher, Lindner, & Johns, 2002; White & Coakley, 1986). Much of this friction can be avoided, or at least minimized, by recruiting young athletes and developing commitment to a sport before adolescence (Green 2005), but sometimes the problem is that many Olympic sports don't provide the opportunities for early practice, or the facilities access and therefore recruitment is harder, this is the case of bobsled and Skeleton.

2.3.3.3. *The Retention Process.*

Retention requires a focus on motivation, socialization, and commitment. (Green, B Christine Green, 2005). It has been suggested that

the retention process involves a number of groups of participants such as volunteers or umpires, but mostly junior participants and aims to capitalize on the identification of the most talented, retain them, and assist them to obtain the required skills to achieve high standards of performance. The intention of a well-established retention process is to cater for all participants and provide the springboard for the pathways to the elite and successful performances at the national and international sport stage.(Sotiriadou, K., Shilbury, D., & Quick, S., 2008)

Retention is mediated by the athlete's motivation and the ways the athlete is socialized into the sport and team subculture. Finally, retention is dependent on the commitment an athlete develops to the sport and/or to the sport organization. Commitment refers to the level of engagement with the sport (Green, B Christine Green, 2005).

Motivation. Being part of a team or joining a club does not guarantee that the Athletes will continue practicing, for that to happen there should be a significant motives and those are going to depend on the participants. Rotter identifies three key variables: benefits, the degree to which each benefit is valued, and the expectation that a behavior will generate a valued benefit. Accordingly, there are three requirements if an athlete is to continue his or her sport participation (Green, 1997b): (a) He or

she must perceive at least one benefit to be obtained via participation; (b) he or she must value that benefit; and (c) he or she must believe that participation will engender that benefit. A corollary is that any benefits and their values must be greater than those to be obtained from alternative activities. (Rotter's (1954) cit. at Green, 2005) Fertl (1990) found significant differences in values of benefits perceived by participants in different sports. She also found differences in the values attached to benefits by athletes who compete at different levels of the same sport.

It looks like we know very little about how athletes perceive the sport alternative benefits, although programs designed to help them find new benefits have been shown to enhance commitment and effort (Kozlik, 1960). Socialization. Socialization is the process of creating and/or confirming the individual's role or identity with the subculture that results in increased commitment to the sport through the side bets which are the way personal past actions confine future ones (Leonard and Schmitt, 1987). In every social interaction each participant has a role. Socialization into a sport's subculture requires that the athlete learn the role requirements and expectations of the subculture (Donnelly & Young, 1988). To the degree that role expectations in the program are consistent with the participant's

broader experience of his or her community, those role expectations will be easier to learn.

Commitment. As athletes commit to a sport, their involvements in other sports or non-sport activities decline. Stevenson (1990) found two factors to explain athletes' decisions to specialize in a given sport: potential for success and the people associated with the sport.

The first factor is the deliberate seeking of desirable role identities, and the second is the role support necessary for development and maintenance of those identities.

2.3.3.4. Transition Process.

Advancement requires that programs be linked vertically and that athletes be aided in processes of locating and socializing into new levels of involvement. (Green, 2005)

As was mentioned before, once the athlete develop the necessary skills to be part of the next level the sport development pyramid model assumes he or she must move to a higher level of training and also of competition, but sometimes this requires practice in a different time, with a different group or team or even move to another city

Movement up the pyramid is by no means automatic, even if an athlete's skills warrant such advancement. We know very little about what hinders or facilitates advancement. Green (1992)

Green (2005) mentioned three difficulties common to pyramid-based development systems: a) the presence of sequential levels in a pyramid does not assure athlete progression up the pyramid b) athlete progression requires effective linkages among organizations (clubs, regional boards, national governing bodies, etc.) at each level of the sport, and this includes programmatic linkages, as well as efficient communication up and down the pyramid, c) athletes require social and material support to make the transition to new levels—this includes efficient means of identifying when an athlete is ready to seek transition, as well as means to facilitate athlete adjustment to programs at increasingly advanced levels.

Other things to be consider that may affect the transition process are the six symptoms of culture shock that could result (Furnham & Bochner, 1986): A sense of stress, feelings of loss and deprivation in relation to old friends and status, fears of rejection, confusion about role identity and expectations, disorientation engendered by unanticipated expectations in the new culture, and feelings of inadequacy. If sport

programs wants to facilitate the transition all this problems need to be addressed as soon as they arise.

2.3.3.5. The Nurturing Process.

Hence, the nurturing process might facilitate the pathways to the attraction process. These pathways offer opportunities for retiring athletes to remain in the sport system and participate in various ways. For instance, retiring athletes have opportunities to participate at a community level, act as coaches or umpires, and facilitate clinics for the attraction process (Sotiriadou, K., Shilbury, D., & Quick, S., 2008)

A linear approach to sport development that many time has been implemented might be inadequate, because it prevents us from conceptualizing beyond the pyramid and the trickle-up or trickle-down effect and examining sport development as a reciprocal process in which supporting one process more than the other might result in fragmented outcomes, and all processes need assistance and funding for a sustainable system

The success of the elite athletes who take part in the nurturing process is a testament to their talent, abilities, commitment, and dedication to training and competition, and a tribute to a number of coordinated efforts from various stakeholders. (Sotiriadou, K., Shilbury, D., & Quick, S., 2008)

2.4. Constraints on Sports Participation.

Crawford and Godbey (1991) analyzed three models of intrapersonal, interpersonal, and structural constraints and suggested that should be recast as a single integrated model in which leisure participants are viewed as having negotiated a sequential, hierarchical series of constraints levels and they also demonstrated how such process might apply not only to leisure participation and nonparticipation, but also to the understanding of how constraints affect specialization among people who are already participating or willing to participate.

2.4.1. Constraints Models

Classification schemes can describe the phenomena of interest but are unable to explain their occurrence. Thus, a potentially more fruitful way in which some researchers have tackled the problem of conceptualizing constraints is through the construction of models. The models trying to explain the participation constraints have varied in purpose, scope, and emphasis. All such models, however, have shared one characteristic: All have been static, not process-oriented, in nature. One of the earliest models to focus on leisure constraints was proposed by Jackson and Searle (1985). Implied in this model, but not stated by its authors, was the proposition that

the effects of constraints may be perceived and experienced sequentially rather than simultaneously. (Crawford and Godbey, 1991),

Crawford and Godbey (1987), centered their around the construction of three models of leisure barriers shown at the figure 4. *Structural barriers*, represent constraints as they are commonly conceptualized, as intervening factors between leisure preference and participation, like the family life-cycle stage, family financial resources, season, climate, the scheduling of work time, availability of opportunity and reference group attitudes concerning the appropriateness of certain activities. (Crawford & Godbey, 1987)

Intrapersonal barriers, involve individual psychological states and attributes which interact with leisure preferences rather than intervening between preferences and participation, like stress, depression, anxiety, religiosity, prior socialization into specific leisure activities, perceived self-skill, and subjective evaluations of the appropriateness and availability of various leisure activities. (Crawford & Godbey, 1987)

Interpersonal barriers, are the result of interpersonal interaction or the relationship between individuals' characteristics.

Barriers of this sort may interact with both preference for, and subsequent participation in, companionate leisure activities. An individual

may experience an interpersonal leisure barrier if he or she is unable to locate a suitable partner with which to engage in a particular activity.

(Crawford & Godbey, 1987)

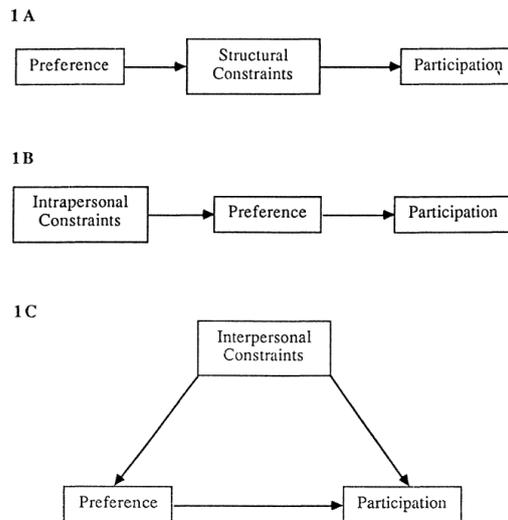


Figure 4. Crawford and Godbey three types of leisure constraints (1991)

Two distinct but interrelated themes summarize the essence of Crawford and Godbey, 1987) contribution to the leisure constraints literature. First, the operation of constraints can only be understood within the broad context of the preference-participation relation and second, contrary to prevailing assumptions, barriers enter this relation not solely by intervening between a preference for an activity and participation in that activity ("structural" barriers), but also in two other important ways: by their influence on preferences and by their effects on preferences and participation. (Crawford and Godbey, 1991)

2.4.1. The Basic Hierarchical Model

Whether related to leisure behavior in general or to specific activities in particular, the most common behavioral measure against which constraints have been assessed has been participation. Moreover, participation has usually been couched in terms of a dichotomy – either people participate or they do not. Given this emphasis in previous literature, Crawford and Godbey, (1991) mentioned that it is appropriate to present our basic reconceptualization in the context of leisure participation and nonparticipation, then they state three propositions that follow from the basic model and subsequently go on to an important extension.

