UNIVERSITAS Miguel Hernández

THESIS

CONSULTING THE SPORT COMMUNITY FOR THE DEVELOPMENT OF AN EVIDENCE-BASED CLASSIFICATION SYSTEM IN **CEREBRAL PALSY FOOTBALL**

by

Samantha April Cammidge

Doctoral supervisors:

Prof. Dr. Raúl Reina Vaíllo

Prof. Dr. Vicente Javier Beltrán-Carrillo

Centro de Investigación del Deporte

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El Dr. D. Juan Carlos Marzo Campos, director del Departamento de Psicología de la Salud de la Universidad Miguel Hernández de Elche.

AUTORIZA:

Que el trabajo de investigación titulado: "CONSULTING THE SPORT COMMUNITY FOR THE DEVELOPMENT OF AN EVIDENCE-BASED CLASSIFICATION SYSTEM IN CP-FOOTBALL" realizado por Dña. Samantha April Cammidge bajo la dirección de los directores Dr. D. Raúl Reina Vaíllo y Dr. D. Vicente Beltrán-Carrillo sea depositado en el departamento y posteriormente defendido como Tesis Doctoral en esta Universidad ante el tribunal correspondiente.

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Dña. Samantha April Cammidge

Dirigida por el Dr. D. Raúl Reina Vaíllo y Dr. D. Vicente Beltrán-Carrillo

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Doctoral Thesis

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Presented by:

Samantha April Cammidge

Supervised by:

Dr. Raúl Reina Vaíllo

Dr. Vicente J. Beltrán-Carrillo

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ABSTRACT

Classification systems play a major role in Paralympic Sports and a valid system of classification ensures a fair and equitable competition. Classification must comply with the International Paralympic Committee (IPC) Code, which specifies in its 2015 version that classification must be evidence-based meaning that it is focused on the relationship between the Impairment of the player and key performance determinants. The application of the new Code is mandatory for all Paralympic Sports before 1st January 2018.

The present thesis consisted in conducting a total of 53 interviews (with Players, Head Coaches, International Federation of Cerebral Palsy Football (IFCPF) Classifiers and IFCPF Stakeholders) and 165 surveys completed by players that participated in the Cerebral Palsy (CP) Football World Championships at St. Georges Park in England, June 2015.

The interview and survey questions covered a wide range of topics related to classification with the aim of finding out people´s opinions and concerns on how to improve the IFCPF Classification process. The analysis of the results obtained will be taken into account to perform verifications in the IFCPF Classification Rules, providing findings that could modify certain points of the classification process and current rulebook. The results from the interviews and surveys coincided in many aspects allowing to analyse both of them as a whole.

Within the results obtained it has come to light that there is a need for change and innovation in the classification system. Some possible modifications will be: a reduction in the number of classes, minimal criteria impairment increasingly more rigorous, additional observation during training sessions by classifiers when having to give a class to a player, among others detailed in this thesis.

RESUMEN

Los sistemas de clasificación tienen un papel muy importante en los deportes Paralímpicos y un sistema de clasificación válido asegurará una competición justa y equitativa. La clasificación debe cumplir con el Código del Comité Paralímpico Internacional, el cual específica en su versión del año 2015 que la clasificación debe estar basada en evidencias científicas, es decir, que está enfocado en la relación entre el impedimento del deportista y los determinantes claves de su rendimiento. La aplicación del nuevo Código es obligatoria para todos los deportes Paralímpicos antes del 1 de enero del 2018.

La presente Tesis Doctoral realiza un total de 53 entrevistas [jugadores, entrenadores, clasificadores y miembros de la Federación Internacional de Fútbol con Parálisis Cerebral (IFCPF)] y 165 cuestionarios completados por jugadores que participaron en el Campeonato Mundial de Fútbol para personas con Parálisis Cerebral, celebrado en St.Georges Park, (Inglaterra) en Junio de 2015.

Las preguntas de la entrevista y los cuestionarios cubren un rango de temas relacionados con la clasificación, con el objetivo de conocer las opiniones e inquietudes de la población para mejorar los procesos de clasificación en fútbol PC. Los resultados obtenidos se tendrán en cuenta para realizar verificaciones en las reglas de clasificación del IFCPF, proporcionando información que modifique ciertas pautas del proceso de clasificación y las reglas vigentes. Los resultados de las entrevistas y

los cuestionarios coincidieron en muchos aspectos permitiendo así analizar ambos de forma global.

De los resultados obtenidos, se ha demostrado la necesidad de cambios e innovación en el sistema de clasificación actual. Algunas modificaciones posibles podrían serán: una reducción en el número de clases, un aumento en el criterio mínimo de impedimento para ser elgible, siendo de esta manera más rigurosa, observación adicional durante las sesiones de entrenamiento por los clasificadores cuando tienen que otorgar una clase a un jugador, entre otras.

1 Introduction

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1. INTRODUCTION

1.1. Classification in Paralympic Sport

Throughout history, Paralympic sport has grown and developed for three main reasons according to Vanlandewijck and Thompson (2011). The first reason is that sport is an effective way of augmenting rehabilitation outcomes for people with disabilities. Secondly, people with disabilities have a right to participate in sport and should have the same opportunities than others. Finally, Paralympic sport is elite, exciting and inspiring.

The International Paralympic Committee (IPC) is the global governing body for the Paralympic Movement, showcasing achievements of athletes with impairments to a global audience. IPC apart from being the organiser of both Summer and Winter Paralympic Games, also act as international federation for 10 sports, 4 of which are summer Paralympic sports (Athletics, Powerlifting, Shooting and Swimming), 5 are winter Paralympic sports (Alpine Skiing, Snowboarding, Biathlon, Ice Sledge Hockey and Nordic Skiing) and Wheelchair Dancing, which is not at the moment accounted for being a Paralympic sport. From the 30th of November 2016, IPC has rebranded the ten sports which acts as an International Federation for with the sports adopting new names (placing the words “World Para” before the name of the sport, for example IPC Athletics new name is World Para-Athletics), identities and competition name formats. This change is an indication of the evolution that Paralympic sports are undergoing.

To ensure a fair and equitable competition, a classification process is fundamental (Tweedy & Vanlandewijck, 2011). Classification in Paralympic sports; and para-sports in general, determines who is eligible to compete in Paralympic sporting events and promotes participation in a sport for people with disabilities by minimizing the impact of eligible types of impairment on the outcome of the competition (Tweedy, 2002). The prospect of a close competition is known to be a potent social motivator for sports participation and, in this way, classification systems help to promote sports participation among people with widely varying skills and abilities, expanding therefore the participation base (Vallerand, 2001). Valid systems of classification ensure that successful athletes are those who have the most advantageous combination of anthropometric, physiological, and/or psychological attributes which enhanced them to the best effect (Tweedy, Beckman, & Connick, 2014).

Classification can be defined as a process in which a single group of entities are ordered into a number of smaller groups or classes based on observable properties that they have in common (Tweedy & Vanlandewijck, 2011). The first internationally recognised system for classification of health and functioning was the International Classification of Impairments, Disabilities and Handicaps, published by the World Health Organization in 1980, becoming the International Classification of Functioning, Disability and Health (ICF), since 2001 (WHO, 2001). In addition, taxonomy is the science of how to classify, its principles, procedures and rules. In 2002, Tweedy described the taxonomic relationship between the ICF and the Paralympic

Classification. Tweedy proposed applying the language and structure of the ICF to the context of Paralympic classification and because of this the IPC uses the language and definitions of the ICF.

In 1948, Sir Ludwig Guttman organised during the London Olympic Games the first competition for wheelchair athletes which he named the Stoke Mandeville Games. Since the Paralympic movement has begun, there have been some modifications, with the introduction of new sports and wider range of disabilities (Gold & Gold, 2007). Paralympic Sport originated as an extension of the rehabilitation process and classification was medically based where athletes received a single class based on their medical diagnosis and competed in that class for all sports (Tweedy, 2011). In the 1970´s, a transition from medical to functional classification began. One feature of early functional systems was that they compromised fewer classes than the existing medical systems (Steadward, Nelson, & Wheeler, 1993). Event organizers favoured fewer classes because the complexity of event organisation was significantly reduced and this was a problem for the Seoul 1988 Paralympic Games. In 1989, the bodies responsible for organising the Barcelona Paralympic Games, who were the IPC and the Barcelona Paralympic Organizing Committee, signed an agreement that stipulated that all the Paralympic sports contested at the 1992 Barcelona Paralympics Games were to be conducted using sports-specific functional classification systems (Vanlandewijck & Chappel, 1996). Due to the rate of development, in 2003, the governing board approved a classification strategy which was published in 2007 as the IPC

Classification Code and International Standards. The IPC Classification Code comprises comprehensive guidelines, policies and procedures for how classification should be done in the IPC sports or IPC member federation governed sports (Tweedy & Vanlandewijck, 2011). The Code aims to contribute to the Paralympic Movement by offering sporting excellence for all athletes and sports involved and providing equitable competition, via robust, transparent and fair classification processes (IPC Classification Code, 2007). In July 2015, a newer version of the IPC Athlete Classification Code was published, consisting in a revised version of the IPC Classification Code first published in 2007. This version is more athlete orientated and incorporates revisions that were approved by the IPC Governing Board in August 2016. The revised IPC Athlete Classification Code is effective as of 1 January 2017 with compliance required by 1 January 2018. Figure 1 shows an adapted timeline from Hart (2014) which explains clearly the changes along the years in the Paralympic classification processes.

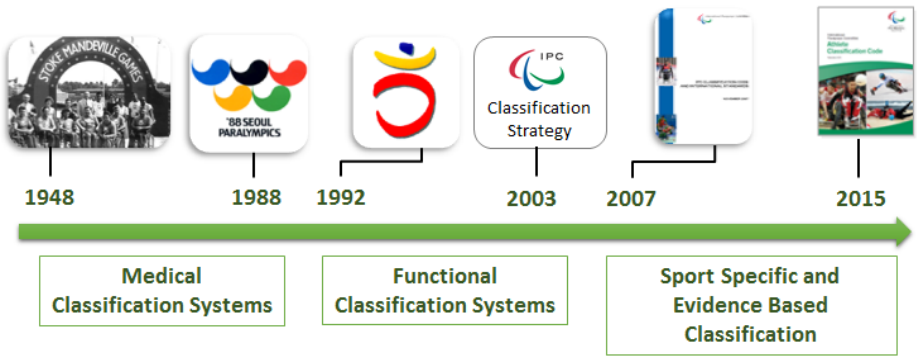

Figure 1. Evolution of Classification Systems (adapted from Hart 2014)

The IPC Code applies to all members and athletes competing in Para-sports at International Competitions. Any type of classification within

the Paralympic movement must be based on this Code (Section 1.1.2 of the IPC Code, 2015). Each international sport federation (i.e. International Federation of Cerebral Palsy Football -IFCPF-, which is the specific governing body for CP-Football, explained in-depth in the following chapter) must create and publish its own classification rules (Section 1.1.3 of the IPC Code, 2015).

Classification that is not valid or that is not perceived to be valid poses a significant threat to Paralympic sport. The legitimacy of an individual´s competitive success or athletic achievement can be significantly diminished by the perception that an athlete is in the wrong class, with the potential for considerable personal and financial cost as well as for discrediting the Paralympic movement. A classification system that is perceived to be unfair will discourage participation among people with disabilities rather than increase participation (Tweedy et al., 2014). Therefore, a transparent and defensible classification system is of high importance.

1.2. What is CP-Football?

The initials CP stand for Cerebral Palsy, therefore CP-Football is football for sportsmen and women with Cerebral Palsy and related neurological conditions. The sport can be played at recreational level and players can also have the opportunity to play at a club at national and international level.

The rules of the game (IFCPF, 2017a) have been modified to adapt to the players making the game more exciting, some of these changes include:

i) the number of players on the field, which is a total of 7 (6 players and 1 goalkeeper); ii) a reduced pitch size compared to football with a maximum length of 75 m and minimum of 70 m, and a maximum width of 55 m and minimum of 50 m; iii) smaller goalposts (2 m in height and 5 m wide); iv) the elimination of the off-side rule which, makes the game more dynamic. Also, players are allowed to roll the ball beneath knee level and the ball must contact the floor within the 1st metre of its trajectory, instead of the traditional throw-in as many players cannot execute this action (IFCPF, 2017a). Also in the new IFCPF 2018 Tournament Regulations (Section 1) the teams will be mixed enabling both male and female athletes to play together in the same team.

Since January 2015, this sport comes under the governing body of IFCPF, which is solely dedicated to football and players with CP and related neurological conditions. Beforehand the discipline came under the Cerebral Palsy International Sports and Recreation Association (CPISRA), which was founded in 1978 for different sports for athletes with CP. CPISRA originated as a Sports and Leisure Group within the International Cerebral Palsy Society (ICPS), with the objective of this Group being beyond competitive sport. However, overtime it was clear that ICPS had other priorities than sport and leisure and were taking major decisions without the voice of any Committee members and therefore, by 1977, relationships with ICPS had broken down and at the close of the International CP Games in Edinburgh (in July, 1978) the Chairmen of the Committee announced the birth of CPISRA. Over the years, different sports have belonged to CPISRA but IFCPF followed the footsteps of

Boccia, who created an independent International Federation in January 2013 and become independent in January 2015 under the name of Boccia International Sport Federation, BisFed. CPISRA currently still governs Race-Running, Wheelchair Slalom and Table Cricket.

There are currently 40 countries from 5 continents involved in CP-Football. Looking at the history of the sport, the game has been played at international level for 38 years, as the first international competition to be celebrated was in Edinburgh (Scotland) in 1978; this competition was part of the Cerebral Palsy International Games. Four years after the first World Championships were held in Denmark. It was not until 6 years later, in 1982, when CP-Football was included for the first time in the Paralympic Games in New York in 1984.

In 2015, IPC deemed for CP-Football to be taken off the Paralympic programme after 10 appearances across a period of 34 years, making a last appearance for the time being at the Rio Paralympics in 2016. To be able to return to the Paralympic Programme the sport must expand its practice more worldwide. The results obtained in this thesis could contribute and help the sport return in the 2024 Paralympic Games as the research conducted consisted surveying and in interviewing subjects from the CP-football world to help to make any future decisions in the classification system.

1.3. Structure of Major Competitions and Qualifying Processes

There are many different levels of competition in CP-Football. The most prestigious competition is the Paralympic Games, where only 8 teams

are allowed to participate. To have gotten to the Rio Paralympic Games (2016), there were a number of previous competitions held to qualify for this major event. These were the following: winner of the World Championships, winner of the European Championships, winner of the America Cup, winner of the ParaPanAm Games and winner of the Asian Paragames. These winners only qualified if the tournament had more than 5 participating countries. The host team of the Paralympic Games also qualified automatically, in case any country won two of the tournaments or a winner was a host country or if any of the tournaments had less than five participating countries, then the teams that can participate were selected from the current World ranking. To make up the eight teams of the Paralympic Games, the remaining were taken from the World Ranking list.

Another competition planned for 2016 was the World Championships Qualification Tournament, which was an open tournament where any country could participate apart from the teams that had qualified for the Paralympic Games. This tournament was the first of its kind and was a way that countries had the opportunity to qualify for the World Championships. The next WC (World Championships) will be in 2017 (San Luis, Argentina) and the first 8 ranked teams at the IFCPF World Championships Qualification Tournament plus the 8 teams that participated at the Paralympic Games are those that will participate at the competition.

In 2018, regional competitions will be held which include the European Championships, the America Cup, Asia-Oceania Championships and

Africa Cup. Two other competitions to be held is the U-19 player's tournament in America´s (Sao Paolo, Brazil) and Europe (Geneva, Italy) and also the ASEAN Paragames (Kuala Lumpur, Malaysia).

The last tournament to be mentioned of the sport is the World Cup. The countries that will play at the World Cup in 2019 are the first 8 ranked teams at the WC, the winners from the European Championships, winners from the America Cup and winners from the Asia-Oceania Championships and the Africa Cup. If any of the countries are double winners then the rest of the countries are chosen in order of the World ranking list. In addition, in 2020 there will be a tournament called Top 8 which will be held in place of the Tokyo Paralympic Games (as CP-Football will not be taking part at these games).

1.4. Concept of CP and Eligible Impairments for CP-Football

According to Bax et al. (2005) and Rosenbaum et al. (2007), the definition of CP is a group of disorders of the development of movement and posture, causing activity limitation, which is attributed to non-progressive disturbances that occurred in the developing foetal or infant brain. The motor disorders of cerebral palsy are often accompanied by disturbances of sensation, cognition, communication, perception and/or behaviour, and/or by seizure.

Within IFCPF, the participation of athletes with neurological impairment of motor control of a cerebral nature which causes permanent and changing activity limitation is allowed (Section A, 1.2, IFCPF, 2015b). Activity limitation concept from the World Health Organization´s ICF

(2001) speaks of “activity” as the execution of a task or action by an individual and identifies activity limitation as difficulties an individual may have in executing activities.

Although IPC establish a total of 8 eligible physical impairments (impaired muscle power, impaired passive range of movement, limb deficiency, leg length difference, short stature, hypertonia, ataxia and athetosis) only the last three listed are actually allowed to participate in CP-Football.

The characteristics of an athlete with hypertonia according to the International Standard for Eligible Impairments (IPC, 2016, Section 2.6), is an increase in muscle tension and a reduced ability of a muscle to stretch caused by damage to the central nervous system. Health conditions related with hypertonia can be cerebral palsy, traumatic brain injury or stroke. However, there are different displays of hypertonia: spasticity, rigidity or dystonia. The consensus of these concepts according to Sanger, Delgado, Gaebler-Spira, Hallett and Mink (2003) are as follows:

- Spasticity which includes hypertonia in which one or both of the following signs are present: 1) resistance to externally imposed movement increases with increasing speed of stretch and varies with the direction of joint movement; and/or 2) resistance to externally imposed movement rises rapidly above a threshold speed or joint angle.

- Dystonia is a movement disorder in which involuntary sustained or intermittent muscle contractions cause twisting and repetitive movements, abnormal postures, or both.
- Rigidity is defined as hypertonia in which all of the following are present: 1) the resistance to externally imposed joint movement is present at very low speeds of movement, does not depend on imposed speed, and does not exhibit a speed or angle threshold; 2) simultaneous co-contraction of agonists and antagonists may occur, and this is reflected in an immediate resistance to a reversal of the direction of movement about a joint; 3) the limb does not tend to return toward a particular fixed posture or extreme joint angle; and 4) voluntary activity in distant muscle groups does not lead to involuntary movements about the rigid joints, although rigidity may worsen.

A series of tests are carried out to determine the spasticity of a player with the help of the Australian Spasticity Assessment Scale (ASAS) that is based originally on systems from Ashworth (1964), Bohannon and Smith (1987) and Tardieu (1954) removing some ambiguities and allowing that every participant can fit into one and only one category (Blair, 2006). Amongst these ambiguities, is that the Ashworth Scale (AS) is unable to differentiate the contribution of velocity-dependent responses (spasticity) to the increased muscle resistance and consequently, several researchers have concluded that the reliability of the AS is insufficient for them to be a useful measure of spasticity (Calame & Singer, 2015).

The ASAS is established largely on the muscle response to passive movement and this is documented to the muscle length. This scale allows both neural and non-neural contributors to rapid passive movement to be considered, by evaluating the "catch point" (spasticity) but also resistance throughout the remainder of the range (hypertonia). The categories of the ASAS also indicate where in the overall range the "catch" is felt (Calame & Singer, 2015). This test is used to quantify the degree of spasticity of a player, allowing to make a clearer picture of which players fit into which class (Table 1).

Table 1: The Australian Spasticity Assessment (Love, Gibson, Smith, Bear, & Blair, 2016)

0	No catch on RPM [*i.e.* no spasticity].
1	Catch occurs on RPM followed by release. There is no resistance to RPM throughout rest of range.
2	Catch occurs in second half of available range (after halfway point) during PRM and is followed by resistance throughout remaining range.
3	Catch occurs in first half of available range (up to and including halfway point) during RPM and is followed by resistance throughout the remaining range.
4	When attempting RPM, the body part appears fixed but moves on slow passive movement.

Note: contracture is recorded separately. RPM: Rapid Passive Movement

Secondly, ataxia refers to an unsteadiness, incoordination or clumsiness of volitional movement, and eligible ataxias must result from either motor or sensory nervous system dysfunction. Motor ataxias most

frequently result from malformation or damage to the cerebellum and are often associated with hypotonia. Motor ataxias are poorly compensated for by visual input. Sensory ataxias most frequently result from lower motor neuron damage or spinal cord disease, affecting vestibular function or proprioceptive function (IPC Athletics Classification Project for Physical Impairments: Final Report-Stage 1, Section 4.1.2, Tweedy, & Bourke, 2009).

And thirdly, athetosis is a slow, continuous, involuntary writhing movement that prevents maintenance of a stable posture. Athetosis involves continuous smooth movements that appear random and are not composed of recognizable sub-movements or movement fragments. The same regions of the body are repeatedly involved which may worsen with attempts at movement or posture but can also occur at rest. Athetosis typically involves distal extremities more than proximal and is distinguished by the lack of rhythmicity and repeatability (Sanger et al., 2010).

Amongst others, all of these impairments can be related with health conditions such as CP, acquired brain injury (ABI), stroke, Friedreich´s Ataxia, Hereditary Spastic Diplegia/Paraplegia and Dystonia, among others (Section 1.2, IFCPF, 2015b).In the IFCPC Classification Rulebook (2015b), the previous concepts of hypertonia, ataxia and athetosis are defined in Figure 2.

Impairment type	Impairment description as per ICF and Sanger et al, 2003, 2006 & 2010
Hypertonia	High Muscle tone
• Spasticity	Spasticity is a velocity-dependent resistance of a muscle to stretch.
• Dystonia	Dystonia is an involuntary alteration in the pattern of muscle activation during voluntary movement or maintenance of posture Sustained or intermittent Muscle contractions.
• Rigidity	Rigidity is resistance to passive movement and is independent of posture and speed of movement. rigidity is not specific to particular tasks or postures.
Ataxia	Control of voluntary movement
Athetosis/Chorea	Involuntary contractions of muscles

Figure 2. Impairment description of hypertonia, ataxia and athetosis as per ICF and Sanger et al., 2003, 2006 & 2010.

When measuring ataxia, the player has to perform a series of simple coordination tests. At least in one of the following tests, ataxic movements should be observed clearly (IFCPF, 2015b):

- Finger to nose test (athlete touching own nose from the crucifix position).

- Finger to finger test (classifier presents their index finger and asks the athlete to touch it with their own index finger).

- Toe-to-finger test (classifier presents their index finger and asks the athlete to touch it with their toe).

- Heel draw test (i.e., draw the heel of one leg along the length of the contralateral shin, from ankle to knee and then in the reverse direction);

- Straight line heel-to-toe walking.

Finally, the observation of athetosis can be found when athletes conduct the following tests where the characteristics of athetoid movements should be observed (IFCPF, 2015b):

- Involuntary movement of the fingers or upper extremities despite the person trying to remain still.

- Involuntary movement of the toes or lower extremities despite the person trying to remain still.

- Inability to hold the body still – swaying of the body. Swaying should not be due to other neurological deficits such as vestibular or proprioceptive impairments and, therefore, should not be exacerbated by closing of the eyes.

- Characteristic athetoid posturing.

1.5. Procedures of the Classification Process

In the IPC International Standard for Classifier Personnel (2015), in section 2.2, a Classifier is defined as a person authorised as an official and certified by an International Sport Federation to conduct some or all components of Athlete Evaluation in accordance with the International Standard for Athlete Evaluation, as a member of a Classification Panel. According to the following section (2.3) of the same document, all International Sport Federations must set Entry Criteria in respect of the persons that it will certify as Classifiers, as well as explaining that Classification panels must include a minimum of two Classifiers, unless an International Sport Federation requires more than two Classifiers (Section 2.2.6). In CP-Football a classification panel consists of three classifiers; a doctor, a physiotherapist and a sports technical expert (Section 2.2, IPCPF, 2015b).

Any new players to the sport must obtain a sports class by undergoing the classification process. The athlete evaluation process is composed of 3 main steps (IFCPF, 2015b, Section 2.7). In first place, the player must complete a physical assessment in which the classification panel examine if the player has an eligible impairment and whether it meets a minimum impairment criteria, meaning that this impairment is permanent (IPC International Standard for Eligible Impairments, 2016, Section 1.3). When it is confirmed what eligible impairment the player has, they then have to go through a technical assessment where the evaluation is made in a non-competitive manner doing specific tasks and activities that form part of football to check player´s activity limitation.

In last instance and as specified by International Standard for Athlete Evaluation 2015, Section 6.1, International Federations may require that an athlete undertakes observation in competition assessment before being allocated a final sports class. In the case of CP-Football, classifiers observe the athlete performing specific skills in a match during the pool phases of a competition for a minimum of 30 minutes of play, unless the Classification Panel deems that a shorter period of play is sufficient in individual circumstances (IFCPF 2015b, Section 2.7.3).

Once all the tests have been completed, they will be given a sport class (FT5, FT6, FT7 or FT8). A Sport Class must be allocated based solely on the impact that Eligible Impairment has on the fundamental tasks and activities of the sport. Although other factors such as low fitness level, poor technical proficiency and aging may also affect the fundamental tasks and activities of the sport, allocation of Sport Class must not be

affected by these factors (IPC International Standard for Athlete Evaluation 2015, Section 5.4).

Apart from a Sport Class, players will also be given a Sport Class Status which indicates if and when a player must undergo further evaluation (IFCPF 2015b, Section 2.8.2 and IPC International Standard for Athlete Evaluation 2015, Section 7). The assigned sport class may vary as follows:

- Sport Class Status New (N): given to a player who has not previously been evaluated by an International classification panel and has obtained an allocated sport class from their National federation for entry purposes.
- Sport Class Status Review (R): this status is allocated to players who have been evaluated by an International classification panel but is pending further re-evaluation. Review athletes include but are not limited to those who have fluctuating, progressive impairments. These athletes may be designated with a Review Fixed Date (RFD), in which the athlete is required to complete athlete evaluation at the first opportunity after the relevant fixed date.
- Sport Class Status Confirmed (C): assigned to players who have been evaluated by an international classification panel and has been determined that the sports class will not change. This status is given if an athlete has had the same sport class for a minimum of two and a maximum of three consecutive IFCPF sanctioned competitions over a two year period.

However, there are a few exceptions in the sport status. One case is when an athlete has an ABI, as they will not be given a Confirmed Status before a minimum of 6 years after the concussion was obtained. Due to the variation in condition of this impairment, the player will have a Review Status until the 6 years have passed since the concussion, and has been classified in the same sports class for a minimum of two consecutive IFCPF sanctioned competitions. The other case is when an athlete is aged under 18 years of age and in this instance will remain a Review Status or Reviewed Fixed Date until they reach 18 years old, and have been classified a minimum of two consecutive IFCPF sanctioned competitions in the same sport class over a period of at least two years.

1.6. Current Classes and Player´s Profiles

The CP-Football classes at the moment of this study used are based on the CPISRA classification system (CPISRA, 2013) composed of a total of 8 classes, where classes 1 to 4 are wheelchair athletes and 5 to 8 are ambulant athletes. In CP-Football, the second group of classes (ambulant) can participate (CPISRA, 2013, Section A).

As mentioned before, there are a total of 4 classes being (FT5, FT6, FT7 and FT8) where FT stands for Football. A description of the profiles and characteristics for each class are as follows which serves as a mere guide for classifiers to use when classifying (IFCPF, 2015b, Section 5):

- Class FT5: Players may show signs of diplegia, asymmetric diplegia, double hemiplegia or dystonia. The spasticity grade is 2-3 with involvement of both legs. The particularity on the field is that

exertion will increase tone and decrease function, presenting difficulties in turning, pivoting and stopping with limited range of movement. In the upper extremities there may be minimal to moderate range of movement limitations but functional strength is within normal parameters.

- Class FT6: Players may display athetosis, dystonia, ataxia or mixed cerebral palsy, showing coordination and timing problems along with fluctuating accuracy when passing the ball. Players with mixed cerebral palsy also have problems with limited range of movement in the upper limbs, whereas players with athetosis or ataxia have poor coordination.
- Class FT7: These players are solely hemiplegic, demonstrating a spasticity grade 2-3 in one half of the body (right side or left side), and having a good functional ability on the non-affected side. The player has difficulties pivoting and balancing on the affected side along with a decreased range of movement in the upper limb.
- Class FT8: Known to be the class where any of the aforementioned impairments exist but the affectation is too minor to be considered in the previous classes. In this class, players may have mild diplegia, asymmetric diplegia, double hemiplegia and/or dystonia, monoplegia, athetosis, ataxia or mixed picture of cerebral palsy. The hemiplegia and monoplegia which must implicate a lower limb have a spasticity grade of 1 to 2 and athletes may appear to have near to normal function when moving but still demonstrate an activity limitation based on hypertonia, athetosis, ataxia or mixed involvement.

Although at first glance it may seem easy to put a player into a class considering the descriptions given, there is a problem when it comes to determining cut-points between one class and another, as the decision-making could be open to an individual interpretation which in term decreases consistency between classifiers (Bicici, Vanlandewijck, & Tweedy, 2012). Terms such as normal, good or better do not provide sufficient guidance for classifiers in their decision making because these terms are based on the assumption that everybody has the same perception (Bicici et al., 2012; Reina, 2014).

As classes are differentiated from each other based on qualitative descriptions, when allocating an athlete to a class, decision-making can be complex and there are four main cut-points: moderate activity limitation of the classes FT5, FT6 and FT7 versus mild FT8, adding FT8 versus Not Eligible in case the activity limitation is not observed during the game (Reina, 2014).

Due to the importance that a class given to a player may have on the game as the rules state that after the Río Paralympic Games 2016, each team must have on the field of play at least two players from the class FT5 or FT6 at all times and a maximum of one class FT8 player at a time on the field, it is essential that a player is given an accurate class. To possibly reduce the occurrence of cut-point problems it is necessary to follow the indications of the IPC Classification Code 2016, Section 10.2.1, stating that “International Sport Federations must develop sports-specific Classification Systems through multidisciplinary scientific

research. Such research must be evidence-based and focus on the relationship between Impairment and key performance determinants."

According to Tweedy and Vanlandewijck (2011), ideally class profiles and methods for classifying impairments would be evidence-based, that is based on scientific evidence that indicates that the classification methods used will result in classes that comprise athletes who have impairments that cause the same amount of difficulty in a given sport or event. In addition, Tweedy at al. (2014) outline the research needs for development of evidence-based classification. Conceptually, an evidence-based system is one in which scientific evidence indicates that the methods used for assessing impairments and assigning class will result in classes that comprise athletes who have impairments that cause approximately the same amount of difficulty in a given sport. The steps required to proceed with research highlighted by these authors are the following:

- Step 1: Specify Impairment Types Eligible for the Sport.
- Step 2a: Develop Valid Measures of the Impairments.
- Step 2b: Develop Standardized, Sport-specific Measures of Performance.
- Step 3: Assess the Relative Strength of Association between Valid Measures of Impairment and Measures of Performance.

The current thesis may help in the decision-making to develop these steps to develop an evidence-based classification process. During the questionnaire phase and the interviews, questions were asked indirectly related to the development of these steps to retrieve people's opinions

on possible ways to modify the classification process towards an evidence-based system.

Below we can observe the diagram of these four steps required for the development of evidence-based methods for Paralympic classification for physical impairments (Figure 3).

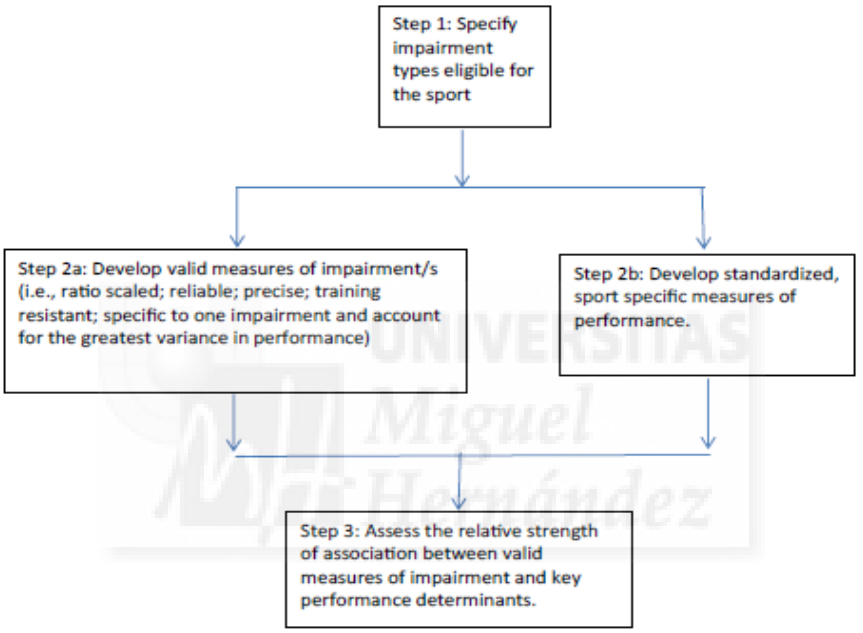

Figure 3. Four step process for the development of evidence-based Paralympic classification (Tweedy et al., 2014).

1.7. IFCPF Classification Research Plan

As stated in the IPC International Standard for Classification Data Protection (2015), in Section 4.1, Classification Organizations may request that athletes and/or athlete support personnel provide them

with personal information and/or sensitive personal information from time to time for research purposes.

Over the past years, research has been made in relation with CP-Football. One study was conducted at the Intercontinental Cup (ICUP) in Barcelona in 2013. The project was entitled “Football-7-a-side Skills and Performance Analysis and its Relationship with Functional Classification”. The aim of this project was to identify and describe the quantitative and qualitative (video) outcomes from a group of motor and football performance tests which have objective, quantifiable outcomes, clear protocols and established reliability and which were judged by experts to be of potential use in differentiating classes. Players completed a series of physical and technical tests with the outcome of finding if the tests are valuable for evaluating the activity limitation. A continuation of this study, the next study to be done was comparing the results obtained in Barcelona with the results obtained by a control group. The control group completed the same tests as the ones done in Barcelona. The objective of this study was to check if the proposal tests are useful to check activity limitation between eligible and non-eligible players. The main findings from these two studies were that the tests that best differentiate between classes FT5 and FT8 were power tests, including horizontal jumps, tests that included running with the ball and tests with changes of direction. The differentiation between classes FT6 and FT8 can be made with the help of tests that implicate the use of the ball, power tests and coordination tests. Also, these same types of tests can also help distinguish between FT7 and FT8 classes.

Finally, the determining factor for the cut point between class FT8 and a non-eligible player was stability (Campayo, 2016).

Continuing the research of the cut-point decision making, a project was developed called “Improving reliability and validity of current classification methods for athletes in classes FT5-FT8 and T35-T38”, funded by Agitos Foundation. This project consisted in evaluating the impact of the impairment on balance, coordination, symmetry, fluency and arms impairment during the performance of 16 valid and reliable tests performed by 28 international athletes with the objective of improving reliability of decision-making. A total of 11 international IPC Athletics Classifiers and 7 CP-Football International Classifiers were involved to develop the study with very important outcomes for the future, including a ranking of features that the classifiers consider useful for decision making which will help to improve the description of the current profiles after Rio Paralympic Games as well as CP-Football profiles (Reina et al. 2015).

Up to this point is when the current project came to life. This event coincided at a time when there was a lot of uproar due to the previous news that CP-Football had not been included in the Paralympic Programme for the Tokyo Paralympic Games in 2020. This occurrence meant that people wanted to see actions being taken to improve the situation and the fact that people could have the opportunity to voice their opinions on the current problems was one of the keys to the creation of this thesis.

This present project required the participation of all individuals in CP-Football (Players, Head Coaches, Classifiers and the Board) and forms part of IFCPF research plan and is detailed below in “aims of the project”.

The most recent studies that are underway consist of video analysis of players competing at the World Championships at St. Georges Park (June, 2015). The players filmed are those that are at the limit of their class, meaning that within the IFCPF Classification Committee these players provoke debates between classifiers as they are borderline players. Researchers must analyze typical football techniques of these filmed players, to gain video clips that classifiers will be able to rely on as a resource when classifying more difficult cases (cut-points between one class and another or between eligible and non-eligible). This research uses information from the data obtained at the ICUP in Barcelona combined with a thorough analysis of the different eligible impairments to come up with technical tests to measure player’s activity limitation contributing to decision-making when deciding the sport class of an athlete.

Looking at what has been done, where this project stands and what still needs to be researched, the timeline looks like this: Improving reliability of decision-making and research into cut-points between classes and between eligible and non-eligible players. These two previous projects are destined to help make classification evidence-based. The current project to obtain opinions from players, head coaches, board and classifiers on the classification processes works in conjunction with the

two other projects to obtain a more global vision of the classification system and try to help with the decision making for any future modifications. The last two projects planned for the near future, are the elaboration of video clips of debatable players to help decision making when allocating players a class and the selection of technical tests that measure players activity limitation which all aim to contribute to an evidence-based classification system that is demanded by the IPC Athlete Classification Code (2016, Section 10.2.1), that claims International Sport Federations must develop sports-specific Classification Systems through multidisciplinary scientific research. Such research must be evidence-based and focus on the relationship between Impairment and key performance determinants.

1.8. Researchers Involved in this Thesis

Firstly, two directors have guided this project with their expertise. The director of this thesis is Dr. Raúl Reina, professor of Miguel Hernández University with a PhD in Sport Sciences and European Master Degree in Adapted Physical Activity. He is an expert in sports for people with disabilities and is a member of the Bisfed Classification Committee, current IFCPF Head of Classification, IPC Athletics Classifier and President of the Classification Committee of the Spanish Paralympic Committee.

The co-director is Dr. Vicente J. Beltrán-Carrillo. He is a professor at Miguel Hernández University with a PhD in Sport Sciences with an expertise in qualitative research. Also, he is an expert in the use of the

computer programme Nvivo, that is a software programme used for analysing qualitative data and has been an important factor in this research project.

Finally, my name is Samantha April Cammidge. I have a degree in Sport Sciences, a Master in Education and a Master in High Performance Sport and Health.

1.9. Aims of this Thesis

The present thesis consisted in conducting a series of interviews and surveys with different subjects that participated in the World Championships at St. Georges Park in England, June 2015. The interviewed were Head Coaches (HC) of participating countries, two players from each team, classifiers and members from the IFCPF Board.

The interview questions cover a wide range of themes related to classification included in the IPC´s Classification Code and its different processes. Also, all players from every team completed a questionnaire with similar questions to the ones asked in the interviews, to obtain a global opinion from every component of the sport, obtaining in this way the opinion from a representative sample of the population of CP-Football.

The analysis of the results obtained will be used to perform verifications in the IFCPF Classification Rules, providing findings that will modify certain points of the classification process and rulebook. The results from this project in combination with the previous described projects

will hopefully help to justify some of the changes that will be made in the classification system towards it becoming evidence-based.

2 Methods

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2. METHODS

In this methods chapter, participants, data collection techniques and instruments, procedure and rigor criteria of the study will be explained in-depth.