As far as leisure participation and nonparticipation are concerned, Crawford and Godbey, (1991) propose that constraints are encountered hierarchically, first at the intrapersonal level (Figure 5).

“Leisure preferences are formed, when intrapersonal constraints of the kind enumerated at the basic model are absent or their effects have been confronted through some combination of privilege and exercise of the human will. Next, depending on the type of activity, the individual may encounter constraints at the interpersonal level; this could happen in activities requiring at least one partner or co-participant but would likely be less relevant in the case of solitary leisure activities. It is only when this type

of constraint has been overcome (if appropriate to the activity) that structural constraints begin to be encountered. Participation will result in the absence of, or negotiation through, structural constraints. If structural constraints are sufficiently strong, however, the outcome will be nonparticipation.” (Crawford and Godbey, 1991)

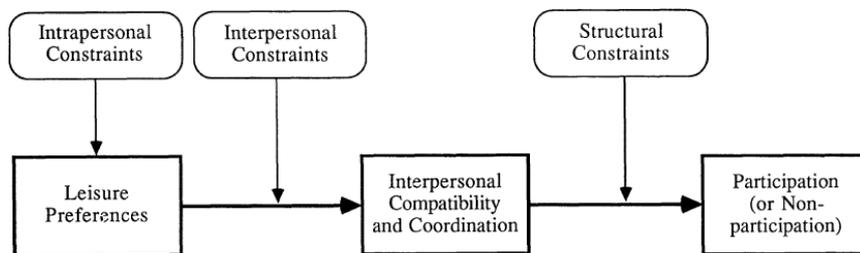


Figure 5. A Hierarchical model of leisure constraints

2.4.2. The Alignment of Constraints.

At the basic model, eventual leisure participation depends on the successful confrontation of each constraint level in turn, missing that nonparticipation can occur because of the operation of constraints at several stages in the process.

After reviewing the model Crawford and Godbey, (1991) it mentioned that leisure participation is heavily dependent on negotiating through an alignment of multiple factors, arranged sequentially, that must be overcome to maintain an individual's impetus through these systemic levels.

2.4.3. The Hierarchy of importance.

Crawford and Godbey, (1991) second propose is that the sequential ordering of constraints represents a hierarchy of importance, in that must first be confronted, and negotiated at the intrapersonal level where the constraint levels are arranged from most proximal (intrapersonal) to most distal (structural), thus, the intrapersonal constraints on participation are the most powerful ones, due to the fact that they condition the will to act.

A Hierarchy of Social Privilege. Social class may have a more powerful influence on leisure participation and non-participation than the analysis of socioeconomic variations in recreational activities has typically demonstrated. This influence is not direct, however; rather it is channeled through variations in the ways in which people perceive and experience constraints. (Crawford and Godbey, 1991)

2.4.4. The Continuing Operation of Constraints.

The hierarchical model of constraints presented by Crawford and Godbey (1991) suggests that the factors that generate constraints might continue to have relevance even after an individual starts practicing sports. Thus constraining factors will directly influence other aspects of engagement, such as the frequency of participation, level of specialization or the ways they analyze a situation.

Crawford and Godbey, (1991) suggested their model of constraints understood in conjunction with leisure activity specialization (Bryan, 1979; Stebbins, 1979), by which constraints have been negotiated toward committed involvement in an activity as its shown.

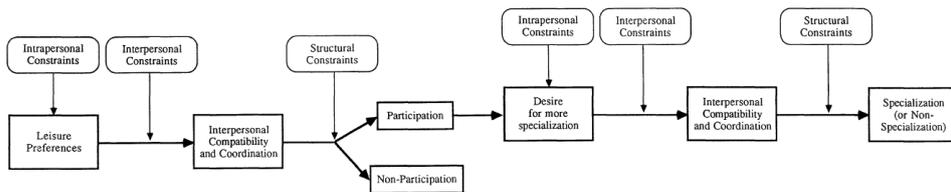


Figure 6. The influence of leisure constraints on activity specialization

The hierarchical nature of leisure constraints is a salient process in regard to specialization because intrapersonal constraints largely determine the extent to which an individual perceives the appropriateness of specialization in a leisure activity. (Crawford and Godbey, 1991). Three main propositions are applied on this model:

1. Leisure participation is heavily dependent on a process of negotiating through an alignment of multiple factors, arranged sequentially.
2. The sequential ordering of constraints represents a hierarchy of importance.
3. Social class may have a more powerful influence on leisure participation and nonparticipation than is currently accepted, that is, the experience of

constraints is related to a hierarchy of social privilege. (Crawford and Godbey, 1991)

In their limitations the scholars recognized this model as a speculative frame that would require empirical validation, where qualitative methods would play an important role in future studies aiming to investigate the constraints, thinking that the explanation of participation facets of leisure will be enhanced by the extent the effects of constraints are being considered.

2.5. Participation.

Some scholars suggested that sport participation and physical activity, in general, can be explained from a demographic–economic perspective a number of demographic and economic variables such as age, gender, human capital (i.e. education), nationality, time, and income influence sport participation in different sports. (Breuer and Wicker, 2008), others first analyzed demographic variables such as gender, age, and nationality/ethnic background/migration background are examined. Second, the focus will be on economic indicators such as income, time, and human capital. (Breuer, C. and Wicker, P., 2008)

In general the literature on participation in sport has considered the impact and influence of a large number of cognitive, psychosocial and situational variables than can be categorized as:

- Socio-individual characteristics, like age, gender and ethnicity,
- Psychological predispositions, like attitudes or motivations,
- Socio-Cultural influences like household socio-economic status, family support and peer influence, and
- Situational or environmental factors like school size, urban/rural setting, environmental aesthetics and transportation. (Sotiriadou, K., Shilbury, D., & Quick, S., 2008).

There some researches related with the factors like:

Age. Age plays an important role in sports participation and leagues and categories are based on the year on birth, because the physical strength, skills and other factors may affect the fairness at the sports.

Researches had analyzed this factor and its implications like Kremarik, F. (2000), *A family affair: Children's participation in sports*. Ottawa: Statistics Canada.

Gender. Gender can constitute a restriction of sport activity participation factor. The social valuation of sport participation can vary

between men and women, especially in interaction with ethnic or religious variables (Breuer Christoph , Hallmann Kirstin and Wicker Pamela, 2011)

Ethnicity. This is another relevant factor to be analyzed because, as Groothoff, Van den Heuvel, & Post, (1998) mentioned, particular groups such as girls and young people from lower socioeconomic families and ethnic minorities are represented as participating less in sports.

Household Socio Economic Status. Some researches results show that households with active parents and higher incomes are key predictors of a child's participation in organized sport. Children with two active parents and a high household income have odds over 12 times higher than those of children with inactive parents in a household whose income is low. Nevertheless, even in lower-income households, children with two active parents have 4.8 times higher odds of sports participation than children with inactive parents. When parents are not involved in sports, however, household income has little effect upon the odds of children's sport participation.(Kremerik, F., 2000).

Family Support. Parents provide an environment that can significantly influence a child's desire to participate in organized athletic activities, and their support may be paramount in encouraging participation during a child's formative and adolescent years. Furthermore, parents who

instill a belief in the value of athletic activity may exert a lasting effect on their children (Kremarik, F., 2000). Rost, Sallis, Pate, Freedson, Taylor, & Dowda, (2003) indicated that parental influence extended beyond simply modeling behaviors to include enjoyment of physical activity, support of physical activities, reducing barriers to participation and providing resources. It is therefore likely that parent involvement and possibly that of other household members in sports could have an impact on adolescent participation

Community Support. The role of a strong and supportive community is known to be a factor in participation in sport and physical activity (Vander Kloet, et al., 2007)

Migration. Previous studies collectively indicate that people with a white ethnic background are more likely to participate in sports (Pratt et al., 999; Stamatakis and Chaudhury, 2008) and similarly that people without a migration background tend to take part in sports more often than people with a migration background (Snape and Binks, 2008). One reason, among others, for this finding is that people with a migration background experience cultural barriers (Snape and Binks, 2008).

Education. “The economic situation of an individual, according to the consumer theory, is dominated not only by the variables income and

time, but also by human capital (education and knowledge about sports). It influences the productivity of time and income which are both needed for sport participation. As a result, higher sport competencies which have been acquired through a long period of physical education (higher education) broaden the opportunities for sport participation under monetary and time restrictions. Consequently, human capital influences the efficiency of the respective household production, meaning that individuals with higher human capital (i.e. educational level) also tend to have higher incomes and are therefore able to participate more in sports in monetary terms” (Breuer Christoph , Hallmann Kirstin and Wicker Pamela, 2011).

Going farther Wilhelm-Stanis, Schneider, and Anderson (2009) used the theoretical 3-factor structure where 31 items represented the three factors under the structural, intrapersonal, and interpersonal constraints adding lack of time, lack of money, and lack of transportation to the structural constraints, anxiety or perceived lack of skill to the Intrapersonal constraints and friends of family who prefer similar or different leisure activities, to the interpersonal constraints. Alexandris and Carroll (1997a) used a different structure, where items were categorized into seven factors: individual/psychological, knowledge, interest, partners, facilities/services, accessibility/financial, and time.

2.6. Motivation

If we take motivation as it is referred to in literature as “those personality factors, social variables, and/or cognitions that come into play when a person undertakes a task at which he or she is evaluated, enters into competition with others, or attempts to attain some standard of excellence” (Glyn 1989) we will see that is a key stone in human affairs that may affect all the stakeholders in sports in many different ways and lead them through different path. Sometimes those paths are not aligned, not because they do not want to, but because the assumptions done about the motivational dispositions that influence the people participation in certain activities.

There are many patterns in sport considered to be motivational behavior, like an participant trying harder or training longer, persisting or performing better, getting involved or dropping out sporting o physical activities, but they are sufficient to define what does actually refer to when we state that an individual is or is not motivated (Maehr & Braskamp, 1986)

2.6.1. Social Cognitive approach

Many theories have addressed motivation in sport, the achievement theory, the test anxiety approach, the expectations of reinforcement, the cognitive approach, the attribution theory, but we will focus on the Social Cognitive Approaches which presents a dynamic

process which incorporates cognitive, affective and value-related sets of variables that are considered to mediate the choice and attainment of achievement goals (Glyn 1989) this approaches are: Self-efficacy, perceived competence and the achievement goal.

Self-Efficacy. Is in a few words, the conviction one needs to successfully execute the behavior necessary to produce a certain outcome. (Bandura, 1977a) and may include performance Accomplishments, vicarious experiences and persuasion while they are affected by physiological states

2.6.2. Perceived Competence.

One of the leading researchers Harter S. (1981) defined the perceived competence as a multi-dimensional motive which directs individuals in cognitive, social and physical domains. In this context, the success or failure in those domains is evaluated by significant others, and the pleasure gained on the success in a mix with the perceived competence will increase the effort to achieve success but in the other hand, perceived incompetence and displeasure are assumed to lead to anxiety and decrease the effort to achieve success. Glyn (1989).

Researchers have been trying to predict participation in sports with many hypotheses like those who were higher in perceived competence

would remain in competitive sports longer or the higher perceived competence the higher the possibilities of engaging in sport, but there is not enough evidence to support it.

2.6.3. Goal Achievement

The first step toward understanding achieving behavior is to recognize that success and failure are psychological states based upon the interpretation of the effectiveness of the person's achievement striving (Maehr & Nicholls, 1980). If the interpretation reflects desirable attributes, will be considered as a success, in the other hand if the interpretation shows a undesirable attribute will be consider as a failure.

It is important to have in mind that success, failure and achievement can only be recognized in terms of the goal of behavior, what is success for me, may be failure for another (Glyn 1989). We need to have in mind that the goal perspective has two paths, mastery and competitive goals of action (Duba, 1989a)

Moving farther, Glyn (1989) implemented a complex dynamic process which tries to unify many theories and recognizing the complexity of the motivation and follows Nicholls (1984a) conception with two dimensions, one achieving mastery, improving or perfecting skill and two, the personal judgment about the capacity relative to others.

From there he suggested that motivation is the result of the perceived ability, goals of action, achievement behavior and motivational climate.

2.6.4. Motivational Climate

When we want to know what else could intervene in the athlete's motivation, we have to consider the psychological climate generated around them, where parents, coaches, peers and other stakeholders will create in a competitive way and/or the mastery way.

2.6.5. Intrinsic/ Extrinsic Motivation.

Intrinsic is a term frequently used in philosophy to designate what corresponds to an object by reason of its nature and not by its relation to another and "sports comprise one of the most pervasive sets of activities that people engage in for enjoyment" (Vallerand Deci & Ryan 1988, Cit At Glyn 1989) we may conclude that joy is an intrinsic interest in sports, but there are also extrinsic rewards in sports and athletes may participate to obtain them and prove themselves and not for the love of the game, therefore intrinsic motivation may not come first in sports involvement.

Chapter 3. Methodology

In this chapter will be explain the methodological considerations that were adopted for this study.

In order to analyze the bobsled and skeleton athletes and former athletes of small nations and the motivations and constraints for practicing this sports, the researcher will use a qualitative research approach with surveys to establish the reference frame. In additional to the qualitative research, in-depth interview will be realized with a variety of stakeholder to establish the actual aim of the participation policies and the small nation's role in the two addressed winter sports.

The time line for this study is eleven months, where five phases need to be performed.

The first phase will consist on the review of relevant literature with reference to the topic of this thesis, as well as the selection of the methodology to be use to achieve the expected results and make possible to answer the research questions, from December of 2016 to July of 2017. The second phase will be to establish the research concept, followed by the questionnaire design that must be done by the end on July of 2017. The third phase will be to conduct the interviews and apply the surveys on September of 2017, the fourth phase will be held during October of 2017, collecting

and analyzing the data and the fifth phase will be to present the results and limitations of the study by the beginning of November of 2017.

3.1. Survey Small Nations Athletes

This survey is a method that will be used in order to respond the following question:

1. What are the socio-demographic characteristics of small nation athletes who have participated in bobsled and Skeleton?
2. What motivates and constraint Athletes from small nations to Participate in Bobsled and Skeleton?

3.1.1. Sample

The respondents will be athletes and former athletes from small nations that have participated in bobsled or skeleton at any of its levels.

The research is targeting a minimum of 30 of the Small Nations athletes that are active or were active in the last 10 years, understanding with this, that they participated in official races during that time.

3.1.2. Procedures and Measurements

The Paired T Test is the statistical process will be used, its allows to make an analysis of two populations means though the statistical examination with two groups from a small size sample, like is our case due the small number of bobsled and skeleton athletes from small nations.

The independent variables considered in the analysis were selected following previous researches and will be grouped under self-efficacy, fun and enjoyment, friends and peers and goal achievement as part of the motivators, while structural, interpersonal and intrapersonal barriers will be considered under the constraints, in reference with the Dependent variables of years practicing the sports, the higher level reaches, the days per week the athletes trained as well as the hours per day.

3.1.3. Analysis

The surveys will be collected and the data will be coded based on the Likert scale (one to five) for all the variables. The required groups for the T Test will be selected based evenly and they will be differentiated with the “A” and “B” letter respectively. For the years variable, the distribution will be done based on the years the athletes practiced bobsled or skeleton until December of 2017, for the level variable, group A will be formed by athletes from Americas Cup, European Cup and Intercontinental Cups, having in group B athletes that reached the World Cup level or the Winter Olympics, for the days variable the groups will be divided between those athletes that trained less than 4 days per week and those who trained more than 4 days and for the final variable, the hours, group A will be formed

with athletes that trained up to 3 hours per day, and group B with athletes that trained more than 3 hours per day.

The analysis will aim to find if there is a difference between the motivators and constraints of this groups starting from the hypothesis that the Mean difference between groups A and B should be equal to Zero: $\mu_D = 0$

3.1.4. Instrumentation

The questionnaire was designed in three parts:

The first part is related with the socio-demographical profile with indicators like age, sex, nationality, profession and level of income. The second part is directly related with the constraints the athlete faced and the third part is related with the motivation to participate in the sports with 50 Indicators, with a Likert scale answer (1 to 5).

Table 1. Distribution of the Athletes Survey Questionnaire

No	Section	Questions
1	Demographic profile	Age, sex, social class, profession, residency
2	Motivation variables	Likert Scale: Competence, Self-efficacy, enjoyment, social reward, friends and peers, social capital
3	Constraints variables	Likert Scale: Intrapersonal, interpersonal, structural

3.2. Surveys Key People in Bobsled and Skeleton

This surveys will be used in order to answer the question: How to increase the Small Nations participation in bobsled and skeleton?

3.2.1. Purpose

We will request the select people, to answer an open-ended style questionnaire, allowing them to express their opinion extensively.

It is important to follow a four steps structure, the planning phase, the development of the instrument, the data collecting and last analyzing the data and findings.

The planning phase involves identifying the stakeholders who will part of the survey, what kind of information we are expecting to obtain from them. On the second phase we will have to develop proper questionnaire to obtain in lighting answers with relevant information, considering all the important points we want to cover. At the third phase referring to collecting the data, we will summarize the main information, verifying we have everything we need. On the last phase the data will be analyzed and findings will be shown.