2.1. Participants

The participants were selected according to the general categories of purposeful sampling of Patton (1990). For the selection of the individuals to participate in the interviews, the maximum variation sampling was used, where the researcher systematically selects individuals that represent the most important possible variations of the CP-Football dimension. Therefore, it was agreed that people from the IFCPF Board, Classifiers, Head Coaches and Players with a minimum of a Paralympic cycle (4 years) experience in the sport were to be interviewed, so that they were able to perceive any possible changes over the years. When the selection for the questionnaires was made, a total population sampling was chosen, as all players from 15 national teams attending the 2015 CP-Football World Championships were to complete the questionnaire.

2.1.1. Board

Three members of the IFCPF board were interviewed, one of which was a woman, including the President of the IFCPF, the Technical Director of IFCPF who was an ex-Head Coach of the Netherlands CP-Football team and Paralympic winner of Seoul 1988, Barcelona 1992 and Atlanta 1996 Paralympic Games, as well as, Head Coach at the Sydney 2000, Athens

2004 and Beijing 2008 Paralympic Games. The third Board member interviewed was a Member of the Football Committee and also ex-Head Coach of Brazil during the Sydney 2000, Athens 2004, Beijing 2008 and London 2012 Paralympic Games.

2.1.2. Classifiers

Three IFCPF Senior Classifiers who are actually members of the IFCPF Classification Committee were interviewed. One of the interviewed was a woman and the two others were men. Amongst the classifiers interviewed there was a doctor, a physiotherapist and also a technical classifier.

2.1.3. Head Coaches

All of the 15 Head Coaches (HC) of the countries that participated at the World Championships 2015 were interviewed. The 15 countries were: Argentina, Australia, Brazil, Canada, England, Japan, Netherlands, Northern Ireland, Portugal, Republic of Ireland, Russia, Scotland, Ukraine, United States of America and Venezuela. Also the Spanish Head Coach was interviewed previous to the World Championships.

2.1.4. Players

A total of 31 players were interviewed. These players were required to have experience in the sport with a minimum of one Paralympic cycle (4 years in the sport). Of 30 players, 2 players were from the same team of each of the 15 teams. Also, a player from the Spanish team was

interviewed. On the other hand, 165 surveys were completed from players from the 15 participating teams at the World Championships.

2.1.5. Participants Descriptive Table

A descriptive table has been designed to gather information on the participants interviewed. The table shows the different participants divided into Board, Classifiers, Head Coaches and Players. The median and the standard deviation of the age of the participants were calculated as well as the median and standard deviation of the years of experience related to CP-Football (table 2).

Table 2. *Descriptive data of the Participants.*

	Age (M±SD)	Experience in years (M±SD)
Board (n=3)	57.46 ± 3.36	21.67 ± 7.64
Classifiers (n=3)	44.89 ± 10.67	9.67 ± 8.14
Head Coaches (n=16)	47.13 ± 7.25	10.06 ± 7.08
Players Interviewed (n=31)	28.54 ± 6.98	9.65 ± 5.43
Players Survey (n=165)	23.99 ± 5.33	5.34 ± 4.10

2.2. Data Collection Techniques and Instruments

For the development of the interview questions and the questionnaires a series of meetings were held. The individuals that assisted these meetings were the following:

- Carlos Antón: Ex CP-football player for the Spanish National team.
- Raúl González: National classifier for CP-Football and Technical Director for Wheelchair Slalom in Spain.

- Dr. María del Pilar García Vaquero: Degree in Sport Sciences, Master in High Performance Sport and Health, International CP-Football Classifier and National Athletics Classifier for people with physical impairments. Also, she is an assistant professor in adapted physical activity at Miguel Hernández University.
- Dr. María Campayo Piernas: Degree in Sport Sciences, Master in High Performance Sport and Health. She is a National Classifier of Swimming and Athletics for people with physical impairments. She is an assistant professor in adapted physical activity at Miguel Hernández University, and also presented her doctoral thesis in 2016 entitled "Battery of tests for optimization of the classification process of footballers with hypertonia, ataxia and athetosis."

The first meeting was held to discuss with a qualitative expert and also co-director of this thesis, on how to design a semi-structured interview. A few current issues that the director of the thesis had experienced recently were debated and we wanted to know the opinion of subjects that formed part of the CP-Football world.

This initial meeting was followed by a group discussion on what to ask in the interview with help from the participants detailed above being an ex-CP-Football player, head of classification for IFCPF, a technical classifier and PhD students specializing in CP-Football. In this meeting a brain storm session on what type of questions to ask and who to interview were discussed.

Once all the questions were formulated, the group met again to check questions and add any extra comments, whilst deciding which participants would be interviewed or to undergo the questionnaire (see Participants).

The instruments used to collect data from the participants were individual interviews and questionnaires. The semi-structured interview format was chosen for the interviews because it allows the interviewer to follow a schedule, meaning that the questions and topics that need to be covered are reflected and asked in a pre-established order but gives the participant a certain degree of flexibility to express their opinions, ideas, feelings and attitudes (Sparkes, 2013). According to Bernard (1988), this format is best used when you do not have the opportunity to interview someone more than once and when the same questions are asked to a lot of people. As the questions are already prepared beforehand it secures that no topics will be missed out along the way. Therefore, it was decided that the interviews would adopt a semi-structured format as the proposal of the study was to interview over 50 people with the same questions but allowing certain leeway for answers as some questions in the interview touch certain sensitive points in the sport.

A total of three pilot interviews or dry runs were completed before the start of the CP-Football World Championships, making sure that the questions were correctly developed, redefining sentences and gaining experience on how to conduct interviews and even timing and recording interviews to obtain a general idea on the duration of them. The pilot

interviews also helped to establish the order of the questions according to Sparkes and Smith (2014). It was necessary to place sensitive questions in the middle of the interview as this is when the interviewed will feel more relaxed to answer certain questions. Towards the end the use of a question like “Would you like to make any additional comment or appreciations?” which is termed as “closing tour” as it invites the participant to fill in any gaps that might not have been covered during the interview. These multiple processes helped to validate and proof the final interview version (Sparkes & Smith, 2014).

The first dry run was made with the Director of the thesis Raúl Reina, witnessed by Vicente Beltrán-Carrillo and María Campayo. He corrected certain errors committed and the sequences of some of the questions were rearranged.

A second pilot interview was done, where I interviewed María del Pilar García-Vaquero and then María Campayo interviewed Raúl González to obtain experience in case she needed to interview anybody at the World Championships. When finished the pilot interview, the participants and Raúl Reina who witnessed the process, gave their opinions on the questions and added valuable information for the improvement of the interview guide.

When the pilot interview was fully prepared, the first people to be interviewed were two players from the Spanish team, the head coach and one experienced player from this national team were interviewed. The Spanish head coach used to form part of the Spanish CP-Football

National team for many years and even played for the team at the Atlanta 1996 Paralympic Games. The Spanish player interviewed has also been competing in CP-Football for 17 years and has participated in many major competitions at international level.

After the interviews were completed a meeting was held with these two members of the Spanish team to discuss any further changes or additions to the interview questions. However, the interview questions needed no modifications and therefore these two interviews conducted form part of the study group.

2.2.1. Interview Questions

After much discussion by all members, the final interview guide has a total of 4 topics (Classes, Classifiers, Players and Classification Process) and each topic has a number of questions related. The first topic was around the classes that exist and possible future modifications. The first question of this topic was "What's your opinion on the measure adopted after Rio Paralympic Games to include in the team one more player of classes FT5 or FT6?" and following the answer given; "Do you believe that these two classes are considered as "low classes"? Why?" This measure was communicated in 2013 during the CPISRA Intercontinental Cup in Barcelona and the aim of the question is to see if people agree or not with the decision made and the question was asked to all participants of the interview.

The next question was only directed to HC asking them; "How does the current classification system effect the organization of the team?" and

“Would you like to be able to line up more players of class FT8?”, this question was thought of because post London Paralympic Games 2012 it was decided that the number of class FT8 players on the field at one time was reduced from two to only one.

A question asked to all and that made people reflect on what they would like to see in the sport was, “Can you please give an example of an ideal team?” followed by; “Currently CP-Football allows the participation of footballers with hypertonia, ataxia and athetosis, three of eight physical impairments eligible that IPC consider in Paralympic sport. What effects would it have for the sport if other eligible impairments were allowed to participate if it was proven that other impairments have an impact in the game? (e.g.: impaired range of movement, limb deficiency…)” The reason for these are as explained in the question, IPC allow the participation of athletes with a total of eight physical impairments. Whereas, CP-Football at the moment only involves athletes with three of these physical impairments, so we wanted to find out if people would like to see this number of physical impairments involved increased or kept the same.

Another question was “Do you think that a person with monoplegia (only one affected limb) of the upper trunk, lower or either of the two can participate in CP-Football? Why?” This question arises because post London Paralympic Games 2012 players with a monoplegia in the upper limb were no longer allowed to participate in the sport and we wanted to ensure that people agree with this measure.

The two final questions related to the "class" topic were; "The classification system is being worked on towards being evidence based. How would you like a future classification to be? (e.g. three classes depending on the limitation that the player has on the field: severe, moderate, low; or using a points system where each player is rated and the total sum of the team cannot surpass a total point system established-similar than other team sports at Paralympics, etc.)." and "The classification profiles are based on the CPISRA classification that was formed of eight classes, four of which are in a wheelchair and four on foot. Would you like the classes to still be called classes FT5, FT6, FT7 and FT8 in CP-Football? Why? (Possible ideas for change: letters, numbers, colours, etc.)". These questions are due to the fact that in other Paralympic sports a point system is used to classify players into classes and also the current classes belong to the old CPISRA classification system.

All of these questions lead to "Do you prefer a more spectacular football or a football were the impairment of the players is more visible to see?" this question is related to all of the previous questions and was asked to all of the participants.

The second topic was "Classifiers" and the first question linked to this topic was; "In CP-Football, the classification panel is composed by three people (doctor, physio and a technical classifier) whilst in other sports there are only two (doctor or physio and a technical classifier). What importance do you give to the medical/physio and the technical classifier when classifying?" followed by "What type of person do you

believe has the requirements for a medical classifier (doctor, rehabilitator, physiotherapist, etc.) and the technical classifier (biomechanical expert, sports scientist, football coach)?" and "Do you believe that both classifiers must have experience in each field? e.g. that a doctor has knowledge in the sport and a classifier with medical knowledge." All of these questions were asked to everybody and are all related with the classification personnel.

Two other questions on classifiers were "Do you believe that classifiers strictly follow the classification rules?" which forms part of the IPC Athlete Classification Code 2015, Section 3.2, where it states "International Sport Federations must have within their Classification Rules a clear set of professional conduct standards which all Classification Personnel must comply with." The last question belonging to the classifiers topic is "Do you think that there have been changes in the last two years in the way the classification processes have been applied?" This question was asked because of the introduction of the new Head of Classification Raúl Reina.

Another topic was associated with "Players" starting with "Do you think that factors like the level of training and physical condition influence in the way a player is classified?" It is mentioned in the IPC International Standard for Athlete Evaluation 2015, in section 5.4 that "A Sport Class must be allocated based solely on the impact that Eligible Impairment has on the fundamental tasks and activities of the sport. Although other factors such as low fitness level, poor technical proficiency and aging

may also affect the fundamental tasks and activities of the sport, allocation of Sport Class must not be affected by these factors."

Some of the more sensitive questions were "In which way do you think you can cheat the classifiers?" and "How do you think the penalization should be if cheating is made and who should be penalized?" These questions are related to the IPC Athlete Classification Code 2015, section 6.2 where it says "An athlete must not intentionally misrepresent his or her skills and/or abilities and/or the degree or nature of Eligible Impairment to a Classification Panel. If an Athlete attempts to deceive the Classification Panel during the course of Athlete Evaluation, he or she is guilty of Intentional Misrepresentation" and section 6.6 "The consequences that will be applied to an Athlete or Athlete Support Personnel who is found to have been guilty of Intentional Misrepresentation and/or complicity involving Intentional Misrepresentation must be one or more of the following: (a) Disqualification from all events at the Competition at which the Intentional Misrepresentation occurred; and (b) Not Eligible for Athlete Evaluation or other participation in Competitions for a specified period of time ranging from 12 to 48 months." Both of these questions were asked to all participants.

The final topic was "Processes of Classification" and participants asked "What's your opinion on the 30 minutes rule during the pool phases, where a team must play a player that needs to be observed during this time?" This rule is specified in the IFCPF (2015b), section 2.7.3, stating "Classification in Competition shall not be deemed to have been

completed until the Athlete has completed a minimum of thirty (30) minutes continual participation in pool phase (or such other play as may be permitted by Competition rules), unless the Classification Panel deems that a shorter period of play is sufficient in individual instances".

The next questions were related to the IPC International Standard for Athlete Evaluation 2015, section 14.2 where it says "International Sport Federations may have within their Classification Rules (and/or any other relevant rules) provisions for the components of Athlete Evaluation that this International Standard requires to be undertaken by a Classification Panel at a place and time other than at a Competition. This is referred to as a 'Non-Competition Venue' in this International Standard." Therefore it was asked "When do you think a player should be classified?; Would you be in favour that players can be classified in accredited classification centres before a competition?"; "Would you agree that classification observation of a player could be done during a training session, as well as during a match? And would you prefer that during the training session the classifier simply observes or that they can also intervene?"

The before mentioned topics were complemented at the start of the interview with the following questions "What is your experience in this sport and how long have you been playing/training? and "What do you think about the current classification system formed of four classes? What are its weaknesses and strengths?"; and also at the end the participants were invited to express any of their personal opinions with these questions "Are there any rules or procedures that you would like to introduce or improve of the current classification process?", and

“Would you like to make any additional comment or appreciation on the classification of this sport?”

2.2.2. Questionnaire Questions

The possibility of obtaining the opinion of all players of the tournament was a big demand and the idea of creating a questionnaire that could be completed by all players in an easy and quick manner was suggested. Therefore, the same questions to be asked in the interviews were adapted so that they could be answered using the Likert Scale from 1 to 4. According to Chang (1994), it is a valid and reliable method that allows individuals to express their opinions in a simplified manner, meaning that if a player “totally disagreed” with the question asked they would mark 1, if they “disagreed” they mark 2, if they “agreed” they mark 3 and if they “totally agreed” they would mark 4. The questionnaire was available in English, Spanish and Portuguese (see Annex 1, for the English version of the questionnaire).

2.3. Procedure

At this point, almost everything was prepared to interview participants and hand out the questionnaires. Therefore, this section is divided into two sections. One section makes reference to the creation of consent forms and the other describes the process of data collection.

2.3.1. *Consent Forms*

It was necessary to design a consent form (see Annex 2) which included ethical questions that may concern participants. All that were

interviewed had to sign this informed consent if they agreed with the terms of the interview which was approved previously by Miguel Hernández University´s Review Board under the Project Evaluator Board with the following Code: DPS.RRV.04.15 (see Annex 3) and outlined the fact that the interviews were recorded but at the same time totally anonymous.

A cover letter and participant information forms were also designed, as these letters had to be sent by email to all participating teams in the first week of June so that everybody was informed of the objective of the study (see Annex 4 for cover letter and Annex 5 for participant information).

IFCPF were the first to be informed of the study proposal and have been supportive throughout the process providing any information or help that I have needed.

2.3.2. Process of Data Collection

The remaining interviews were conducted in the second week of the 2015 CP-Football World Championships. It was decided to interview during the second week of the tournament as it was thought that the players would be comfortable with the situation after having been one week at the competition and the first eight teams were already qualified at that point for the Rio Paralympic Games.

All the interviews were done in the same place. The room where the interviews took place was a spacious but at the same time private area

with a lot of natural light. The furniture was comfortable and the position adopted was face to face. The participants disposed of water and hard boiled sweets in case they desired. As stated in the consent form, all interviews were recorded with a voice recorder but were totally anonymous. The recorder used in all of the interviews was an Olympus model VN-7800PC.

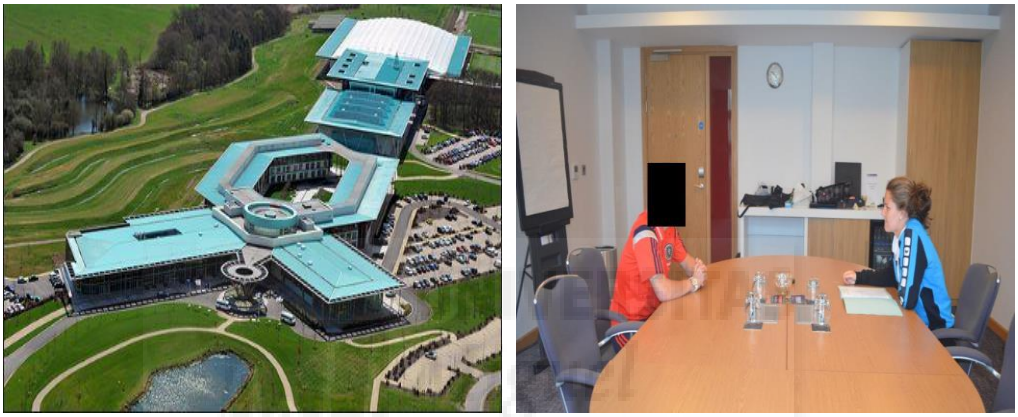

Figure 4. St. Georges Park Installations (left) and Interview Room (right)

A notice board was put on the research room door where the interviews were to be made, with a timetable where players and Head Coaches were indicated to write in an anonymous way when they wished to be interviewed filling in the available one hour slot on the elected day. If a player was from England for example, then they had to write in the desired time slot ENG-P1, meaning he was from the England team and he was a player, his team mate had to write ENG-P2, which meant player two from the team and the Head Coach had to write ENG-HC and so on so forth with the rest of the teams. In the board and classifiers case they wrote BOARD1, BOARD2, etc.

This timetable process meant that teams could plan the interviewing procedure around their own schedules making it easier for them to dispose of free time and participate in a relaxed way.

The participants had the option of doing the interview in English, Spanish or Portuguese. I conducted the interviews in English and Spanish, as I am a native English speaker but have lived in Spain for over 10 years, and the interviews in Portuguese were done by my colleague and María Campayo. In the case that individuals did not speak any of these languages they had to assist the interview with an interpreter who spoke their native language plus English, which was the case of Japan, Russia and Ukraine.

The calculated time in previous pilot interviews was of an estimated 30 to 40 minutes. This estimation was correct as the average time calculated was 36 minutes although one interview surpassed this time with one HC taking more than two hours.

Table 3. *Time of interviews per language*

Language	M ± SD (min)	Min. Time (min)	Max. Time (min)
English	38.47 ± 17.78	15	111
Spanish	29 ± 7.65	15	40
Portuguese	33.83 ± 14.32	22	57
Translator	34.33 ± 13.56	15	54
Total	35.81 ± 15.94	15	111

M: Mean; SD: Standard Deviation

All the participants were interviewed in an identical manner and the same questions were asked in the equal order. Before the interview

commenced the participant had to fill in a personal information sheet and a consent form agreeing to the fact that the information was to be recorded. Before the formal interview questions, began the participants were again reminded but this time whilst recording had started, the purpose of the study, the interview procedure and ethical issues, like the anonymity and how the information will be recorded.

After completing the interview, each Head Coach was given instructions on how their players must complete the questionnaires and how and by when they must return it to me.

The interviews took place from Monday to Saturday and all 51 required participants took part, obtaining 100% pre-established participation from the 15 teams that participated at the World Championships, plus the IFCPF Board and Classifiers and a total of 165 surveys completed.

2.4. Data Analysis

There are two types of data analysis undertaken, the first being the interview data analysis and the other the survey data analysis.

2.4.1. Interview Data Analysis

The data analysis began with transcription of the interviews word by word known as the verbatim technique. Once the interviews had been transcribed it was then necessary to translate them into English, if they were not already in this language. The transcriptions were analysed with the support of the software Nvivo (version 10.0.638.0SP6), which was used to organize and classify data efficiently (Bazeley & Jackson, 2013).