3.2.2. Selection of Respondents

In this study, we will have 5 main respondents, the Vice President of Legal Affairs, Mr. Ben Sandford, the Representative of Athletes

Advisory Committee, Mr. Peter Van Wees, both to answer as part of the International Bobsled and Skeleton Federation, Mr. Ander Mirabell, Skeleton World Cup athlete and Athlete IOC Commission candidate from Spain, Bryan Mc Donald, former World Cup Athlete, former small nations coach at the Americas Cup and actual USA World Cup skeleton Coach, and Joe Sisson former USA team bobsled World Cup athlete and bobsled coach for the Brazilian bobsled team, aiming to obtain a perspective from all the possible levels and their thoughts as volunteers, coaches, athletes, developers, representatives and Federative, about the factors that are constraining and motivating small nations to participate in Bobsled and Skeleton.

3.2.3. Survey Structure

The Questionnaire will have three sections, the first one will be related with changes and tendencies in bobsled and skeleton, the second part is about their perception of small nation's participation and the third section about Small Nations Youth Participation, with this we are trying to cover all the levels in the sport, the past, present and possible future for athletes and we decided to add 2 questions related with small nations and their possible relation with the PyeongChang Olympic track.

Table 2. Distribution of Key People Survey Questionnaire

No	Section	Questions related to
1	Changes and tendencies in bobsled and skeleton	Relevant changes and tendencies
2	Perception of small nation's participation	Participation increasing or decreasing, role of immigration, future, possible help and recommendations
3	Small Nations Youth Participation	Tendencies, concerns, motivations and constraints, policies and future.

Chapter 4. Findings

In this chapter will be present the results of the surveys mentioned in the previous chapter. Both surveys were conducted through internet, the athletes' one with athletes filling the information in a specific link following the instructions there. The link was shared through their National Federations or by direct e-mail. The survey for key people was sent to them in a personal email.

4.1. Survey for Small Nations Athletes

This method was used to answer the first two research question; “What are the socio-demographic characteristics of small nation athletes who have participated in bobsled and Skeleton?” and “What motivates and constraint Athletes from small nations to Participate in Bobsled and Skeleton?”

4.1.1. Respondents Profiling

From the samples, researcher collected a total of 32 respondents (n=32), from three continents, different social classes, professions and backgrounds, with the objective of obtain a real general perception about the motivators and constraints of small nations athletes in their participation in bobsled and skeleton.

Their description of the respondents is presents in the following table.

Table 3. Demographics

Variable	Group	N	Percentage
Sex	Male	13	40.6
	Female	19	59.4
Age	15 - 19	2	6.3
	20 - 24	1	3.1
	25 - 29	4	12.5
	30 - 34	10	31.3
	35 - 39	5	15.6
	40 - 49	10	31.3
Residency	America	14	43.7
	Europe	11	34.4
	Oceania	7	21.9
Education Level	High School	2	6.3
	College	18	56.3
	Master	9	28.1
	Ph. D	1	3.1
	Other	2	6.3
Profession	Student	3	9.4
	Employee	14	43.7
	Self Employed	10	31.3
	Entrepreneur	3	9.4
	Athlete	2	6.3
Social Class	Low-Middle	2	6.2
	Middle	24	75.0
	Middle-High	5	15.6
	High	1	3.1
Total		32	100

As we can see in table number 3, the sex distribution shows a 59.4% female participation and a 40.6 male participation, making evident that

female athletes in are attraction to fast and exiting sports, even more than males, at least in bobsled and skeleton, which are our case.

At the Age distribution we can see two big groups, the 30-34 and the 40-49 years, both of them with ten athletes, followed by the group of 35-39 with five athletes, representing the 78.2%, the next group will be the 25-29 with four athletes, the group of 20-24 with just one athlete and the last group, 15-19 with two athletes, we are conscious that we didn't obtain the answer from all the small nations athletes and the reason about why this age gap has happened could be a topic for a further research.

The next factor shows that all the small nations' athletes have their residency where the answers were grouped in continents, based on the location of the countries in question, as can be seen, from the total of 32 respondents, 14 have their residency in America, 11 in Europe and seven in Oceania, there is no one from Asia or Africa.

The educational level shows that 56.3% of the Small Nations Athletes have at least a College degree, with a high 28.15 of them with a Master's degree, one Ph. D Athlete, two technicians and two current students of High School. As a profession, three are students, 14 employees, 10 self-employed, 3 entrepreneurs and just two dedicate their full time to train as athletes.

At the final factor consider in this table, we asked the athletes to place themselves in the social class they consider they belong having representation of all the social classes' level, except of the low class distributed as follows: two low-middle class, 24 middle class, five middle-high class and one high-class athlete.

As a general approach we present on table number four the descriptive statistics from the motivators and in table number five the descriptive statistics of the constraints, so we can have a first idea about how this variables are being consider in a general way.

Table 4. Motivator's descriptive statistics

Variables	N	Min	Max	Mean	Std. Deviation
Self-efficacy					
To improve my performance	32	4.0	5.0	4.7813	0.4200
Drive the sled	32	1.0	5.0	4.2813	1.1705
To learn new skills	32	1.0	5.0	4.0313	1.2309
Develop new skills/abilities	32	2.0	5.0	4.0313	1.0313
Prove that I could do it	32	1.0	5.0	3.8125	1.0607
Gain self-confidence	32	1.0	5.0	3.4375	1.2936
Showing what I do to others	32	1.0	5.0	2.8750	1.1570
Fun and Enjoyment					
Experience a fast/exiting sport	32	2.0	5.0	4.3750	0.8707
The speed	32	1.0	5.0	4.2188	0.9750
The adrenaline	32	1.0	5.0	4.1875	1.0607
The feeling of freedom	32	1.0	5.0	3.9375	1.0758
Enjoy the sport by myself	32	1.0	5.0	3.8750	1.0395
Enjoy the sport with others	32	1.0	5.0	3.8125	1.2032
To travel	32	1.0	5.0	3.5313	1.2439

Variables	N	Min	Max	Mean	Std. Deviation
Friends and peers					
Meet international athletes	32	2.0	5.0	3.6250	0.9419
Be with my friends who practice it	32	1.0	5.0	3.4688	1.0772
Meet people that like this sport	32	1.0	5.0	3.4063	1.1031
To be a part of a special community	32	1.0	5.0	3.2500	1.2700
Meet local athletes	32	1.0	5.0	2.9375	1.0453
To create stronger bonds with my friends	32	1.0	5.0	2.5000	1.0160
To create stronger bonds with my family	32	1.0	5.0	1.7500	0.9158
Goal Achievement					
Achieve a personal goal	32	3.0	5.0	4.6250	0.6091
The dream of participating in the Olympics	32	1.0	5.0	4.6250	0.7931
To represent my country	32	2.0	5.0	4.5625	0.7156
To compete	32	3.0	5.0	4.5313	0.6214
To win competitions/medals	32	1.0	5.0	3.6875	1.2556
To expand my network	32	1.0	5.0	2.4688	1.2439
To follow people doing the same	32	1.0	5.0	2.3438	1.0659

The table shows all the factor in each variable in descendent order for an easy understanding on the athlete's motivator's perceptions.

Table 5. Constraints' descriptive statistics

Variables	N	Min	Max	Mean	Std. Deviation
Structural barriers					
The equipment was expensive	32	2	5	4.1563	0.9197
No facilities near home	32	1	5	3.8438	1.4167
Not having a coach	32	1	5	3.5000	1.2443
No access to facilities	32	1	5	3.4063	1.1031
Expensive track fees	32	1	5	3.3750	1.2636
Not being able to buy good equipment	32	1	5	3.3438	0.9370
No money for training	32	1	5	3.3125	1.1760
Not time available at the tracks	32	1	5	3.1875	1.0298
No Money for competitions	32	1	5	3.0313	1.2044
No money for traveling	32	1	5	3.0313	1.1773
Conflict with school/job schedules	32	1	5	2.8438	1.0809
Find affordable hotels for races	32	1	5	2.7813	1.0994
No transportation to facilities	32	1	5	2.4375	1.0758
Unfair rules	32	1	5	2.4375	1.0453
Unfair participation quotas	32	1	5	2.3125	1.1760

Intrapersonal barriers					
Lack of knowledge about tracks	32	1	5	3.1250	1.0080
Lack of knowledge about rules	32	1	5	2.0000	0.9504
Stress	32	1	5	2.8750	1.1288
Anxiety	32	1	5	2.3125	1.1760
Depression	32	1	4	1.8750	0.8328
Injuries	32	1	4	2.6875	0.6927
Interpersonal barriers					
Family preoccupation	32	1	5	2.6563	1.0035
Bad attitude of the track administration	32	1	5	2.5000	1.1914
Bad attitude of athletes	32	1	5	2.0938	0.9284
Find athletes to travel with for the races	32	1	5	2.4375	1.0453
No support from my national federation	32	1	5	3.3438	1.1248
No support from IBSF (FIBT)	32	1	5	2.8750	1.2115

The table shows all the factor in each variable in descendent order for an easy understanding on the athlete's constraints' perceptions.