The analysis of the data collected was analysed through a conventional content analysis (Hsieh & Shannon, 2005). This analysis is used when there is a scarce amount for scientific information on the topic chosen. The advantage of the conventional approach to content analysis is gaining direct information from study participants without imposing preconceived categories or theoretical perspectives.

After all transcriptions were completed, in first place, they were read several times to become familiar with the data to obtain a global vision of data. Secondly, the exact same words from the text that highlighted the main concepts of each question were coded. In third place, these codes were sorted using inductive reasoning creating maps with interrelated categories to help understand the data and get a full picture of the results obtained. The categories had different subcategories which were again revised to make sure nothing had been missed out.

Once this process had been completed, percentages of answers were calculated for each question divided by the role of the person, using Microsoft Excel 2010 version. The data analysis was conducted by the researcher who conducted the field work but other members of the research group supervised this process and resolved discrepancies in coding. This supervision was established to enhance the quality of coding and categorizing.

2.4.2. Questionnaire Data Analysis

The questionnaire data was entered into the statistic software program SPSS (Statistical Package for Social Sciences, Version 21.0 for Windows,

SPSS Inc., Chicago, IL, USA). In order to do this, a template was created dividing the information into countries and coding the questions into variables. All the data was put into the program to be able to conduct an exploratory data analysis. Significance level was $p<0.05$.

A series of correlations were made taking into account the ranking of the teams before the start of the competition, the previous experience of the player in CP-Football, the age of the player and the level of competition that the player had assisted in past competitions until the moment of the data collection. Ranking of the team is understood as each countries position in the World Ranking previous to the World Championships 2015. The ranking of the teams is the following: 1st Russia, 2nd Ukraine, 3rd Brazil, 4th Netherlands, 6th Argentina, 7th Ireland, 8th Scotland, 9th USA, 10th England, 12th Australia, 13th Northern Ireland, 14th Portugal and 15th Japan. The level of competition refers to the participation of players in the last four major competitions. The values given in the statistical programme were 1 for participation at Paralympics, 2 for World Championships or ICUP, 3 for International-Regional competitions, 4 for National competitions and 5 for non-participation at any tournaments before. Therefore, the strength of association between one of these variables and each one of the questionnaire questions was assessed using a Pearson correlation (r). As it was indicated in section 2.2.2, the questionnaire questions were answered using a Likert scale (1 = Totally agree, 2 = Disagree, 3 = Agree, 4 = Totally agree). To interpret those results the threshold values for

Pearson product-moment proposed by Salj and Markovic (2011) were used: low ($r \leq 0.3$), moderate ($0.3 < r \leq 0.7$) and high ($r > 0.7$).

On the other hand, a one-way analysis of variance (ANOVA) with least significant difference *post-hoc* comparison (Scheffé correction) was used to examine the mean differences, in the answer to each questionnaire item, between different groups according to the classes and the ranking of the team. The classes were FT5, FT6, FT7 and FT8. For the ranking, the teams were divided into three categories, being top 5 teams in the ranking (Russia, Ukraine, Brazil, Netherlands and Argentina), the middle ranked teams (the four following teams after the 5th ranked team being Ireland, Scotland, USA and England) and the bottom ranked teams (the following four ranked teams after the last middle ranked team, which were Australia, Northern Ireland, Portugal and Japan). Cohen´s effect sizes (*d*) between groups were also calculated (Cohen, 1988) and the interpretation of effect sizes was: above 0.8, between 0.5 and 0.8, between 0.25 and 0.5 and lower than 0.25 were considered as large, moderate, small and trivial, respectively.

2.5. Rigor Criteria

According to Lincoln and Guba (1985), the criteria's commonly used to evaluate the scientific quality of a qualitative study are credibility, transferability, confirmability and dependability; these concepts help to determine the trustworthiness of the study which is important to evaluate its worth.

Credibility is the confidence in the truth of the findings. An author that defends this concept is Shenton (2004) who provides a series of provisions to assure that credibility has been achieved. Firstly he points out the adoption of well-established research methods and the development of an early familiarity with the participating culture, this is confirmed as pilot interviews were done with ex-players of CP Football which allowed participants to reflect on situations. Apart from this, a triangulation process was used consisting in observation of trial interviews by experts, focus groups to discuss the formation of the interview guide and also individual interviews were carried out. Another factor to ensure credibility was tactics to achieve honesty in informants by assuring them anonymity during interviews and the right to withdraw from the study at any point. Last of all, frequent debriefing sessions between the researcher and my supervisors were carried out, so that the researcher received feedback to improve the processes of data collection and data analysis.

Another criterion is confirmability, meaning that the findings of the study are shaped by the respondents and not researcher bias in anyway. The interviews were recorded and the recordings were later transcribed into text and with the help of the Nvivo software program the interview answers were categorized and percentages of answers could be calculated with Excel, meaning that all steps can be revised to assure no bias or interests on behalf of the researcher have been committed. This process according to Shenton (2004) is called “audit trial”, which allows any observer to trace the course of the research step-by-step via the

decisions made and procedures described. Also, the role of triangulation and debriefing sessions between the researcher and my supervisors help reduce the effect of investigator bias.

Any study must be transferable showing that the findings can be applicable in other contexts. In the article by Shenton (2004), transferability can be obtained through a series of processes. In the case of this study, the detailed information provided in the method section may help readers decide to what extent they can be confident in transferring to other situations the results and conclusions presented in this thesis. Moreover, the institutions involved in this research, the number of participants taking part in the interviews and questionnaires, the varied origin and profile of the sample, and the rigorous processes followed during data collection and analysis allows many readers to think that interesting knowledge can be transferred from this research to other contexts.

Finally, the dependability of this research was enhanced by providing an in-depth methodological description to allow the study to be tracked or repeated (Shenton, 2004). However, it is important to take into account that reliability and reproducibility does not fit with the assumptions and purposes of qualitative research, in such a way that the dependability is not considered an important criterion for judging the quality of qualitative research (Sparkes & Smith, 2014).

The main rigor criterion for the questionnaires according to Norland (1990) is validity. The questions are the same as the ones from the

interviews but adapted as mentioned previously to the Likert scale 1 to 4. To make sure the questionnaire is valid, the researchers assured that the questionnaire measured what it intended to measure, represented the content of study, was appropriately adapted for the population and the instrument used was simple to fill in without the presence of the researchers. An expert group thoroughly made continuous revisions of the questions and the final product had been modified until the research group was satisfied with the outcome.

3 Results and Discussion

UNIVERSITAS
Miguel
Hernández

3. RESULTS AND DISCUSSION

3.1. Interview Results

The results obtained from the interviews as mentioned in the anterior chapter were put into tables depending on the topic and divided into questions and the role of each group in CP-Football. The answers to the questions were transformed into percentages. The interview results are also presented with text fragments illustrating the main findings coming from the interviews.

3.1.1. *Class Topic*

The following figure shows the results to the first question (Nº1) asked related to this topic "Do you agree on the measure adopted after Rio Paralympic Games to include in the team one more player of classes FT5 or FT6?" (Figure 5). The total percentage was elevated at 84.91% in favour of this decision.

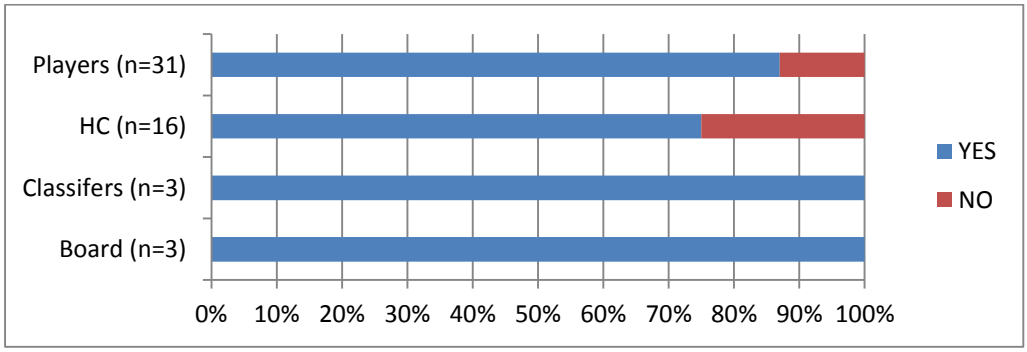

Figure 5. Percentage answers to question 1.

Players agree (87%) with this measure with one answer being “I think it’s a good initiative as the sport is for people with disability and this will help that they can play more and it will have an impact from the public’s point of view” (BRAP1). One player that did not agree said: “I think it’s fine right now” (CANP2).

This percentage is slightly lower with Head Coaches (HC) at 75% with one HC saying “I think it will benefit and bring teams closer and I presume that is the objective of doing it, to have more visually affected players on the pitch” (HC13). In contrast, “I disagree with that, that’s not the answer at all. The answer is to take the ABI players out in both classes 6 and 8 because they don’t look like a CP player” (HC4). Both classifiers and Board members agree 100% as one classifier said “I think it’s very good for the sport”.

The results to question (Nº2) which is linked with question 1, “Do you believe that these two classes are considered as “low classes”?” The answers are split with no consensus within the different groups, although the total percentage is of 50% in favour that classes FT5 and FT6 are considered as low classes (Figure 6).

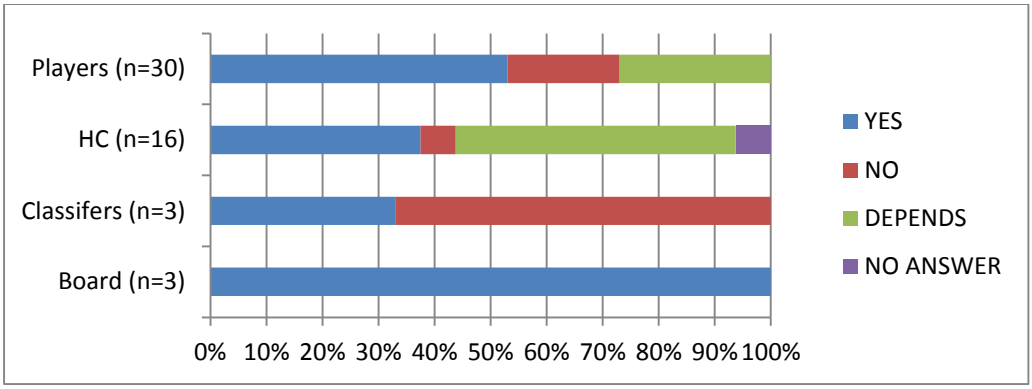

Figure 6. Percentage answers to question 2.

Within players, the percentage that agree that these classes are considered as low classes was 53%, as one player who agrees said "I think the general overlook of how people conceive them is that they are a weaker option compared to class 7 or 8" (ROIP1). On the other hand, 20% did not think this was the case: "No, not really because the class 5 from Brazil is very good and the player from Canada too and also the goalkeeper from Russia, so I would say not" (VENP2). Amongst players, 27% said that it depends on the player, arguing that "In relation to class 6 it would probably give them equal opportunities but again the class 6 on some teams are better than class 8, so it's a bit of a weird one"(ROIP2).

When the HC´s were asked, 37.50% agreed, with one answer being "Sure, they are weaker than class number 8 but they play on the top level nowadays and they are more professional" (HC14). Only 6.25% did not agree with this assumption: "I wouldn't say low, low class isn't the word because for example in my team we don't have substitutes" (HC3).

The highest percentage was the answer “depends” with 50% of HC, with one saying “It depends at what team you are looking at, as Russia has class 6 that are very good and that is what makes it more difficult for the classifiers” (HC2).

Only 33% of classifiers agreed to this: “For people it may sound bad but for us we know it’s not like that and I think players involved in the system will also think the same.” But 67% didn’t agree saying: “Puff, some FT6 don’t look low, they are very very very able, very fast, very challenging so there are some really good”.

The highest percentages agreeing were from the Board at 100%, with one member agreeing: “Yes, absolutely, especially class FT5 who have diplegia, who have the difficulty of running, there are no doubt that class FT5 and FT6 have the most visible impairments and of course their performance is affected because of this”.

From the answers obtained in both questions, there is a general agreement on increasing the number of these classes on the pitch, although they are only considered by half of the interviewed as “low classes”. This agreement is in line with IPC Athletes with High Support Needs which has been created to increase involvement and awareness of athletes with more severe impairments in IPC (IPC Handbook, 2006, Chapter 2.4.2, Section 1). Moreover, the increase of FT5 and FT6 players on the field coincides with the definition of “activity limitation” of Tweedy and Vanlandewijck (2011, page 8), who point out that

“impairments that meet eligibility criteria should be divided into classes according to how much activity limitation they cause”.

According to Howe (2008), data from his involvement in the Paralympic movement suggest that an increase in the severity of the disability is directly linked to the marginality felt by individuals within sporting practice. In other words, greater impairment equates to lesser acceptance for a sportsperson. The Paralympic athletes that receive the greatest exposure (TV coverage, publicity, etc.) are in fact the most “able”, that is, the least impaired. This has been experienced by former British Paralympian cerebral palsy athlete Bethany Woodward who won silver T37 in the 200m in London four years ago but has now withdrawn from the sport. She expressed to the Sunday Times “I represented my country for a long time, but if I can’t compete like I used to compete because they’ve brought in people who are not like me in terms of disability, what’s the point?” (Gayle, 2016, September 4. Paralympian withdrew from Team GB over United Kingdom Athletics classification concerns. *The Guardian*).

Therefore, the players that meet the eligibility criteria and have more activity limitation, which could be the case of classes FT5 and FT6, should have the same amount of opportunities than other players with eligible criterions who do not have as much activity limitation.

The next question (Nº3) of this topic was only asked to Head Coaches, asking them “Would you like to be able to line up more players of class FT8?” (Figure 7). Observing the results, 87.67% said no, with some

coaches even saying that they would be happy to eliminate class 8 altogether saying: “No, I wouldn’t like to, I would like that this class didn’t exist“(HC16). However, one head coach agreed with lining up more class 8 arguing that: “I believe that we should have more class FT8 on the field, however, I would only believe that is a valid suggestion if the level of impairment was increased of the class FT8“(HC15).

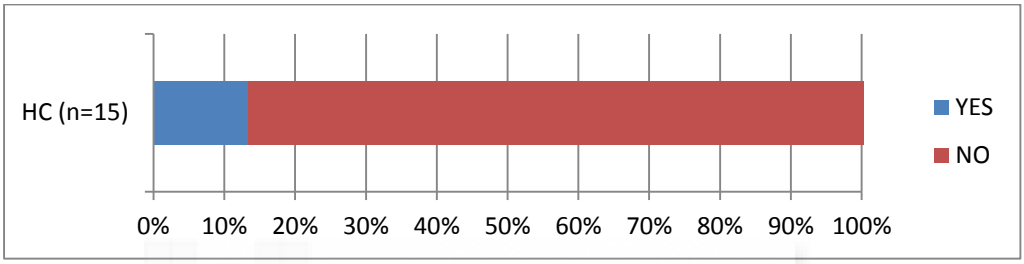

Figure 7. Percentages of answers to question 3.

The results from this question coincide with the answers of the last two questions. If the population want to see more classes FT5 and FT6, it would then be contradictory to want more class FT8 players, as that would take away the chances of FT5 and FT6 players from playing. We can therefore confirm consistency in the answers.

Also as Howe (2008) points out, a competitor who is moved to a less impaired class is not competing against other competitors with similar activity limitation and is unlikely to win. Change to classification systems have been about packaging the most attractive and commercially viable product that will be sold to the highest bidder. The act of transforming the classification system primarily established for an impaired athlete, where an equitable chance of achieving success is lessened, heightens

media interest but at a cost to the practice community. This in other words translated into this sport, if the number of class FT8 players was to be increased, competitors who are more impaired have less chance of performing to their ability because they are overshadowed by less impaired players on the pitch.

Figure 8 shows the results to the question (Nº4): “What effects would it have for the sport if other eligibilities were allowed to participate if it was proven that other impairments have an impact in the game? “

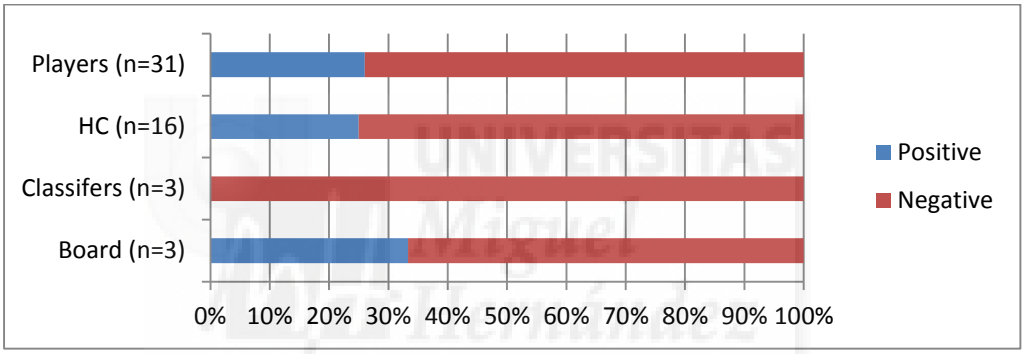

Figure 8. Percentages of answers to question 4.

Most of the participants hope that CP-Football will not integrate other physical impairments, with a total of 75% disagreeing. Only 26% of players thought that the introduction of different physical impairments in the sport could be a good idea, with one player expressing: “I think any other disability can participate as long as we are equal and they don’t have an advantage, so I would be in favour” (ARGP1). On the other hand, 74% disagreed with one of those defending: “We are called CP-Football so if we move further away from that we run the risk of losing our identity and the sport” (AUSP1).

The percentages for HC´s was very similar to those of the players, with 25% agreeing, as one HC said: “I think on the sport as a whole, in terms of growing the game globally, it would have a significant positive effect” (HC15). But 75% didn’t agree with this possibility saying: “No, only players with CP and even players with ABI but none other disabilities because its football for people with CP” (HC3).

Also, 100% of the classifiers said no to this measure, with one mentioning: “I said it at the time that the idea is to protect the athletes with CP and neurological conditions and I say to protect because the sport was born for them”.

One member of the board believed that this is a good way forward for the sport, defending: “I think for the sport itself it would probably be a really good thing because in terms of the Paralympic movement when you can include more impairments in the sport the more attractive it is”, whereas another member disagreed saying: “I think there are a lot of opportunities for other disabilities to compete in sport and I think CP football is the only sport that gives a fair opportunity to people with CP, I want to keep the sport fair and clean and not mix with other disabilities”.

When asked (Nº5) about “Do you think that a person with monoplegia (only one affected limb) of the upper limb, lower or either of the two can participate in CP-Football?” a total of 73.08% disagreed that players with upper limb monoplegia can participate in CP-Football (Figure 9).

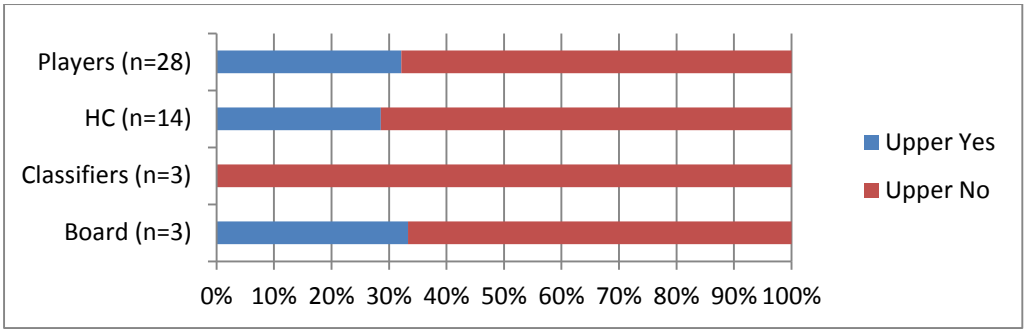

Figure 9. Percentages of answers to question 5.

This percentage amongst players was of 67.86%, with one player saying: "So having one arm affected doesn't really matter if they have two functioning legs so they shouldn't be able to play" (AUSP1). On the other hand, 32.14% agreed that players with one affected upper limb can participate in the sport, as one player said: "In my opinion in the upper limb is valid because I think they have an impact on the game" (BRAP1).

Very similar percentages were obtained from the HC´s, with 71.43% disagreeing that these players can participate, saying: "No, only players with CP and even players with ABI but none other disabilities because its football for people with CP" (HC3). This percentage is at 28.57% when agreeing to upper limb affected players, defending that: "To be eligible, you know, I have gone in to sessions with my arm strapped because I like to know what their issues are and with the one arm it certainly has an effect on the movements and how you move, so I wouldn't rule it out because there is an effect on you balance and in your game" (HC11).

All classifiers interviewed believe that those players who only have impairment in their upper limb with no affection in any lower limbs

cannot play this sport, with one classifier saying: “If its leg, I say yes but if its arm, then I say no”.

Board members also tended to agree with classifiers, as 66.67% said no to players with only upper limb impairment: “If they don’t have a minimal impairment in the legs and only in the arms, then no because they would have such an advantage, so if the problem is only in the arms I don’t think they should be included”. Although one board member believed that it is not a problem for these athletes participating saying: “Yes, but only if it is from the brain and has impact but if it is not from the brain they cannot compete”.

These last two questions about monoplegia participation and inclusion of more physical impairments in the sport are also related in a way. Point out that 100% of the classifiers believe that players with upper limb impairment should not participate, this could be because they are the front line people who see the minimum impact that one arm has on players performance compared to other more complex impairments. This then leads to the next question of incrementing the inclusion of more physical impairments in CP-Football, obtaining a total of 75% disagreement on the introduction of other physical impairments in the sport. Both of these points are related because if the interviewed indicate they do not want upper limb participation as these examples explained HC3: “No, only players with CP and even players with ABI but none other disabilities because its football for people with CP”, and AUSP1: “So having one arm affected doesn’t really matter if they have two functioning legs so they shouldn’t be able to play” it is then

explanatory that the participation of other physical impairments is not warmly welcomed neither as reflected in the high percentage of disagreement (75% total).

The question (Nº6) that specifically asked about the number of classes that people would like was “How would you like a future classification to be?”. This question has a very broad results table, where the highest total percentage is of 38% agreeing to keep the classes the same as they are now (Figure 10.)

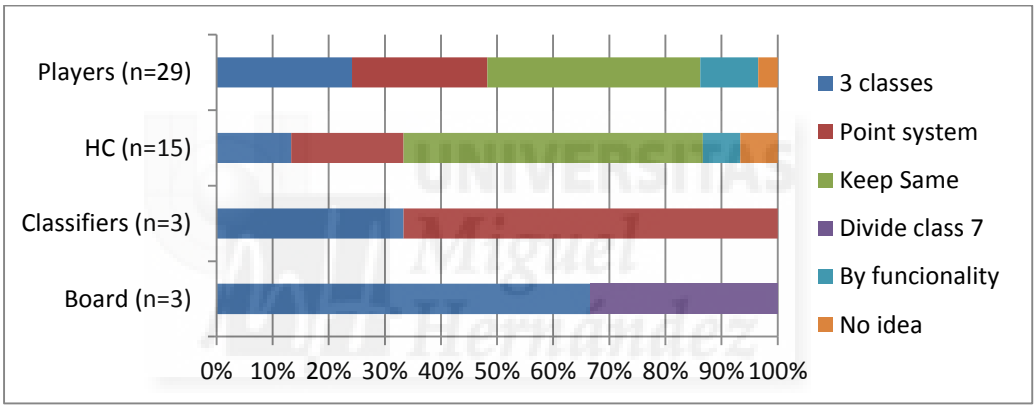

Figure 10. Percentages to question 6.

If we observe which answer has the highest percentages in each group, 37.93% of players would prefer to keep the classification system as it is at the moment, saying that: “If you keep changing it, it’s going to become even more confusing” (CANP2).

This same answer was given by HC´s with 53.33% preferring to keep the system the same as it is in the future with one HC saying: “I don’t know, but I think the classes FT5 to FT8 are ok and there is no need to change it”(HC10).

Despite this, 66.67% of classifiers prefer to change the current classification system leaning towards a point system as one said “I would like to use a point system like most team Paralympic sports, it’s the most fair and equal”. Finally, 66.67% of board members believe that three classes would be better saying that: “I think this is the best option so low, moderate and severe”.

This question has also been raised in Paragolf in a paper on how to achieve evidenced-based classification (Stoter et al., 2015, p. 10), where they mention “an important challenge for a proper classification system is the number of sport classes, which could be “limited”, but the optimal number is hard to define. Fewer sport classes, and thus a larger number of handigolfers per sport class (leading to wider classes), improves acceptance of the overall competition (i.e. fewer medals), but will enhance the diversity of the different impairments within a class and could make competition within a class less fair. The challenge is to find a balance between the range of diversity and width of a class and the number of competitors within a sport class. It is assumed that a more fair and adequate competition, and better exposure due to admission to the Paralympic program, will lead to more players competing”.

So as we can see, it is difficult to find the optimal number of sports classes, as seen in other para-sports and observed by the varied percentages obtained from different opinions of those interviewed.

Another question (Nº7) around the different classes was “Would you like the classes to still be called classes FT5, FT6, FT7 and FT8 in CP-Football?” (Figure 11).

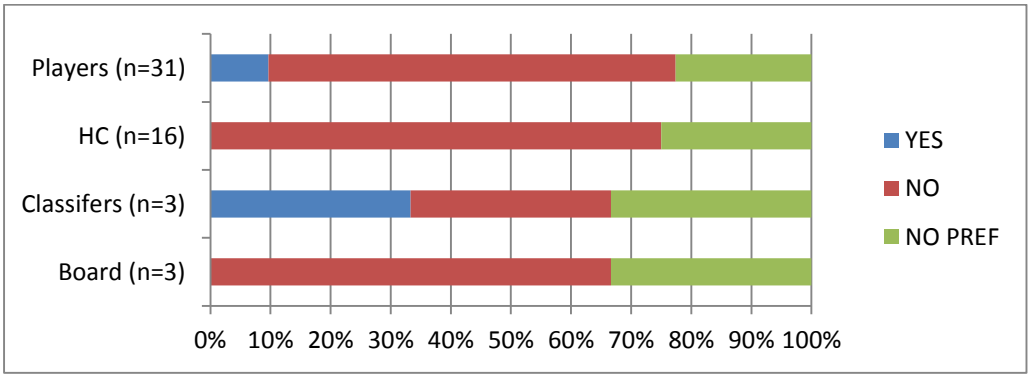

Figure 11. Percentages of answers to question 7.

As before there was no real consensus within the answers obtained, but the highest total percentage was 64.15% disagreeing to any changes in the names of the classes, with this percentage being 68% in players and 75% in HC, saying respectively: “I think its ok as it is, it’s a familiar classification that people involved in the sport realize and I think it may complicate it if you change” (NIRP1), and HC said “I don’t have a problem with the current name” (HC13).

There is no agreement within classifiers, as each classifier gave different opinions with one classifier agreeing to changing the name of the classes by saying that: “We have our own federation and many people ask why the numbers start at 5 and not at 1 so I think we could change it”, a different classifier who doesn’t agree the names should be changed by saying: “I don’t have an issue with that because it’s like athletics and its

quite comparable, so for me it is fine", and another classifier who doesn't have any preference on the future names of the classes by saying: "I really don't know". Board members also tended to disagree with any change, with 66.67% saying no to any class name modifications.

The two previous questions are about the actual classification system as a whole, including the number of different classes and the name that people would give to those classes. These questions were raised for two reasons, the independence of CP-Football as a soul federation becoming IFCPF, and the fact that other sports have changed their classifications systems like Para-triathlon towards an evidence based system, as well as Para-cycling and Wheelchair Slalom at national level.

Both of the questions are linked as the highest total percentage was to keep the classes the same which coincided with the higher percentage of 64.15% to keeping the name of the classes the same too. This indicates that over half of the interviewed would like the classification classes and names to maintain the same, claiming in the results part that any change would only make the matter more confusing as one player said: "If you keep changing it, it's going to become even more confusing, it's good to change things sometimes, change is good, but we have a four system right now and it is good" (CANP2).

The last question (Nº8) related to the "class" topic was "Do you prefer a more spectacular football or a football where the impairment of the players is more visible to see?" (Figure 12)

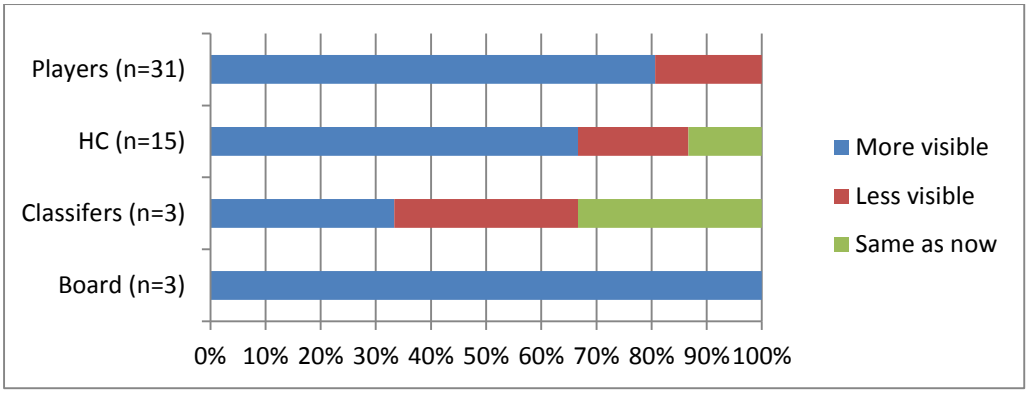

Figure 12. Percentages of answers to question 8.

The results here are clearer with a total of 75% agreeing to the fact that they want to see more impairment visible on the pitch, with this percentage rising to 81% within the players, being the highest percentage from all the participant categories, with one player saying: "So the disability should be transparent and visual otherwise it´s not CP-Football" (UKRP1). Although 19% disagreed to needing more impairment visible on the pitch defending that, "Not necessarily, I don't think that the disability of the player needs to be visible, as I think it is a beautiful game" (PORP1).

This percentage was lower amongst HC´s with 66.67%, with one HC saying: "Yes, it should be visually seen, it is a disabled game otherwise it's not under IPC" (HC14). Those who disagreed with increasing the visibility of disability on the pitch were 20%, one saying: "In that case everyone would have to stop training, the Russia team look like that because they train, the level of CP can change due to exercise and using modern methods and equipment they can be treated to a sub-maximum

level. We know CP cannot be healed 100% but we can assist them, if they stop training they will lose their ability" (HC12). Within the HC´s, 13.33% said they would prefer to keep it as it is by believing: "I think there have been some really equal games with players giving everything they can" (HC5).

Once again, there are no agreements between classifiers, with each classifier defending a different opinion. One classifier agrees to the necessity of more disability visible on the pitch by saying: "Yeah, I think so, us as classifiers we cannot decide that but I think", another classifier doesn't agree there needs to be anymore disability visible by defending: "I don't care about that (laughs), I don't think it needs to be visible but I think people need to have more of an impairment, they need to be more impaired but it will still look spectacular because we can have FT5, FT6, FT7 that are really skilled and good", and the third classifier asked simply said that he would like to see "equal" amount of disability as now.

Board members are 100% clear that there must be more disability visible on the pitches in the future with one member mentioning that: "Yes, I prefer to see the disability, it should be recognised by the people so we are different from mainstream football, you cannot see it anymore".

This final result is backed by all of the previous answers collected up to this point. Those being, agreement with more class FT5 and FT6 on the field at one time, no more FT8 classes on the pitch, no upper limb

monoplegia players and the non-inclusion of other physical impairments in the game, all of these discussion points derive in the participation of players whose disability is visible to the naked eye.

This fact seems to be a problem in athletics too, as Oxana Corso, an Italian athlete with severe cerebral palsy said that she felt “duped by a mocking system more focused on putting on a show than supporting disabled athletes” (Gayle, 2016, September 4. Paralympian withdrew from Team GB over UKA classification concerns. *The Guardian*).

Since Seoul Paralympics in 1988, there has been a marked decline in the number of severely disabled athletes participating in Paralympic Athletics program. In many aspects this helped to legitimate elite sport for people with disabilities. In other words, some bodies are worth watching and others are not (Schantz & Gilbert, 2001; Schell & Rodriguez, 2001; Smith & Thomas, 2005). This is what has happened in CP-Football, where more impaired players have been edged out of the sport over the years, ending up with players that are less impaired reaching the point of seeing some players on the field that seem like able bodied athletes, as said by a concerned player: “The disability should be more visible to see in the players because that way it would be more spectacular and would catch the public’s eye. At the moment, there are teams that don’t seem to have any disability and this seems disloyal when a team is very good with little disability against a team that is more compromised” (BRAP2).

For a clearer view of the findings discussed, a concept map of the questions and their links has been developed allowing a global view of the results and facilitating the discussion points. The map has been divided into sections (A, B, C and D), and these sections represent questions that have been discussed previously as a group due to the links they represent (Figure 13).

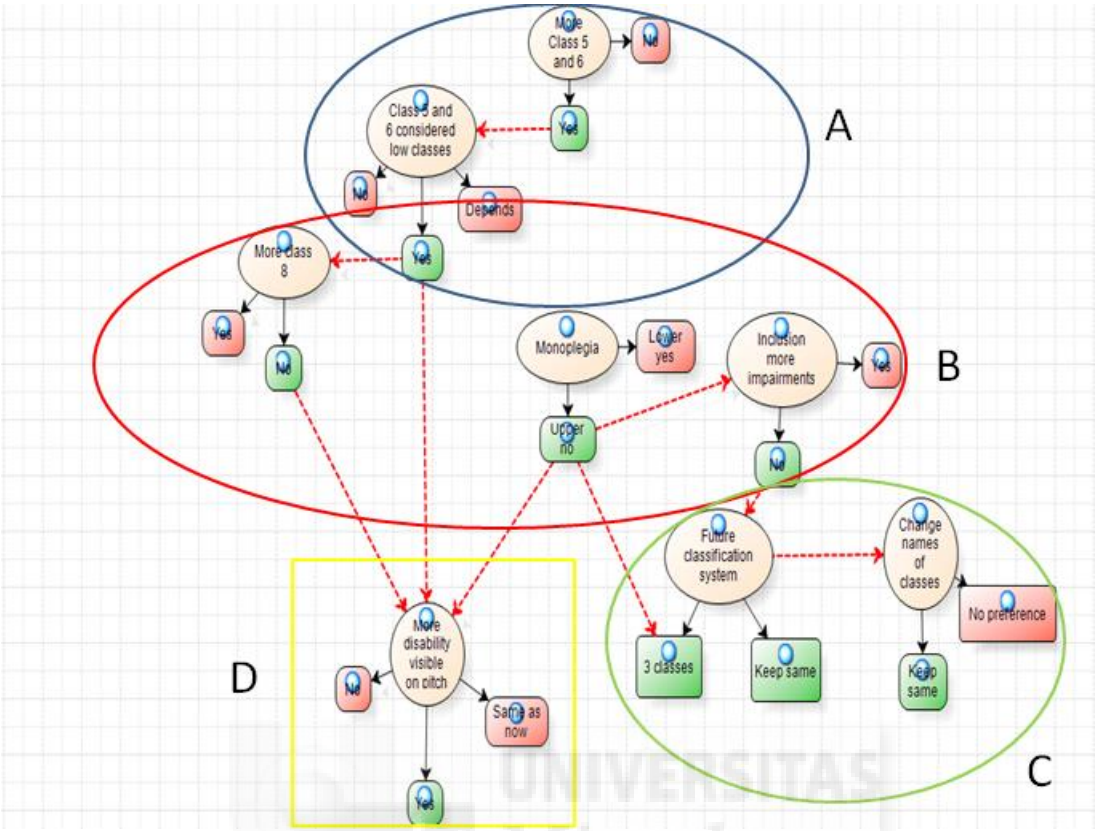

Figure 13. Concept Map about the Class Topic.

3.1.2. Classifiers Topic

In this topic the questions were based on the Classifiers of this sport, starting with question Nº9: "The classification panel is composed by three people (doctor, physio and a technical classifier) whilst in other sports there are only two (doctor or physio and classifier). What importance do you give to the medical/physio and the technical classifier when classifying?" In Figure 14 we can observe people's opinions on the number of classifiers that should form a classification panel. The most frequent total answer was three classifiers on the

classification panel, which is the current number, with 71.15% agreeing to this.

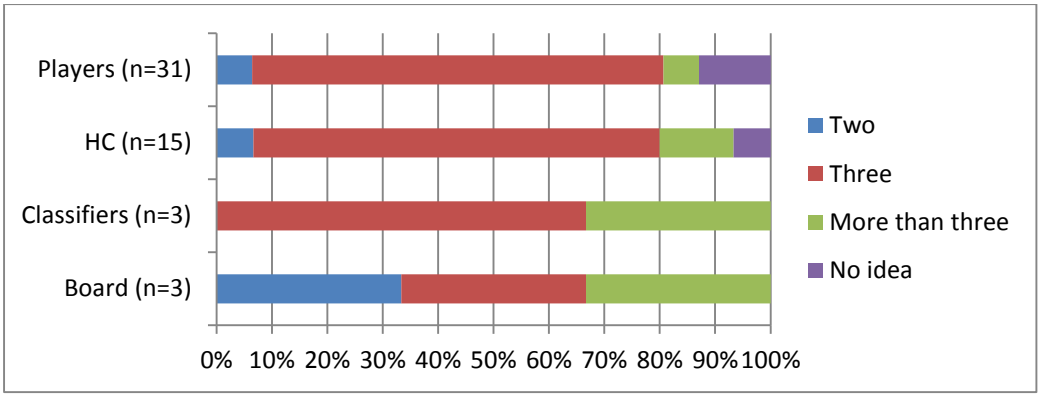

Figure 14. Percentages of answers to question 9.

In the players group, 74.19% agreed that three is the right amount of classifiers: "I think each one has their profession and their own opinion and one may see something that the other one does not, I think the three are important to be able to exchange opinions" (BRAP1). Although 12.90% of players had no idea how many classifiers there should be, with one player saying: "I don't know what each one does to be honest, in my eyes they are just all classifiers, so I don't realize what the difference is, so I don't understand what the difference is" (ENGP1). Both answers "two" and "more than three" classifiers both achieved a percentage of 6.45%.

The HC group obtained alike percentages as players, with 73.33% agreeing with the current number of three classifiers in the panel with one HC defending that "Three people know more than two" (HC8). A percentage of 13.33% thought that more than three classifiers would be

better saying that the classification panel should be “very big, each panel should be formed of two doctors, two physios and one technical classifier so that the decision is three against two” (HC3). Again, only 6.67% had no idea and the same percentage believed that just two classifiers would be sufficient by saying: “So I don’t work in the classification process but if other sports cope with two classifiers why not here” (HC14).

Classifiers had a more clear vision, with 66.67% agreeing with the three classifiers explaining in depth the role of each classifier: “Each person has a very defined role and we know that a medical gives the eligibility and depending on their background they have an active part on the physical evaluation of the athletes. The physio for me has an important value. I could really do the test that they do but it’s good to have their opinion to compare, I always feel comfortable and I am always learning and as we come from different countries we have a difference in opinion and sometimes it’s not so easy to determine the exact spasticity grade. In the case of the technical, well they are very important because they are the complement of the physical part”.