4.1.2. Reliability Analysis

In order to guarantee the reliability or the predictors of the independent variables, the Cronbach's Alpha test was conducted, the results showed the all the variables meet the levels of standard consistency with the consideration on α above .60.

The coefficient shows that as motivator, fun and enjoyment has the highest score with .984 and goal achievement the lowest with .945, but all of motivators above .900.

On the constraints side the coefficient shows structural barriers with the highest score of .851, intrapersonal barriers with a .718 and interpersonal barriers with a low .676 as seen on the table below.

Table 6. Variables Reliability Test

Motivators		
Variable	No of Items	Cronbach's Alpha
Self-efficacy	7	0.963
Fun and Enjoyment	7	0.984
Friends and peers	7	0.978
Goal Achievement	7	0.945
Constraints		
Variable	No of Items	Cronbach's Alpha
Structural	15	0.851
Intrapersonal	6	0.718
Interpersonal	6	0.676

4.1.3. T Test Results

Following the reliability test a T Test two samples for means was conducted following four dependent variables in order to find out if there is a significant difference among the independent variables on the groups. The respondents (N=32) were divided in groups of 16 (N=16) for each scenario, those with less years (Group A) and those with more years practicing the sport (Group B); those in a competition level below World Cup (Group A) and those with a World Cup level or higher (Group B) ;

those who trained from 1-3 days per week (Group A) and those how trained 4-6 days (Group B) and finally those who trained 1-3 hours per day (Group A) and those who trained 4-8 hours per day (Group B), meaning that each variable will have a group A and a group B and the results are shown at the tables number 7 and 8 below.

Table 7. T Test Results Years and Level

Variables	No	YEARS			LEVEL		
		Mean	SD	P Value	Mean	SD	P Value
Self-Efficacy							
Group A	16	3.99	1.345	0.042389	3.66	1.365	0.00072
Group B	16	3.79	1.058		4.13	0.987	
Fun & Enjoyment							
Group A	16	4.12	1.264	0.000877	3.76	1.246	0.00001
Group B	16	3.87	0.875		4.22	0.856	
Friends & Peers							
Group A	16	3.19	1.318	0.001157	2.79	1.223	0.00021
Group B	16	2.79	1.066		3.19	1.174	
Goal Achievement							
Group A	16	3.98	1.342	0.03527	3.65	1.412	0.0087
Group B	16	3.69	1.308		4.02	1.222	
Structural Barriers							
Group A	16	3.18	1.245	0.416837	3.23	1.274	0.00002
Group B	16	3.09	1.21		3.04	1.172	
Intrapersonal Barriers							
Group A	16	2.46	1.16	0.695192	2.53	1.169	0.00012
Group B	16	2.5	0.973		2.43	0.959	
Interpersonal Barriers							
Group A	16	2.73	1.183	0.247601	2.91	1.248	0.09766
Group B	16	2.57	1.102		2.40	0.967	

4.1.3.1 Years Variable

The results showed that athletes with less years are more motivated than the ones with more years; Self-efficacy, $M (SD) = 3.99 (1.345)$ versus $3.79 (1.058)$ respectively, $t(2.56)$, $p .0423 < .05$; Fun and enjoyment $M (SD) = 4.12 (1.264)$ versus $3.87 (0.875)$ respectively, $t(6.11)$, $p .0008 < .05$; Friends and peers $M (SD) = 3.19 (1.318)$ versus $2.79 (1.066)$ respectively, $t(5.79)$, $p 0.001 < .05$ and Goal achievement $M (SD) = 3.98 (1.342)$ versus $3.69 (1.308)$ respectively, $t(2.7)$, $p .035 < .05$ and also that the constraints are statistically insignificant.

4.1.3.2 Level Variable

The results showed that athletes with lower level are less motivated than the athletes in a higher competition; Self-efficacy, $M (SD) = 3.66 (1.365)$ versus $4.13 (0.987)$ respectively, $t(6.33)$, $p .0007 < .05$; Fun and enjoyment $M (SD) = 3.76 (1.264)$ versus $4.22 (0.856)$, $t(7.33)$, $p .00002 < .05$; Friends and peers $M (SD) = 2.79 (1.223)$ versus $3.19 (1.174)$, $t(8.8)$, $p 0.001 < .05$ and Goal achievement $M (SD) = 3.65 (1.412)$ versus $4.02 (1.222)$, $t(7.9)$, $p .035 < .05$ and more affected at the structural barriers, $M (SD) =$

3.23 (1.274) versus 3.04 (1.172) respectively, $t(1.77)$, $p .00021 < .05$; and interpersonal barriers $M (SD) = 2.91 (1.248)$ versus 2.4 (0.967) respectively, $t(4.17)$, $p .0087 < .05$

Table 8. T Test Results Days and Hours

Variables	No	DAYS			HOURS		
		Mean	SD	P Value	Mean	SD	P Value
Self-Efficacy							
Group A	16	3.99	1.345	0.0417	3.7	1.365	0.00034
Group B	16	3.79	1.058		4.1	0.987	
Fun & Enjoyment							
Group A	16	4.12	1.264	0.00556	3.8	1.246	0.00001
Group B	16	3.87	0.875		4.2	0.856	
Friends & Peers							
Group A	16	3.19	1.318	0.0015	2.8	1.223	0.00021
Group B	16	2.79	1.066		3.2	1.174	
Goal Achievement							
Group A	16	3.98	1.342	0.00719	3.7	1.412	0.00026
Group B	16	3.69	1.308		4	1.222	
Structural Barriers							
Group A	16	3.18	1.245	0.0721	3.2	1.274	0.0009
Group B	16	3.09	1.21		3	1.172	
Intrapersonal Barriers							
Group A	16	2.46	1.16	0.1746	2.5	1.169	0.5946
Group B	16	2.5	0.973		2.4	0.959	
Interpersonal Barriers							
Group A	16	2.73	1.183	0.142	2.9	1.248	0.4427
Group B	16	2.57	1.102		2.4	0.967	

4.1.3.3 Days Variable

The results showed that athletes that train less days are less motivated than the athletes that train more days; Self-efficacy, $M (SD) = 3.81 (1.241)$ versus $3.97 (1.181)$ respectively, $t(2.58), p .0417 < .05$; Fun and enjoyment $M (SD) = 3.88 (1.183)$ versus $4.10 (0.986)$, $t(4.22), p .0055 < .05$; Friends and peers $M (SD) = 2.84 (1.095)$ versus $3.14 (1.307)$, $t(5.49), p 0.0015 < .05$ and Goal achievement $M (SD) = 3.75 (1.352)$ versus $3.92 (1.309)$, $t(3.9), p .00719 < .05$ and more affected at the interpersonal barriers, $M (SD) = 2.85 (1.22)$ versus $2.45 (1.024)$ respectively, $t(3.68), p .0142 < .05$.

4.1.3.4 Hours Variable

The results showed that athletes that train less hours are more motivated than the athletes that train more hours; Self-efficacy, $M (SD) = 4.29 (0.906)$ versus $3.49 (1.342)$ respectively, $t(7.28), p .0034 < .05$; Fun and enjoyment $M (SD) = 4.43 (0.767)$ versus $3.55 (1.191)$, $t(3.3), p 0.001 < .05$; Friends and peers $M (SD) = 3.34 (1.07)$ versus $2.64 (1.25)$, $t(2.6), p .0002 < .05$; and Goal achievement $M (SD) = 4.16 (1.151)$ versus $3.51 (1.142)$, $t(7.6), p .0026 < .05$ and more affected at the structural barriers, $M (SD) = 3.29 (1.13)$ versus $2.98 (1.29)$ respectively, $t(1.94), p .0009 < .05$.

If we want to interpret the T Test results (table 9), the motivators for all the groups on the four scenarios are different, they think in a different way about what drives them toward participating in bobsled and skeleton.

The findings on the year scenario were, that there is no difference among any of the constraints, there for, no matter how long the athletes have been practicing they have faced the same barriers. At the Level scenario, the intrapersonal barriers is the only variable with no difference and that is present in both groups, the rest of the variables are different. Interpreting the day's scenario, where athletes faced the same structural and intrapersonal barriers, but different motivators and intra personal barriers. For the last research scenario based on the hours, the athletes from both groups are affected by the intrapersonal and interpersonal barriers.

The only consistent constraint with no difference between the groups are the intrapersonal barriers, that measured anxiety, stress, depression, lack of knowledge about the tracks, lack of knowledge about the rules and injuries.