The answers given from Board members were spread between two, three or more than three classifiers. One member defended only two classifiers by saying: “I think the physio and technical classifier are the most important”. Three classifiers was proposed by one member by saying: “The doctor is the first step, and after this stage he goes to the physio, who I think has an important task but in my opinion not disrespecting his work, but the technical, the man who understands

about football and all the movements, this will be the most important after the doctor". The final option with more than three classifiers was said: "I think the technical classifier is the most important, the doctor sees if the player is eligible. I think in every tournament there should be two panels, where one doctor is sufficient and the other people should be at least 2 sport techs and one physio".

Overall, it was agreed that three classifiers is the optimal number with a total percentage of 71.15%. This percentage is nearly three fourths of the total interviewed, although it is a subject that must be looked into with more depth. IPC stipulate that a Classification Panel is a group of Classifiers appointed by an International Sport Federation to determine Sport Class and Sport Class Status in accordance with the Classification Rules of that International Sport Federation. (IPC International Standard for Classifier Personnel and Training, 2016, Section 2.5). In Para-swimming, a minimum of two classifiers form a classification panel consisting of a medical classifier (a doctor or physiotherapist), who will have undertaken the Para-Swimming classifier training, and a technical classifier (a swimming coach). This is the same for Para-triathlon who state that classification panels should include a minimum of two classifiers, in which at least one medical classifier must be present (International Triathlon Union, Para-triathlon Classification Rules, 2014, Section 2.7). In favour of two classifiers are economic reasons and also efficiency when classifying as three panels of two can classify quicker than two panels of three classifiers. This allows classifiers to take better decisions due to less fatigue, as Howe 2008 (p. 502) pointed out "the team of classifiers look like they have been working all night long and I

wonder whether this will lead to an inaccurate diagnosis". On the other hand, three classifiers provide more opinions than two classifiers and allow for more discussion when dealing with a more complicated athlete to class. Therefore, it is not a decision to be taken lightly and the need for weighing up both arguments is necessary to take a correct decision in the future.

The following question (Nº10) asked was "What type of person do you believe has the requirements for a technical classifier?". Once again, there was a mixed view on this question with the most frequent answer being "football experience" with a total of 54.71% (Figure 15).

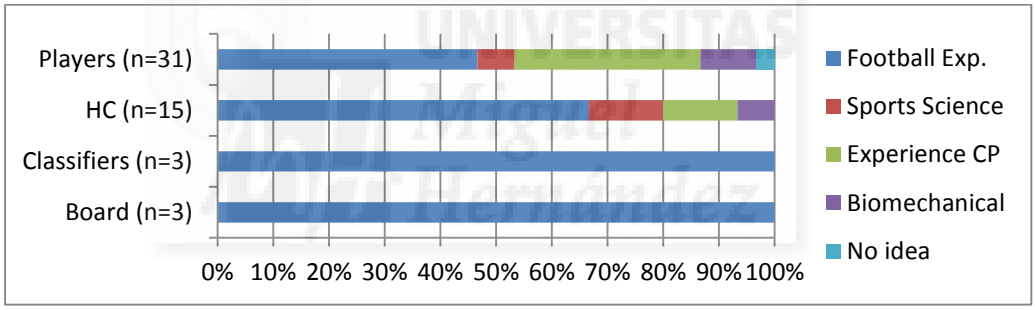

Figure 15. Percentages to answers for question 10.

This percentage was lower within players with 46.67% who thought that a technical classifier should have football experience above all, with one player saying: "Yeah, the experience in football must be essential" (ROIP1). The second most common answer was that the technical classifier must have experience in CP: "Yes, experience in CP football would be very beneficial" (NIRP1).

For HC´s, football experience was also the highest answer with 66.67% as one HC shared his opinion saying that the technical classifier “should be a football coach” (HC14). There was a consensus between classifiers and Board members with both agreeing 100% that a technical classifier should have previous football experience.

A final question (Nº11) related specifically with classifiers was: “Do you believe that both classifiers must have experience in each field?” (Figure 16). A total of 79.25% agreed that classifiers should have experience in opposite fields. For example, a technical classifier should have experience in their own field and in the medical field and vice versa, medical classifiers must have basic football knowledge. This percentage is elevated in players with 89.66% agreeing to this, with one player agreeing: “Yeah, they should be very much a team and know what each other is doing” (NIRP2). On the other hand, of the 10.34% who disagree, one player said: “I don’t think so, each one has a different role and don’t have to interfere in each other’s work. They are different roles (ARGP2)”.

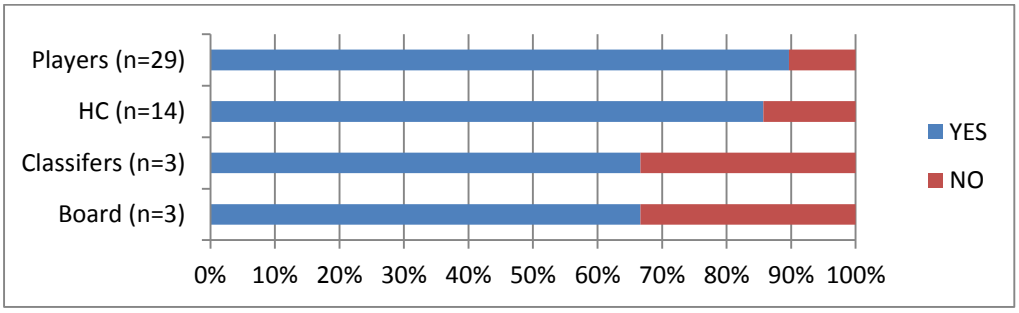

Figure 16. Percentages to answers for question 11.

HC´s also believed that they should have experience in both fields, with 85.71% agreeing to this, as one HC said: “Yes, in both fields to complement” (HC16). Although of the 14.29% who disagree this is necessary, one HC said: “As for the doctors they only need to know the medical side” (HC14).

These percentages are the same amongst classifiers and board members, with 66.67% agreeing respectively and 33.33% disagreeing. One board member who agrees mentioned: “Of course, I prefer a doctor who has knowledge of the sport, if all classifiers have knowledge of the sport it would be perfect situation but if not at least the technical classifier should have.” But with another member saying different: “I don’t think the doctor needs to, I think he must know about CP, so if he has or not, but it’s not up to him to know about football, he doesn’t need to know about football itself”.

These questions on Classifier Personnel and their experience are indispensable. As observed in the results, the general population manifest their worries on this topic. IPC outline that a Classifier must have a thorough understanding of the Classification Rules for the sport for which they seek certification, an understanding of the sport and the rules and professional qualifications, level of experience or any other skills or competencies the International Sport Federation determines (IPC International Standard for Classifier Personnel and Training, 2016, Section 4.2). Currently in the IFCPF (2015b), there are no pre-requisites to be able to complete Level 1 to become a classifier and there are only recommendations of who should to take the course but they are not

obligatory. From the results obtained and the stipulation from IPC, it is essential that classifiers have previous experience in the sport and it could also be discussed in the future whether those who opt to do the course should possess certain qualifications (sports scientist, football coach, etc.) as is the case to become a national technical classifier for the USA (United States Paralympic Committee). This committee expresses that "technical classifiers must have extensive coaching background, be former athletes and/or have a degree in physical education, biomechanics or kinesiology with a suitable level of knowledge of the impairments and activity limitations associated with the sport in which they pursue classifier training." (Team USA webpage, Become a Classifier). This is also the case in Para-canoeing, where a technical classifier is a person with extensive practical knowledge of canoeing with experience such as a canoe or kayak coach, sport scientist, former paddler, physical educator or similarly qualified person (International Canoe Federation Paracanoe, VA´A Classifiers Manual, 2015, Section 1). The same goes for Para-Triathlon technical classifiers who must be sports specific and/or technical experts like as sport scientists, coaches, physical educators, experts in human movements' science or equivalent (ITU Paratriathlon Classification Rules, 2015, Section 2.6).

A question (Nº12) about classifiers ability was: "Do you believe that classifiers strictly follow the classification rules?". This question saw similar opinions between players and HC´s and a total of 57.69% agreeing to the fact that classifiers follow rules (Figure 17).

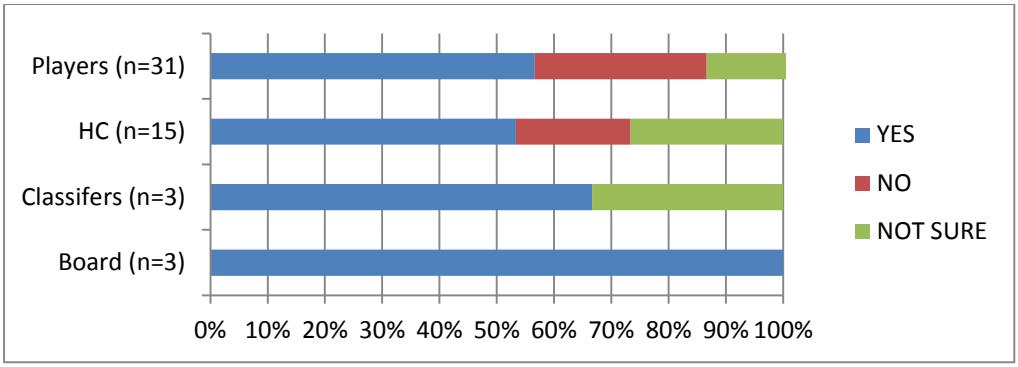

Figure 17. Percentages to answers for question 12.

Starting with players, 56.67% did agree that classifiers try their best but despite this, 30% of players don't believe this is happening with one player saying: "I don't think that they comply with any rules because I have seen some players that could never pass a classification in their life" (ESPP1). And 16.67% are not really sure if they follow the rules or not: "Probably yes but we don't know" (RUSP1).

Like percentages were shown from HC´s, with 53.33% agreeing that classifiers tend to follow rules, 20% disagreeing to this: "I like to believe so but then I see things on the pitch, so I doubt it" (HC8). In addition, 26.67% were not sure if they do or not.

Classifiers themselves seem to think they are, with 66.67% agreeing to the fact but one classifier did mention they were not sure if this was happening or not arguing that: "I think it would be good to standardize all the tests, so no errors are made but I think we have improved a lot." All Board members totally agree 100% that the classifiers follow the rules strictly.

The final question (Nº 13) related to classifiers was: “Do you think that there have been changes in the last two years in the way the classification processes have been applied?”. Again there was a variation in the total percentages between different roles of people in the game. Overall, 48.98% do think there have been changes, 34.69% think there have not been any and 16.33% are not really sure (Figure 18).

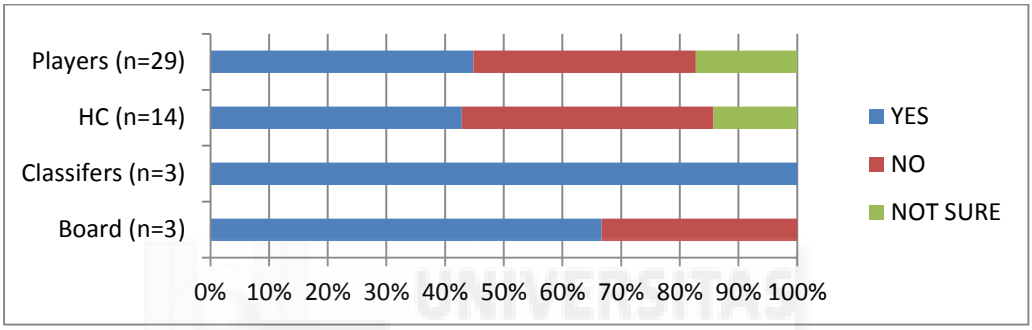

Figure 18. Percentages of answers to question 13.

Players follow these total percentages, with 45% who think there have been some changes in the last two years, with one player saying: “Yes, I think they are being stricter and focusing on more things” (CANP1). On the other hand, 38% do not agree there have been any changes: “No, I don’t think there are no differences” (PORP1). Lastly, 17% of players do not know if the changes have been noticeable or not: “I haven’t noticed any differences in the last two years myself but I’m not sure to be honest” (NIRP1).

Within HC´s, the percentages are alike with 42.86% who have seen changes, like one HC who said: “I think it is getting better because you are working more on the field” (HC5). The same percentage did not

think this was true with one HC saying: “Not to my knowledge no” (HC13). Others were not sure if there had been any changes or not with 14.29%, such as one HC who mentioned: “We haven’t been here in the last 18 months so I can´t really answer this” (HC2).

The current classifiers do agree that there have been changes for the better over the last two years, with 100% agreeing to this as one classifier said: “Yes, I think we have improved a lot”. Board members also thought there had been visible changes, with 66.67% agreeing, as one member said: “Yeah, for sure I have seen the changes”.

The last two questions of this topic are linked, and the results coincide as more than half of the interviewed believe that the classifiers follow the rules and just under half believe that there have been changes towards better classifying on behalf of the classifiers over the last two years. This may be thanks to the fact that classifiers have been following the rules more strictly as one player notes: “At the beginning the situation was bad but now it’s more difficult for the athletes with minimal disability to have class FT7, they mostly have class FT8, so I observe the really hard work of the classifiers” (UKRP2).

Although one Head Coach (HC12) mentioned that “the players call them (the Classifiers) the police, so there has to be trust and communication and this is not how a human person should be treated”. This fact was also manifested by Wu et al. (2000, p. 421) saying that “Athletics appears to be “policed” by the “able” or “Abs” as the athletes refer to

them. As a result individuals who work on classification teams may be seen as agents of social control".

To add to this topic, Helmut Hoffman, German team doctor at the International Paralympic Committee Athletics World Championships in Doha in 2015, told the Sunday Times he watched races with athletes he thought had been wrongly classified: "I don't want to say it was corrupt, but it was unfair," he said (Gayle, 2016, September 4. Paralympian withdrew from Team GB over UKA classification concerns. *The Guardian*). Therefore, to avoid any polemic situations, Classifiers must try their best always to comply with rules and regulations of the classification processes.

In figure 19, we can observe the concept map of the classifiers topic and the different areas highlighted that have been discussed and are associated in some way, allowing an easier understanding of the topic as a whole.

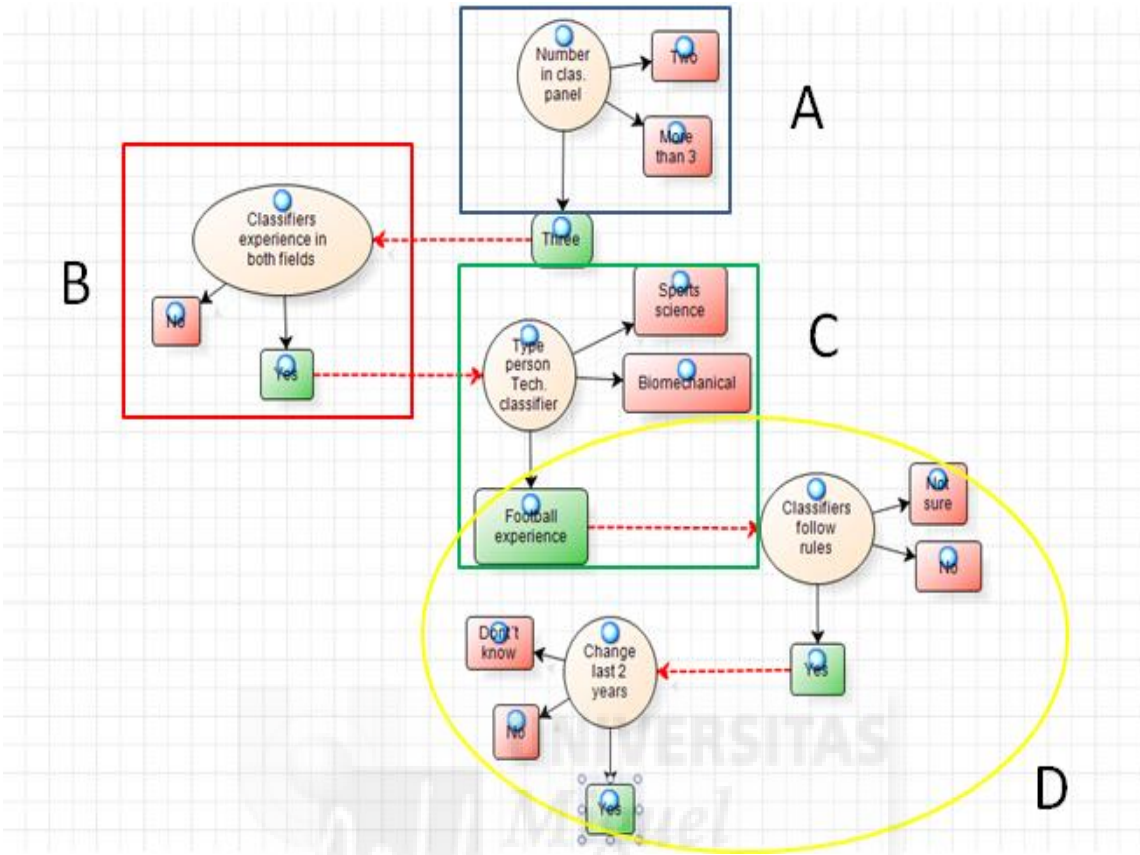

Figure 19. Concept Map about Classifiers Topic

3.1.3. Players Topic

A series of questions were asked about players and their role in classification. The first question (Nº14) of this topic was: “Do you think that factors like the level of training and physical condition influence in the way a player is classified?”. This question received an elevated total percentage with 86.53% agreeing that depending on the player’s physical condition they may be given one class or another (Figure 20).

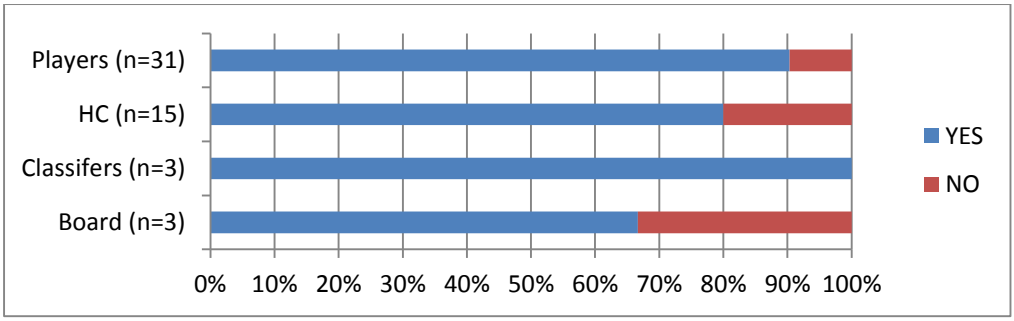

Figure 20. Percentages of answers to question 14.

A total of 90.32% of players believe this happens as one player commented: “Yes, I think I was affected in this way, some people train once a week and we train twice a day, of course we will be quicker than others but because you train you shouldn’t be punished for this” (RUSP2). Although of the remaining percentage that disagree one player expressed: “No, it doesn’t happen” (JPNP2).

Head coaches also think this happens but with a lower percentage at 80%, as one head coach explained: “Yeah, I would because he is almost being punished if it’s because a lot of different countries don’t have the opportunity to train, so I think if classifiers have looked at him over the time and he clearly has the muscle, I think fitness levels shouldn’t come in, I think it should be more medical” (HC13). Of the 20% who do not think that physical condition influences, one said: “No, I don’t think this is related” (HC1). Classifiers gave their opinion and 100% of this group thought that this does happen. One classifier mentioned it concerned them the fact that this is happening by saying: “I do sometimes and it concerns me”.

Of the three board members, two said that if this is happening it should not by defending: “I hope it doesn’t because that’s my worst nightmare, where a highly trained athlete gets screwed over because they worked so hard and I hope that’s not the case”. But a different member who said no, explained his point by saying: “I think the classifiers have enough experience in this tournament to not punish the players”.

The total percentage for this question is elevated at 86.53% agreeing that players with high fitness levels are being punished for their training and are being put in a higher class as BRAP1 says: “Yes, you may have a player in class FT7 that has trained a lot and be put in class FT8”. Also as Jones and Howe (2005, p. 138) point out: “The major problem with the use of the functional classification system is that it does not take into account “training effects” on competitor´s ability. It is not clear, therefore, to what extent the athlete´s performance are predicated on a baseline physical activity (underserving) or on strength, flexibility, endurance and motor adaptations from training “merit””. If we look at other team Para-sports, both Wheelchair Basketball and Wheelchair Rugby use a point system to classify their players with a broader number of classes totaling, eight different sport classes compared to CP-Football with only four FT classes. Maybe this should be looked into, as despite the percentage of half the interviewed not wanting to change the sport classes. However, this could mitigate this current problem as one player explains: “I think this is why we must divide the class 7, so then that way we broaden the horizon” (AUSP2).

This is an issue for other sports who are researching into evidence-based classifications such as Paragolf. Stoter et al. (2015) have highlighted their concern on the need to change the classification process but are aware of the difficulties this imposes. Classifying the combined effects of impairment, training, motivation and talent is inherently a performance-based classification, and therefore deemed to be unfair according to the current IPC´s Position and scientific scope. We should aim to completely separate contributions attributed to talent, training and motivation from contributions attributed to the impairment. We realize that in reality it is more complex to identify to which extent performance determining factors are affected by training, talent, motivation or impairment.

The following question (Nº 15) was debatable, consisting of "Do you think you can cheat the classifiers?". The tendency of answers was less clear with similar results between them. Those who believed it is possible to cheat the classifiers during classification were 55.78%, meanwhile 44.22% thought this wasn't possible (Figure 21).

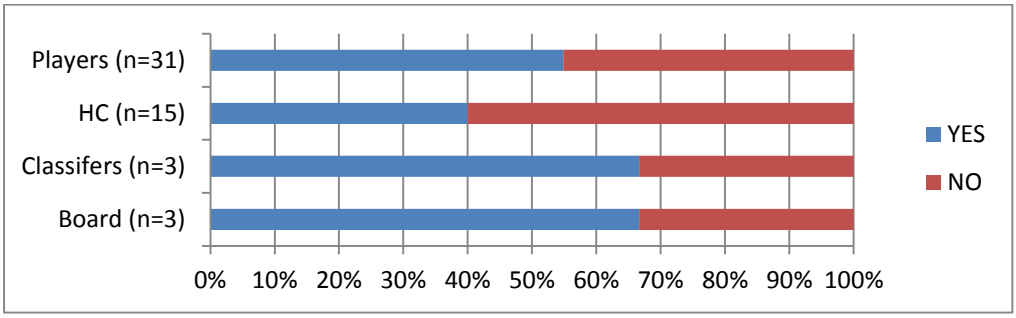

Figure 21. Percentages of answers to question 15.

These percentages are very similar amongst players (54.84%) thinking that players do try to cheat, as one player said: “Yeah, there are players that will try it and personally you can see when it’s put on” (SCOP2). Others believe that cheating is just not possible and one player expressed this by saying: “I don’t think you can cheat the classifiers. It may not show immediately but once you meet the point of fatigue and you get tired your body shows it, it shows and I don’t think you can really fake it through“ (CANP1).

The HC group is the only group with the lowest percentage in thinking that it is possible to cheat with just 40%, although one HC said defending the fact that cheating does happen: “I always see it happen in the first stages of the tournament” (HC15). On the other side of the question, 60% said you cannot cheat a classifier as a HC believed: “Well, I don’t think you can cheat the classifier” (HC4).

Both classifiers and Board members had the same amount of percentages (66.67%), believing there is a chance that this can happen as one Board member mentioned: “I think that players try to cheat by putting their hand next to body and just give not their best performance”. On the other hand, one classifier defended the impossibility of this happening and said: “An intentional misrepresentation in athletes with CP isn’t usual, I have seen it in other disabilities like spinal cord injuries faking to have less movement but in athletes with CP is more difficult to do in an intentional manner”.

The interviewed population is split almost down the middle with this question, although the total view is slightly more than half towards the fact that cheating does happen as one said: “We have sat and watched games and watched a player carry his arm and then the game starts and he forgets what he is supposed to do” (HC11). This fact does not only happen in CP-Football as Howe (2008, p. 502) explained: “I hear stories of athletes who try to cheat the system. They try to make their bodies appear more impaired than they actually are so that they are classed with a more impaired group”. Also as one player expressed: “It happens and classifiers will see that and you cannot stamp that out because the system is black and white and very wide, whereas if you are stricter and made it more narrow it would be harder” (SCOP1). Maybe as this player highlights if the classification system was stricter it would be more difficult for players to have the chance to cheat. However, the fact that players may cheat could be related with the previous question of players being penalized for their fitness levels and perhaps not doing their best in classification through fear of receiving a higher class as HC14 explains: “Athletes are probably afraid to get a higher class so that’s why they show the ability that fits his class, so for sure there is a chance”.

This is not only a problem in CP-Football. Tanni Grey-Thompson an ex-British Paralympian has expressed her concern over the last months that some athletes have obtained a competitive advantage due to being mismatched. Other high-profile disabled former athletes, such as the TV presenter Ade Adepitan have drawn attention to “intentional misrepresentation”, calling it the equivalent of drug-cheating in able-

bodied sport. Dr Mukul Agarwal, a former medical officer for the Great Britain Paralympics team, said: “I do have concerns about the way classification works currently and about the potential for cheating. Medical records are part of the classification system but there’s a degree of trust in what is offered to the classifiers. Should an athlete, coach, national governing body or a country choose not to present the entire data it is possible that an inaccurate classification could take place.” (Taylor & Foggo, 2016, September 2. Inquiry into UK Paralympic classification to be launched after Rio Games. *The Guardian*)

While the majority of Paralympians would appear to be correctly classified, accusations of misrepresentation have become so widespread that some of the Paralympian sports’ governing bodies are now attempting to control them, with one UK Athletic official sending an email warning athletes not to make “baseless” claims or face legal action. The nature of Paralympic classification can lend itself to some disgruntled competitors and their advocates pointing the finger at their rivals, whether or not they are actually competing in the right class.

Mike Cavendish, the performance programme manager at British Athletics, said that “there were concerns some athletes were intentionally seeking to be placed in classes perceived as having less challenging opposition and that some athletes thought to have knowingly pursued classifications that they know to be incorrect, simply to gain a competitive advantage” (Taylor, Foggo, and Gayle, 2016,

September 4. Concerns over abuse of Paralympic classification raised over two years ago. *The Guardian*).

The Paralympic movement's leading authority on classification, Peter van de Vliet, admitted that the complex system which pairs like-for-like impairments into competition groupings sees athletes "inherently pushing the boundaries" to force their way into classes which give them a greater chance of winning gold medals. "Classification is a concept, but a scientific one that works," added Van de Vliet. "What we do think, however, is that it is time for international federations and all the Paralympic sports to re-examine their classification criteria, in an area that will always be an evolving process." Therefore, cheating has more to what meets the eye in both CP-Football and other Paralympic sports and needs to be further looked into (Davies, 2016, September 4. Paralympic classification expert claims "cheating is not endemic". *Telegraph*)

Following this topic, another question (№16) was: "How do you think the penalization should be if cheating is made and who should be penalized?". There is a mix of opinions with the highest percentages being to penalize the player with a total of 35.48% and to penalize the team with 38.70% (Figure 22).

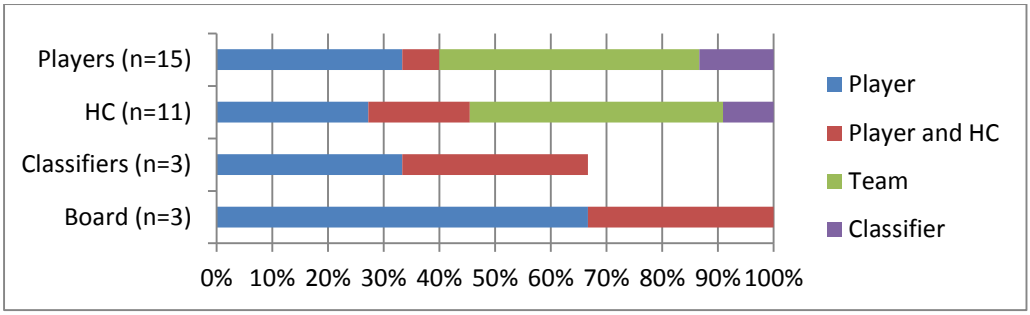

Figure 22. Percentages of answers to question 16.

Player's opinions differ but the most voted was to penalize the team with 46.67%, as one player defended to penalize: "Everyone involved in the situation" (AUSP1). The second most discussed was to penalize the player with 33.33%, as one player highlighted: "Only the player, I don't think you can penalize the team or coach because the player might be fooling the coach as well" (ENGP1).

These options to penalize team or to penalize player were also the most mentioned among HC´s. Penalize the team received 45.45% of their opinions, by saying that: "The organization of the team" (HC10) must receive the penalization for cheating. To penalize the player got 27.27% as one HC simply said: "For me, it could be the player" (HC13). Classifiers could not agree between penalizing the player or penalizing both player and HC, and the Board members lent more towards penalizing the player with 66.67%, as one Board member defended that "You can only say the player has cheated".

The ITU International Para-triathlon Classification Rules (2015), section 7.8, mention that: "The ITU shall enforce sanctions on the personnel

supporting the athlete, who assist or encourage an athlete to fail to attend their evaluation, to fail to cooperate, intentionally to misrepresent skills and/or abilities or disrupt the evaluation process in any other way; b) those who are involved in advising any athlete intentionally to misrepresent skills and/or abilities are subject to sanctions that will be as severe as the sanctions enforced on the athlete; c) in this circumstance, reporting the athlete's support personnel to appropriate parties is an important step in deterring intentional misrepresentation by any party."

As mentioned above in the same question, two argument points were mentioned, one being who to penalize, which is discussed previously and the other was: How long should a penalization be for? (Nº17). Again, there is no consensus between the different options, with the most discussed point being to penalize the team by not allowing them to participate in the next major tournament with 40% backing this option. An economical fee for the team was not far behind with 37.5% in total (Figure 23).

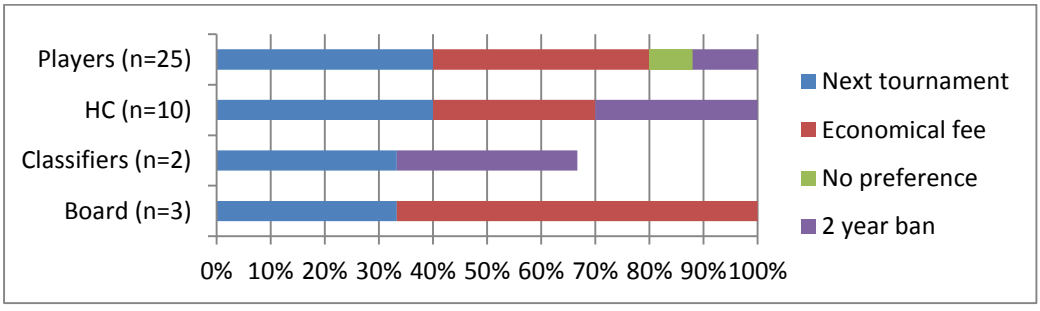

Figure 23. Percentages of answers to question 17.

Players could not decide among these options with 40% towards next tournament ban and 40% for an economical fee for the team. Head Coaches opinions were split between three options: 40% was for a ban at the next tournament, 30% an economical fee, and 30% for a 2 year ban for the player in question. Another point from one head coach who defended an economical fee should be imposed on the team was: "Maybe an economical fee that can be used in classification for the future" (HC8). One classifier said: "Yes, the next tournament they are not allowed to participate"; whereas another said: "Yeah, I think a ban of 2 years it what it says in the rules". Within the Board, an economical fee was favoured with 66.67% over penalizing for the next tournament with 33.33%.

If we look at who to penalize, the highest total answers were the individual player or the whole team (33.33% and 47.67% respectively). At the current moment, IFCPF only penalizes the player involved (IFCPF 2015b, Section 2.13), whereas IPC states that: "Any Athlete or Athlete Support Personnel, who knowingly assists, covers up or disrupts the evaluation process with the intention of deceiving or misleading the Classification Panel is guilty of Intentional Misrepresentation" (IPC Athlete Classification Code, 2015, Section 6.4). When it comes to the length of the ban, IFCPF stipulates a minimum of two years without participating in the sport (IFCPF, 2015b, Section 2.13), as IPC establishes a minimum of 12 months (IPC Athlete Classification Code, 2015, Section 6.6). In Para-triathlon, if an athlete is found guilty of cheating they are not allowed to undergo any further evaluation for a minimum of two (2)

years from the date upon which the athlete intentionally misrepresented skills and/or abilities (ITU Para-triathlon Classification Rules, 2015, Section 7.7). Another example is Wheelchair Tennis, which again is a minimum ban of 2 years (ITF Wheelchair Tennis Classification Manual, 2016, Section 4.7). When asked how to penalize misrepresentation, the total percentage was of 40% for the player or team to not be allowed to participate in the following major tournament, followed by 37.5% who said an economical fine would be a good idea and maybe also help to prevent this type of situation as mentioned by NIRP1: “An economical fee to deter that”.

In figure 24, we can observe the different questions and their relations with arrows. The questions have been grouped into sections (A, B and C) allowing an easier interpretation of the results and their discussion.

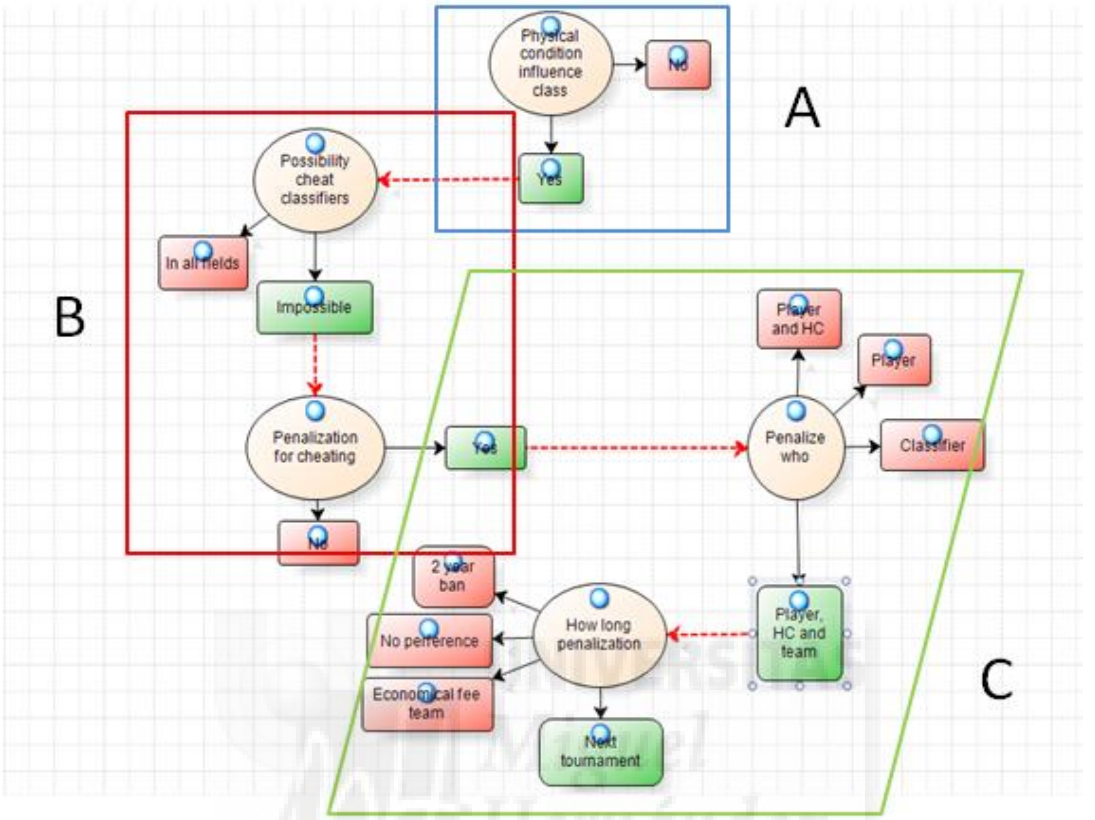

Figure 24. Concept Map about the Players Topic.

3.1.4. Processes of Classification Topic

The final batch of questions was linked to “Processes of Classification”, where the questions asked were based on current issues and future ideas to optimize the classification system. These questions (Nº18) started with “What’s your opinion on the 30 minute rule during the pool phases, where a team must play a player that needs to be observed during this time?” (Figure 25).

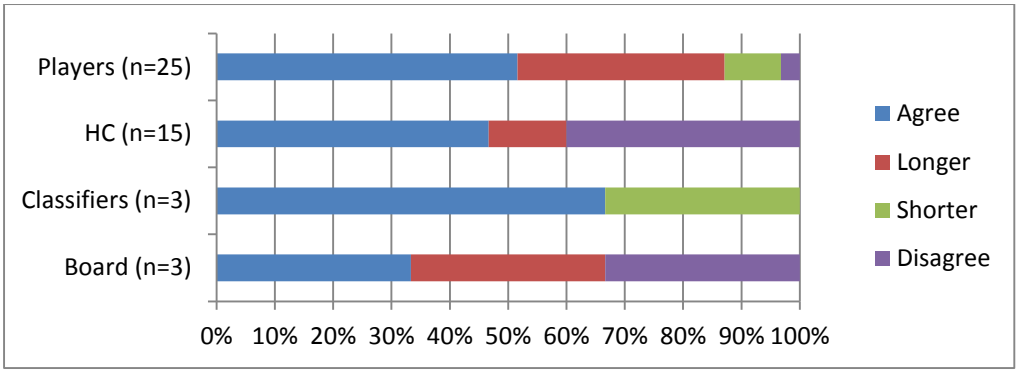

Figure 25. Percentages of answers to question 18.

Many diverse answers were obtained but the most elevated total percentage was 48.07% with people agreeing that the 30 minute rule is adequate. The second most talked about was "longer" (26.92%), meaning that people do not only agree that this rule should exist but the time should even be longer than 30 minutes. The less mentioned options were people who disagreed with this rule (15.38%), and that the time should be shorter (9.62%).

Just over half of players (51.61%) agree with this rule, as one player said: "I think that's sufficient time" (ARGP1). The next most commented from players was that the time should be longer with 35.48%, by defending that "I think an hour would be better because as the player is more fatigued you can see the disability more" (VENP2).

The HC group is the only one with a different opinion from the rest. Although they coincide with the highest percentage that agree with this measure (46.67%), in second place at 40% is "disagree". Among those who agree one HC said: "I think it is sufficient" (HC3). Of those who disagree, a HC argued: "That is also a problem because I have to use the

players under observation and didn't plan to use them in this match and get worse result than expected" (HC14). Only 13.33% thought that this time should be longer with a HC saying: "I think it should be a whole game and the reason for this is because when a player gets tired the disability shows up even more, so for me it would be 60 minutes" (HC5). None of the HC´s believed that the time should be shorter.

The opinions viewed from the classifiers, 66.67% agreed with the 30 minutes, by saying: "I don't think it needs to be longer or shorter because half an hour with how much they run in soccer". One classifier even thought that the time could be shorter by commenting: "Well yeah, you have to think about a good solution and we can always say, if it's not enough time he still remains a Competition Review Status so I think 30 minutes is too long".

Board members were split between agreeing, thinking the time should be longer and disagreeing altogether with the rule. The member that did not agree did not have a clear solution and simply said: "I think there must be a certain rule but for me it can't be replaced by must play sufficient time to make a good judgment".