Table 9. Interpretation of the T Test Results

Variables	Years	Level	Days	Hours
Self-efficacy	Difference	Difference	Difference	Difference
Fun and Enjoyment	Difference	Difference	Difference	Difference
Friends and peers	Difference	Difference	Difference	Difference

Goal Achievement	Difference	Difference	Difference	Difference
Structural barriers	No Difference	Difference	No Difference	Difference
Intrapersonal barriers	No Difference	No Difference	No Difference	No Difference
Interpersonal barriers	No Difference	Difference	Difference	Difference

Having in mind our hypothesis where the mean difference between group “A” and “B” should be zero, there were certain factors from the variables in relation with the independent variables that fulfill this prediction.

Considering the independent variable of the years, the motivator that has no difference is the dream of participating in the Winter Olympics, it does not matter if they have been practicing over nine years or if they have barely started, both groups have this motivator with 92.5%.

Considering the independent variable of level we found four constraints with zero difference, no enough time available at the training facilities (63.75%), no transportation to the facilities (48.15%), unfair rules (48.75%) and Anxiety (46.25%).

Considering the independent variable of days per week that the athletes trained we found three factors, the adrenaline with 83.75%, achieve a personal goal with 92.5% and unfair rules with a consistent 48.75%.

The unfairness of the rules was also present in the years groups, even when it was not the same, 51.25% of the older group and 46.25% in the younger group consider this as a barrier.

4.2. Survey Key Stakeholders in Bobsled and Skeleton

This surveys will be used in order to answer the third research question: How to increase the Small Nations participation in bobsled and skeleton? And consisted in 19 open answered questions to provide freedom to the interviewees and provide a wider idea about their perception.

4.2.1. Respondent Profiling

The five respondents are main stakeholders in the bobsled and skeleton sports, from various backgrounds but all of them with significant knowledge and proved passion. All of them have been involved with small nations in their careers in different ways, so we will mention relevant facts on the matter.

Mr. Ben Sandford, 38 years old, borne in New Zealand a lawyer, former skeleton athlete, three times Olympian, Athlete Representative at the International Bobsled and Skeleton Federation from 2006 to 2014 and since then Vice President of Legal Affairs, at the same Federation. He was a

coach for small nations athletes like Jamaica, Slovakia and Mexico sharing his knowledge at the Americas Cup.

Mr. Peter Van Wees, 44 years old, born in the Netherlands, bobsled athlete from 1993 to 1999, skeleton athlete from 2000 to 2010, representative of the Athletes' Advisory Committee since 2012 has been the voice of small nations athletes and helped to change policies regarding Winter Youth Olympics to provide equal chances to all the athletes to win a medal.

Mr. Ander Mirambell, a 35 years old active Skeleton World Cup athlete representing his country, Spain, was one of the first athletes from small nations that was helped by the IF with coaching, he has been a part of all level competition in skeleton, including the Olympics and he also practiced bobsled and now he is an Athlete IOC Commission candidate.

Mr. Bryan McDonald an American 46 year-old former World Cup athlete, former small nations coach at the Americas Cup and actual USA World Cup skeleton Coach.

Mr. Joe Sisson former USA team bobsled World Cup athlete that after suffering a bobsled accident retired from the sport, but has shared his knowledge with small nations like Brazil, where we managed to qualify the 4 Man bobsled team to his first ever World Cup in Lake placid. bobsled

team, aiming to obtain a perspective from all the possible levels and their thoughts as volunteers, coaches, athletes, developers, representatives and Federative, about the factors that are constraining and motivating small nations to participate in Bobsled and Skeleton.

All of them provided unique approaches of the small nation's participation in bobsled and skeleton at senior and youth levels, we will present their main ideas in an anonymous way.

4.2.2. Findings

All the findings were categorized into several highlighted findings, that were analyzed through the thematic analytic process, a widely used qualitative data analysis method, with the objective of identify patterned across the dataset.

After coding the research showed main themes, with similar patterns from all the participants. We will present a synthesis of the main ideas from each key person answers in an anonymous way and random order, regarding the most relevant changes in the last 15 years for the sports, the actual tendencies, the small nations participation, their role, the youth participation, tendencies and main concerns, and the role the new track in Pyeongchang could play in the small nations participation.

Respondent one considers that the most relevant changes in bobsled and skeleton have been the television broadcasting, the control of the material used on the sled and the creation of the professional World Cup with eight races. He considers that participation in skeleton is increasing and in bobsled decreasing due the cost of the equipment. As a key factor for small nations he mentioned that there should be a program to find athletes, have an actual developing program in place to train at the ice tracks, select the best athletes there and have them training on ice before participating in any competition. One key point that he mentioned was to find athletes that can afford the traveling expenses.

Respondent two consider as main changes in the las 15 years of the sports, the re-inclusion of skeleton at the Winter Olympic program in Salt Lake City, Utah in 2002 and the professionalization of the sport that came with a positive side, the change of the athletes' profile, now the sport requires faster and stronger athletes, with better training, but from the negative side, the decrease of the grass roots clubs, as this clubs can no longer access to the tracks because they are being booked for races, team trials and training for the teams. As tendencies he considers that Pyeongchang could be part of the World Cup circuit, but that will represent more expenses to the teams. He also consider that the sport is too expensive

and there is a need of standardization of equipment to reduce the logistic costs. In reference to the technologies, he encourage to find new technologies that help to build tracks and maintain them in a cheaper way. For him the participation in skeleton of small nation's athletes is the same, but in bobsled has dropped off.

He considers that small nations play an absolutely vital role in this sports and urges to make it accessible, setting paths that will allow them to grow. For him, some tracks have been really good helping small nation's athletes while others have practically closed the doors for them, but again reminded the importance that the athletes are given enough time to train on ice.

Regarding the youth participation he is worried about the time between the Winter Youth Olympic Games and also the transition from youth to senior level, having as an issue that the athletes may leave the sport when they face other athletes with bigger size bodies, stronger and faster than them.

Respondent three consider as relevant changes the women inclusion in many disciplines, the creation of the Winter Youth Olympic Games and the recent creation of the races for athletes with disabilities (para-World Cup), but sees as a negative tendency that there is "too much

focus on small stuff and no changes in the necessary big stuff”. Regarding the participation he considers that has decreased to the minimal, having it at risk if there is not a change in the sport cost and also considers that immigration is a problem that should not be allowed in the sport. For him the youth small nation’s participation problems are many but first, that they don’t know about the existence of bobsled or skeleton, then, there is a huge gap to crossover to the senior level and not a solid structure in their National Federations. He proposed as a solution to generate a real change in the regulations, increase the Olympic quota to attract more athletes and use tracks like Pyeongchang to start a developing program for Asia.

Respondent number four consider as relevant changes in the sports the technology in sled design and construction, the quality of the materials and the highly machined parts as the increase of level of athleticism. As for the small nations participation he consider is increasing in skeleton and same in bobsled due this sports represent a faster way to becoming an Olympian. But this has negative consequences, because the small nations don’t have enough athletes and no athletic standards, any athlete can compete and that affects the races level. For him there is an imperative necessity to create real permanent structures that allow larger participation from South American Nations to help create a better North American Cup

competitions. He firmly believes that increasing small nation's participation will help to ensure the sport grows. Referring to youth athletes, he thinks just a couple of nations worldwide recruit them at a young age, and special attention should be paid to this field, because when young athletes are coached with bad habits in other sports, it is really hard to change them. Additionally he considers that funding from the International Bobsled and Skeleton Federation to encourage small nations participation would be highly effective, at the same time that they change and create a true small nation coaching/staff program, considering the current one is ineffective and the coaches' rotation is really high.

Our last respondent considered the sled design and the amount of money spend on the sled research as the main changes in the last 15 years.

For him there is a simple equation that explain the small nation's participation which is, when smaller nations do not have a track, a coach, a top notch sled, they have no chance to succeed, there for, they don't wish to compete and add that without the small nation's participation, the sport will be basically a five countries competition. He has seen how small nations have lost athletes to a bigger nation via immigration so they can have a chance to be successful.

He considered that provide track access is a key factor in the success of any small nations program and see that Pyeongchang could be the place to train athletes from all over Asia if they don't forget to provide enough time for them, having the opportunity to be a better training facility to athletes from Oceania and Africa.

All that information could be summarized in the next table

Table 10. Key People Findings

Key Findings	Topics	Brief explanation
Relevant changes in the last 15 years	Olympic inclusion	Skeleton was included at the winter Olympics again in 2002 in Salt Lake City
	Television	International race broadcasting
	Technology	To obtain data and improve overall performance
	Materials	Better quality and use of different material
	Circuits	Creation of new circuits
	Inclusion	More woman participation, Youth Olympics, para World Cup
	Design	Sleds and equipment with highly machined part, top technology and expensive materials
	Professionalization	increased the required level of athleticism
Tendencies	Bigger show	Present a better product for TV and sponsors
	Lack of vision	Too much focus on small things, without changing the necessary big stuff
	Bigger gap	Between developed and developing countries teams due technology, no track access and rules
	Controlled changes	There are changes that con not be postponed, the ways to do it are being planed
	Standardization	Related to equipment to reduce advantages due technology

Small Nations Participation	Increase/decrease	Mixed opinions, with more votes on decreasing
	Recruitment	Lack of real programs to attract athletes
	Quotas	Quotas need to be changed to promote participation
	Immigration	Loss of athletes that change and compete for big or small nations
	Policies	Affected by the IF rules
	Cost	Reduce sport cost/ equipment standardization
	Tracks	Not enough time access
	Coaches	Need of consistent good coaches with knowledge
	Role	Vital, they cannot disappear
Small Nations Youth Participation	Structure	Lack of real permanent structure
	Safety	Need of measures that guarantee their integrity
	Transition	There is no established path to the senior level
	Tracks	They have a reduced time to train
	Age	Recruitment should be at younger age
	Existence	No many kids know about the sports
	Policies	Fair rules that allows any athlete to win
	Participation	Need to find a way to attract participants
Pyeongchang	Gap	Nothing is being done between each Winter Youth Olympic Games
	Local development	Continue the successful Korean program
	Small nations	Could be the main training track to Asia and Oceania athletes, also a big opportunity for African athletes.
	Asian circuit	Possible creation of Asian Cup

The last point that was mentioned is how hard it is to find athletes that commit to the sport, which implies 5-8 years before being competitive and nowadays there are too many options for athletes.

Chapter 5. Discussion

The study of motivators and constraints that influence the small nations' participation in bobsled and skeleton is without a doubt an important research due its implication at this sports development and survival.

In the previous chapter the researcher showed the results of the research related with the respondents' descriptive statistics, the T Test results as well as the key people surveys' findings. The researcher also discusses about the athletes motivators and constraints and their relation with the literature review presented in chapter two, especially with the motivators considered by Green (2005), the constraints models by Crawford and Godbey (1987) and the attraction, retention and nurturing process of sport development by Sotiradou and Shilbury (2008).

Chapter five discuss farther and analyze how they are related, emphasizing the answers of the research questions of this study.

5.1. Summary of Study

Sport development is a process where processes and structures are set up to enable particular groups of peoples to take part in sport or to improve their performance (Collins, cited in Eady, 1993).

Scholars suggested that sport participation could be explained from a demographic–economic perspective where a number of demographic and economic variables influence (Breuer and Wicker, 2008), others consider economic variables such as income, time, and human capital as an indicators. (Breuer, C. and Wicker, P., 2008). The education influences the productivity and income which are both needed for sport participation, meaning that individuals with higher human capital also tend to have higher incomes and are therefore able to participate more in sports in monetary terms (Breuer Christoph , Hallmann Kirstin and Wicker Pamela, 2011).

The results of the research found the elements of education, social class, time allocation, sex and profession as highly influencing the participation of athletes from small nations.

Moving forward, motivators are seen in previous researches as personality factors, social variables or cognitions that come into play when a person undertakes a task, competes with others, or attempts to achieve standard of excellence (Glyn 1989). There scholars suggested to consider motivational behavior and recognize that are psychological states based upon the interpretation of the effectiveness of the athletes achievement (Maehr & Nicholls, 1980). It is important to have in mind that the goal perspective as motivator has two paths, mastery and competitive goals of

action (Duba, 1989a), with an extrinsic rewards that may lead athletes to participate sports to obtain them and prove themselves (Vallerand Deci & Ryan 1988, Cit At Glyn 1989).

On the order of the motivators, Christine Green research results showed that fun and enjoyment, self-efficacy, friends and peers and goal achievement are the common motivators and they appear to influence in this order.

The results showed all this factors as influence on the small nations' athletes but in different hierarchy, having goal achievement on the top, followed by self-efficacy, fun and enjoyment and las friends and peers.

The highest goal achievement factor was represented by participate in the Olympics with 92.5%, in self-efficacy the higher scored factor was to improve my performance with 95.63%, to experience fast and exiting sport, followed by the speed and adrenaline with an 87.5%, 84.385% and 83.75% respectively, were the higher scored factor in fun and enjoyment and as for the friends and peers factors the higher one was meet international athletes with 72.5%.

After running the T Test with the groups and variables, the research with the dependent variable of years, showed that all the motivator are statistical significant among the groups. On the scenario with the

dependent variable of level, the World Cup athletes are more motivated, but both sample groups are constraint by anxiety, depression and stress.

The research also showed that in specific factor and scenarios, the difference between there was not difference on the perception of the respondents about being affected by not enough time available at the training facilities (63.75%), unfair rules (48.75%), Anxiety (46.25%), the adrenaline (83.75%), achieve a personal goal (92.5%) and unfair rules with a consistent (48.75%).

From the survey to key people on the sport the research showed the broadcasting, technology, creation of circuits, equipment standardization, small nations' participation decreasing, the participation quotas at the Olympics, the reduced time at the tracks and the forgotten transition between development levels and reduced funding as main topic related with athletes participation, being consistent with the structural barriers that were result of the Athletes' surveys.

Related with Pyeongchang the research showed its importance as a home track for small nations' athletes, the key role to attract new athletes to the ice, and its importance to help the sport survival. Results also showed the recognition of Korea successful bobsled and skeleton program and the role they will play on the Asian sport development.

5.2. Significance of the Motivators and Constraints

In the last decades, the sport have been changing in a dizzying speed, the options of disciplines multiplied and many of them caught the attention of the athletes, either because of its easy access, because of its low cost or because they want to be like the role models they want to follow, whatever the reasons are, they are affected by motivators and constraints, both analyzed through a very subjective way, were the person assigns perceived value to each one of the factors and that allows them to put them in a hierarchy and decide if the benefit to obtain is worthy to pursue or not and act in consequences.

Enjoyment, self-efficacy, friends and peers are consider to be the factors that are more popular in sport participation (Green 2010) but for the nature of the sport, the researcher decided to add goal achievement as the fourth variable of motivators.

Talking about constraints, the participation is heavily dependent on the negotiation through an alignment of multiple factors, arranged sequentially, that must be overcome to maintain an individual's impetus through this systematic levels (Crawford 1991), then, if we don't know the factors and the possible sequence, we could be wasting time, energy and

money on strategies that will never improve the small nations athletes participation.

In the way of what motivates and constraint the athletes to practice bobsled and skeleton could be understood, it could be used that to attract more people, facilitating participation, retention and transition on the sport development levels. For bobsled and skeleton, as was mentioned by key stakeholders, the small nations' participation is vital to invert the actual tendency.

Chapter 6. Conclusions

With all the information presented on the previous chapters, the answers for the three research questions could be sum it up as follows.

The first research question is, what are the socio-demographic characteristics of small nation athletes who have participated in bobsled and Skeleton? The results shows that we have mainly athletes form middle class that train and work, pay all the expenses from their money and represent their countries from America, Europe, Oceania and Africa.

The second research question is, what motivates and constraint Athletes from small nations to Participate in Bobsled and Skeleton? The factors that motivates are goal achievement in first place, self-efficacy in second and fun and enjoyment and friends and peer in third and fourth respectively, validated with the T Test results. As for the Constraints, the intrapersonal barriers are the most important ones, this following the pattern predicted by Green (2005)

The last research question is how to increase the Small Nations Participation in Bobsled and Skeleton? Based on the stakeholders' inputs, the way is to create a permanent professional structure for small nations, either created by them or by the International Bobsled and Skeleton Federation, increase their access to the tracks, decrease costs and maximize

safety. They consider that will implies in a mid or long term, changes at the sport rules like equipment standardization and an increase the Olympic quotas and in the short term, creation of ssustainable programs in partnerships with the track another countries development programs.

6.1. Limitations and Recommendations for Future Research

The research was limited by the range of the sampling, due the small number of athletes involved in bobsled and skeleton during it existence. In this matter, other limitation was that the surveys were answered by athletes that participated either in bobsled, or skeleton, without having any respond from people who could not participate.

The time when the study was realized represented another limitation, because this was during the first phase of the Olympic season and both, athletes and some key people involved in the sport were not able to answer on time the surveys and their knowledge could not be included.

For future researches could be consider, a qualitative study of the motivators and constraints and a study with the objective of know the nature of the benefits athletes perceive in sport participation in order to understand better how does the motivators and constraints are place in a hierarchy and how does that hierarchy affects their ways to overcome constraints and keep motivation.

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Appendix A

Former athletes/ athletes' survey

Name: _____

Age: _____ Sex: _____

Nationality: _____

Residency: _____

Profession: _____

Ethnicity: _____

1. What is your Educational Level?
2. To which social class do you consider you belong?
3. During your athlete career you just trained, study, work? Where?
4. How do you/ did you finance your training?
5. How do you/did you finance your competitions/travels?
6. Which Sport did you practice?
7. For how long?
8. Which was your higher competition level?
9. Which was your main track to practice bobsled/Skeleton?
10. At what time do you usually practice bobsled/skeleton?
11. How many days did you practice bobsled/skeleton per week?
12. How many hours per day did you practice bobsled/skeleton?
13. Which facilities could you afford to use?
14. Why did you practice for the first time your sport?
15. When you first thought bobsled/skeleton what came to your mind?
16. What do you like about the sport?
17. What do you don't like about it?

What was your motivation for practicing/competing in bobsled/skeleton?

The number means:

1 = Never 2 = A few times 3 = Sometimes 4 = Most of the time
5 = Always

	Items	Never	Almost never	Sometimes	Most of the times	Always
1	Enjoy the sport with others	1	2	3	4	5
2	Enjoy the sport by myself	1	2	3	4	5
3	Achieve a personal goal	1	2	3	4	5
4	Prove that I could do it	1	2	3	4	5
5	Experience a fast/exiting sport	1	2	3	4	5
6	Gain Self confidence	1	2	3	4	5
7	Develop new skills/habilities	1	2	3	4	5
8	Distract me from the pressures at work / school	1	2	3	4	5
9	Meet people that like the sport	1	2	3	4	5
10	Meet local athletes	1	2	3	4	5
11	Meet international athletes	1	2	3	4	5
12	Be with my friends who practice it	1	2	3	4	5
13	To create stronger bonds with my family	1	2	3	4	5
14	To create stronger bonds with my friends	1	2	3	4	5
15	To be part of a different community	1	2	3	4	5
16	To expand my network	1	2	3	4	5
17	To travel	1	2	3	4	5
18	To represent my country	1	2	3	4	5
19	To learn new skills	1	2	3	4	5
20	To improve my performance	1	2	3	4	5
21	To compete	1	2	3	4	5
22	To win competitions/medalls	1	2	3	4	5
23	Showing what I do (bobsled/skeleton) to others	1	2	3	4	5
24	To follow people doing the same	1	2	3	4	5
25	Wear cool equipment	1	2	3	4	5
26	The adrenaline	1	2	3	4	5
27	The freedom feeling	1	2	3	4	5
28	I dreamed with participate at the Olympics	1	2	3	4	5
	Others:					
29		1	2	3	4	5
30		1	2	3	4	5
31		1	2	3	4	5
32		1	2	3	4	5
33		1	2	3	4	5

What circumstances you faced during your bobsled/skeleton practice/career?

The number means: 1 = Never 2 = A few times 3 = Sometimes
4 = Most of the time 5 = Always

	Items	Never	Almost never	Sometimes	Most of the times	Always
	Circumstances					
1	Family preoccupation	1	2	3	4	5
2	No Money for training	1	2	3	4	5
3	No Money for competitions	1	2	3	4	5
4	No Money for traveling	1	2	3	4	5
5	Conflict with School/Job schedules	1	2	3	4	5
6	No facilities near home	1	2	3	4	5
7	No Access to facilities	1	2	3	4	5
8	No Enough time available at the training facilities	1	2	3	4	5
9	No transportation to facilities	1	2	3	4	5
10	Bad attitudes from tracks administration	1	2	3	4	5
11	Bad attitudes from athletes at regular training	1	2	3	4	5
12	Bad attitudes from athletes at competitions	1	2	3	4	5
13	Not being able to buy good equipment	1	2	3	4	5
14	No having coach	1	2	3	4	5
15	Lack of knowledge about rules/track	1	2	3	4	5
16	Expensive track fees	1	2	3	4	5
17	Find athletes to travel with, for the races	1	2	3	4	5
18	Stress	1	2	3	4	5
19	Anxiety	1	2	3	4	5
20	Depression	1	2	3	4	5
21	Injuries	1	2	3	4	5
22	Unfair rules	1	2	3	4	5
23	Unfair participation quotas	1	2	3	4	5
24	No Support from my National Federation	1	2	3	4	5
25	No Support from IBSF	1	2	3	4	5
	Others:	1	2	3	4	5
26	_____	1	2	3	4	5
27	_____	1	2	3	4	5
28	_____	1	2	3	4	5
29	_____	1	2	3	4	5

Appendix B

Key People in Bobsled and Skeleton Survey

Section I. Respondent General Information

1. What is your Name, age, Nationality?
2. How long have you been involved in Bobsled/Skeleton? In which position?
3. What do you think have been the most relevant changes in this sports in the last 15 years?
4. Which are the tendencies today for the sport?

Section II. Small Nations Participation

1. Do you think the small nation's participation in bobsled and skeleton is increasing or decreasing?
2. Why do you think is that happening?
3. Which role do you think small nations plays in the future of bobsled and skeleton?
4. Which role do you think immigration from small nations families may have in Bobsled and Skeleton?
5. Do you think the tracks in America would help small nations to train with them?
6. What would do you recommend small nations in order to participate in Bobsled and Skeleton?

Section III. Small Nations Youth participation

1. Which are the tendencies today at youth level in sports?
2. Which are the main concerns about youth and sports from your perspective?
3. Which are the factors that you think are constraining Small Nations youth from participating in Bobsled or skeleton?

4. Which are the factors that you think may motivate Small Nations youth to participate in Bobsled or skeleton?
5. What do you think about the current policies in bobsled and skeleton?
6. In what way do you think bobsled and skeleton could be developed for small nations?
7. What would you like to see in the future for small nations in bobsled and skeleton?
8. What would you think may/should the IBSF plan be for the PyeongChang Track?
9. Would small nations would have access to it? In which way?

국문초록

작은 국가의 봅슬레이와 스켈레톤
참여에 영향을 미치는
동기요인 및 제약사항

Juan Jose Carlos Ruiz

Global Sport Management, Physical Education Department

The Graduate School

서울대학교

1930년 초반부터 봅슬레이와 스켈레톤은 작은 나라에서 관심을 많이 가지는 두 동계스포츠 종목으로 자리매김을 하게 되었다. 최근부터는 비인기 종목이기 때문인지 관심이 급격하게 저하되었다. 이러한 현상에 있어서 본 두 개의 동계스포츠 종목 참여에 어떤 동기부여와 제약사항이 영향을 미치는지에 대한 연구

또한 매우 미흡한 상황이다. 작년 시즌에 본 종목 현역선수들은 세계적으로 나라규모에 상관없이 총 300명 밖에 없었다.

2002년 동계올림픽에서 스켈레톤 종목을 다시 추가하면서 작은나라선수들의 참여가 급 증가하였고 4년 후에 올림픽까지 추세가 이어졌다. 하지만, 스포츠가 발전하면서 규정의 변화와 기술발전 및 장비들의 의존도가 높아지면서 많은 선수들이 운동을 그만두거나, 이민을 가거나 자기나라의 프로그램 발전에 기여를 하게 되었다. 본 연구는 작은 나라 선수들의 동기부여와 제약사항을 두 종류의 설문으로 다른 참여자들에게 정보제공을 해주고 다시 작은나라들의 참여도를 높일 수 있는 전략에 도움을 줄 수 있는 연구목적 아래 조사하였다. 또한, 다가오는 2018 평창 올림픽부터 특히 작은 나라 출신 유소년 선수들 참여에 앞으로 도움되기를 바라는 바이다.

첫 설문지는 32개의 작은 나라출신 봅슬레이와 스켈레톤 현역 및 은퇴선수들을 대상으로 동기부여와 제약 요인들을 직접 도출하였다. 연구방법은 T-검증을 사용하였으며 동기부여는 92.5% 올림픽 참여 요인을 제외한 나머지는 그룹마다 차이가 있었다. 제약사항에 대한 결과는 개인적인 내부 장벽은 차이가 없었으며

새로운 선수와 은퇴선수들 또한 동일한 제약사항에 영향을 받았다. 트랙사용 미달, 불안감, 불공평한 규칙과 같은 요인에 관한 결과는 모두 동일하였다.

두 번째 설문지는 봅슬레이와 스킨레톤 참여를 어떻게 하면 높일 수 있는지에 대하여 작은 나라 스포츠 관련 주요인사들이 참여를 하였다. 기술적인 차이가 규모가 큰 나라와 작은 나라의 차이를 발생시켰다는 결과가 도출되었다. 스포츠 규칙 변경과 파트너쉽을 통한 유지 가능한 프로그램과 스포츠 규칙 조정은 참여를 높일 수 있으며 특히 올림픽 참여 가능 및 장비 비용절감은 더 많은 선수들을 끌어들이 수 있을 것이다.

주요어: 작은 나라, 동기요인, 제약, 봅슬레이, 스킨레톤, 참가.

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