The total agreement of this duration was of 48.07%, which is just under half. In other team Para-sports like Wheelchair Basketball for example, do not mention a minimum observation time during competition and only explain that "If the panel had seen very little of a player during the tournament, and there remains uncertainty, a card will not be issued for the player. On the final tournament report the player will be listed as

"limited observation; no card issued" (IWBF Classification Manual, 2014, Section "The process of classification"). Also, in Wheelchair Rugby there is no minimum amount of minutes for competition observation. Therefore even though almost half agree that 30 minutes is enough, maybe it should be down to the criteria of the classifier or even over the period of a whole competition as SCOP1 says: "Classification should be done over the whole tournament".

A new idea for improving classification was tested in this question (nº19): "Would you agree that classification observation of a player could be done during a training session, as well as during a match? This possible new future idea for improving the classification system seemed to be welcomed as 83.01% said yes to this feature (Figure 26).

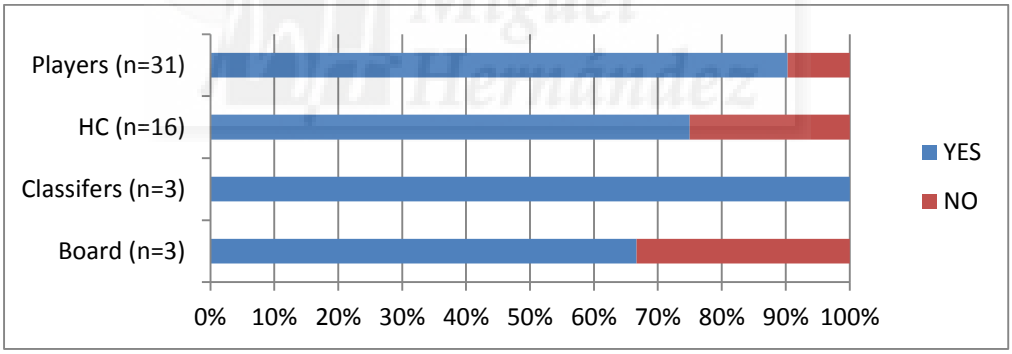

Figure 26. Percentages of answers to question 19.

Players agreed with 90% approving that classifiers can observe during team training sessions. One player that agreed said: "Yes, it would be good because that way it would be harder to cheat the classifiers" (BRAP2). Of the 10% that did not think this measure would be useful, one player defended: "No, I think you have to truly get a clear

classification, you have to see them when he is in a competitive environment" (ROIP1).

These percentages were slightly lower in the HC group, with 75% agreeing and one HC saying: "If the classifier wants to, then there wouldn't be a problem and we have to accept" (HC10). Of those who disagree, a HC pointed out "Maybe so, but training sessions can be manufactured but a game is a game, you know I can manufacture a session if I want to, I don't see the sense in that way" (HC11).

Classifiers agreed 100% with this measure as one classifier agreed: "Yes totally, I think it should be done during the (two weeks) of the tournament". Board members tended to agree with 66.67%, although one member didn't agree by highlighting: "I don't know, maybe whether there is a risk with the athlete, there is something that happens in a match that maybe doesn't happen in the training, so I'm not sure if the training observation would be adequate in some circumstances".

The percentages of agreement to this question are elevated with a total percentage of 83.01%. In both Wheelchair Basketball and Wheelchair Rugby players are observed during team practice: "New players are observed during the team´s observation practice prior to the commencement of the competition" (IWRF Classification Manual, 2015, Section 3.8) and "Observation assessments consist of observing activities such as ball handling and wheelchair tasks during warm-up, training and/or practice, and/or during competition" (IWBF Official Player Classification Manual, 2014, Section "Processes of Classification").

In Para-Canoeing, observation should be completed while the paddler is aware of being observed and while not aware, both medical and technical classifiers both observe the paddler while on the water, while training and/or racing (International Canoe Federation Paracanoe VA´A Classifiers Manual, 2015, Appendix 1).

Consequently, with such a high percentage agreeing to this necessity and fellow Para-sports which have already introduced this extra to the classification process adds to the need of modifying this process. Also, as SCOP2 mentioned: “Maybe use match footage” which is interesting because Wheelchair Rugby have already introduced this technology in the classification process “The classification panel may use video footage and/or photography” (IWRF Classification Manual, 2011, Section 3.8). Although stipulated in the IFCPF (2015b), Section 2.7.4: “Video footage and/or photography may be utilized by the Classification Panel for all classification purposes connected to the competition”, it has not been up to recently that the classifiers have started to use this tool, which players show interest in their use for improving classification.

The following question (Nº20) was a continuation of the last, consisting in: “Would you prefer that during the training session the classifier simply observes or that they can also intervene?”. Here the percentages are more varied. Exactly half of the people interviewed agreed that the classifiers can intervene freely during a training session if necessary. Of the total remaining, 26.19% disagreed and 23.81% agreed, but only if the intervention was made after the training session had finished (Figure 27).

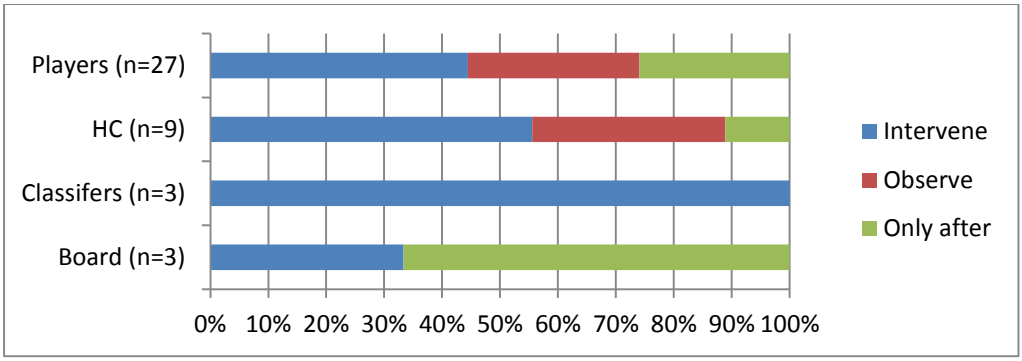

Figure 27. Percentages of answers to question 20.

Within players, 44% said yes to intervention of the classifier by saying: "I think that whatever helps classification is good" (ARGP1). Of the 30% who did not agree argued: "No, only observe because if a team is training it wouldn't be good for the team as the time for training is very little" (PORP1). The remaining percentage thought that classifiers could only intervene after the training session defending: "After a session they can intervene by all means but not during because that stops the flow of the training session" (AUSP2).

Of those HC´s that answered this question, 55.56% agreed as one HC added: "Yes, with me that would be perfect" (HC10). Less people disagreed with 33.33%, as one HC mentioned "Only observe because it's not ethical to intervene because you are interrupting the work of the coach" (HC3). Only 11.11% said to intervene after.

Classifiers again agreed 100% with this option and one classifier explained: "Call somebody and feel the spasticity, if I am looking at players now and like, I am wondering if there is so much spasticity, I just

want to check it's like one minute. I think we must have the right to do that, well it's fair for anybody and for the sport and we do it for the sport".

Among Board members, one member did not have a problem and said clearly: "I think you should, in this case you should clearly describe the classification process and describe in our rules that this is a possibility because you have to take into account privacy of the players". Although the other two members of the Board, believed that only after this could be possible, as one member said: "After they can but not during, after the training session is over you can communicate with the team".

Again, half of the interviewed believe that classifiers can intervene during team training sessions if the classifier thinks it is necessary as one player says "If they need to intervene for something specific yes" (BRAP1). This already happens in Wheelchair Basketball as stipulated: "During this practice the Panel may choose to meet with the new player to discuss with them their proposed class and identify factors which may influence their decision" (IWBF Official Player Classification Manual, 2014, Section "Process of Classification"). In Para-Rowing, the Classifiers may request the rower being classified to perform a range of movements or tests and shall also observe the rower during normal training and racing. The medical and technical classifiers will both observe the rower while on the water. The rower's coach is also encouraged to attend this portion as an observer only. The Classifiers shall satisfy themselves as to the correct sport class of the rower concerned. The rower can also be observed at any moment while

representing his/her rowing ability. The classifiers shall observe the rower while he/she is aware of being observed, and while he/she is not aware of being observed (International Rowing Federation, Para-Rowing Classifiers Instruction Manual 2014, Part Three).

As we can see, this could be an interesting possibility in the future for securing correct decision making in classification, like CANP2 who says: "To see what class to put them in, you are looking at these people and you want to get the most accurate classification for them as possible".

The last two questions are connected and talk about when to classify a player. The first question (Nº21) was: "When do you think a player should be classified?" The total percentages are 65.31% in favour of players being classified before competitions and 34.69% believe that the current system of classifying a few days before the competition is fine (Figure 28).

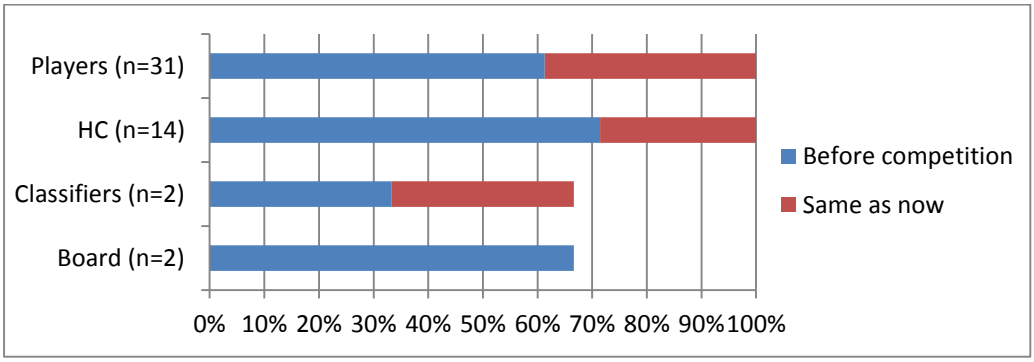

Figure 28. Percentages of answers to question 21.

These percentages are alike among players with 61.29% agreeing that classification should be before the competition as one player said:

“Maybe a couple of months in advance between the exhibition and the tournament” (CANP2). Whereas the remaining 38.71% agree to leaving as it is now, with one player defending: “I say again you have to classify in the competition watching a player playing football” (ESPP1).

HC´s tended to agree more with classifying before competitions with 71.43%. The comments of one HC were: “Yes, I think this is a good idea but it can’t be any longer than 2 months before the competition and there can’t be any margin for mistakes because the consequences are major” (HC4). In opposition, another HC disagreed with classification happening beforehand and said: “It is very difficult to do in a week or a month before but if it is one or two days before then there is no problem” (HC10).

One classifier agreed to classification before competition could be a good idea by saying: “Any time before I think, maybe six months before but if it’s an ABI, no more than two months, if it’s newly acquired”. A different classifier believes that classifying during competition is the better option: “I can imagine it will be more difficult for the classifiers because now it’s still 80 people and I don’t remember all details of course, but still you can remember some things, it’s good to have a picture in your head and then go to classification”.

The Board members agreed that classification should be before a competition mentioning: “Ohh for sure, I like that idea, I could see that happening, as long as I would think, it would be advisable to make it a new state, so as long as it’s not a confirmed class”.

The final question (№22) asked and linked to the previous question was: "Would you be in favour that players can be classified in accredited classification centres before a competition?" A high total percentage of 78% think that this future possibility could be a good idea (Figure 29).

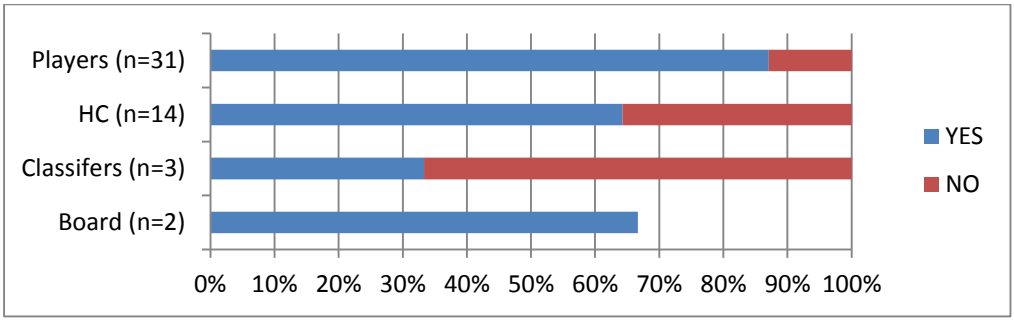

Figure 29. Percentages of answers to question 22.

This percentage is the highest within players (87%), with one player agreeing with this: "Without a doubt it could be great in relation to people coming in and different people looking at different players, so that may have a big effect" (ROIP2). Of those who oppose, a player said: "No, because they still have to play a game because until you play them in a pressure situation, then you can't see the real player" (AUSP1).

The number of HC´s who agree with this is lower compared to the player's agreement (64.29%). One HC gave his opinion on how this could be arranged in the future: "Say you had a classification week in Europe and countries brought their players that require classification you could have 100 players and they could be mixed and play as many games as needed, that´s an idea" (HC9). However, of those who opposed, one HC

argued: “The major problem for us and other countries is finance” (HC3).

Among the classifiers, one classifier is in favour of accredited classification centres but the other two classifiers disagreed as one said: “I think it would be difficult because I don’t know how they would plan it and to find people that are experienced in these regions”.

The board members approved of this possible system and one member explained: “Yes, I think that works, we did that in my country years ago and flied a team in to look at players because it helped us to have an idea on who we could pick, so I think that´s a great idea”.

If we look into these last two questions, there is a connection among them. A total percentage of 65.31% agreed that players should be classified before a competition starts. This percentage together with 78% of the total interviewed who agree that players can be classified in accredited classification centres before a competition begins can be related. To date, there are not any other Para-sports that classify before a competition and only classify at the competition a few days prior to the competition starting. This topic has been discussed by IPC and in their latest International Standard for Athlete Evaluation, 2016 version, in Section 14 of Athlete Evaluation Location, it stipulates that “Athlete Evaluation may take place at a location, referred to as a Non-Competition Venue, and/or time other than at a Competition in order to provide Athletes with the greatest possible opportunity to undergo Athlete Evaluation by a Classification Panel and be allocated a Sport

Class" which is followed by "Athlete Evaluation done at any other location must properly fit to conduct all necessary parts of the process, such as a sports science institute, without compromising the standard of Athlete Evaluation".

A part from the future possibility of Athlete Evaluation being made at sport science institutes, the International Paralympic Committee (IPC) made great strides in classification research during 2013, as the first of two IPC Classification Research and Development Centres opened in Australia and the Netherlands. Three centres are being opened around the world to spearhead the co-ordination of the classification research agenda in the Paralympic Movement, with each centre being dedicated to one particular impairment group: physical, visual and intellectual. The purposes of these centres are to develop evidence-based classification as said by IPC Classification Committee member Dr. Sean Tweedy: "Evidence-based decision-making is critical because it can reduce the number of classification controversies and increase the level of certainty about classification decisions" (Official Website of the Paralympic Movement, Nº 24: Classification Research to Make Para-sport better).

For those that opposed to classification at a Non-Competition Venue because of worries about not being able to see the player during a match as HC8 said "You miss the part on the pitch which is really important", there is a solution to this. As the IPC International Standard for Athlete Evaluation (2016) in Section 14.7 highlights: "If an International Sport Federation provides that the allocation of a Sport Class in respect of a certain sport is potentially subject to Observation in

Competition Assessment this does not preclude the International Sport Federation from making Athlete Evaluation in respect of that sport available at a Non-Competition Venue". Therefore, considering the elevated percentages in favor of these changes that are also backed up by IPC, it could be a potential change in the right direction in classification in the near future. See Figure 30 for the concept map which indicates the connections and links between the questions relate with the process of classification topic.

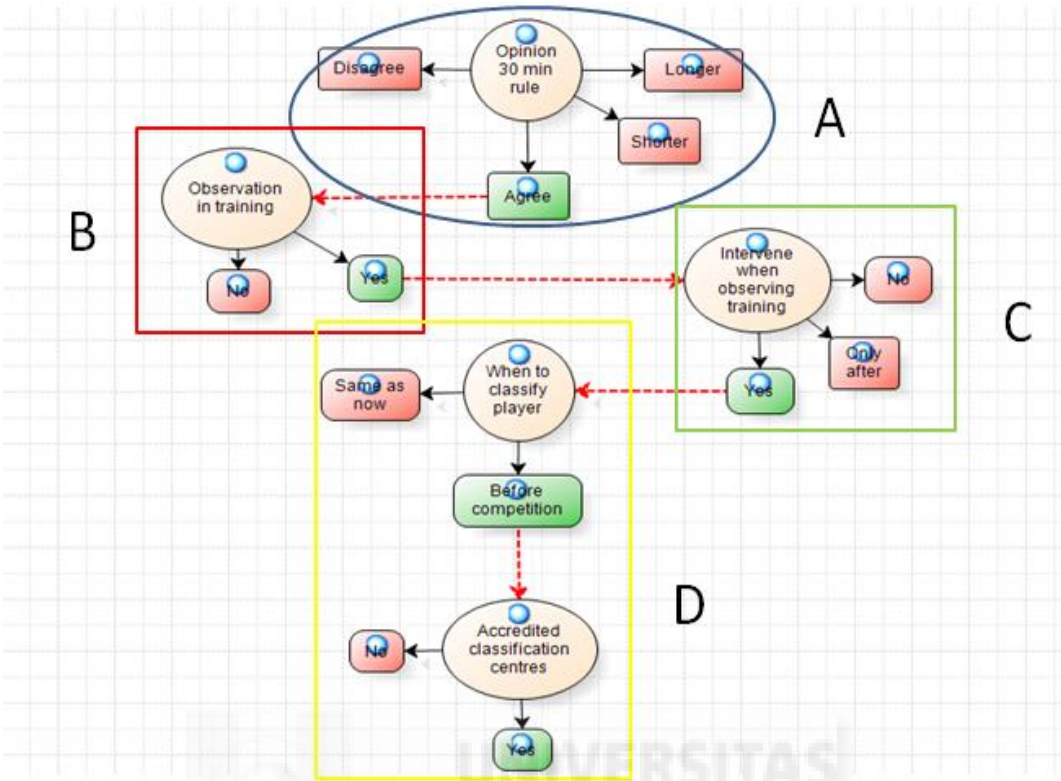

Figure 30. Concept Map about the Processes of Classification

3.2. Questionnaire Results

3.2.1. Correlations

As it was described in the section 2.4.2 (Questionnaires Data Analysis), a series of correlations were made including the ranking of the teams before the start of the competition, the previous experience of the player in CP-Football, the age of the player, the level of competition that the player had assisted in past competitions, and the variables corresponding to the different questions of the questionnaire.

Only those significant correlations have been taken into account. The results have been divided into the next four categories for a clearer understanding of them.

3.2.1.1 Experience of the Players

This category refers to how much experience each player has within the sport in number of years involved, using the question: "How long have you been competing in CP-Football?". Not many correlations were obtained with the questions of the survey. In the *Classifiers* dimension, the question *"Do you believe that in the last 2 years there has been a change in the way the classification process has been applied?"* showed a low negative relationship (r=-0.194, *p*=0.017). Also, the *Players* dimension included the question: *"Do you believe that a player should be penalized if they fool the classifiers?",* with a low negative relationship (r=-0.159, *p*=0.044).

Looking at if players believe there have been any changes over the last 2 years, there is a negative relationship, meaning that, the more experience a player has, the less they feel any changes have been made in the classification process. This may be because those players, who have been participating in CP-Football for so many years, have not had to go through any classification processes, and consequently have not experienced first-hand the new changes. On the other hand, newer players can see the changes being made because they have had to undergo classification recently. If we analyse the last question, the relationship is negative meaning that, more experienced players think it is not necessary to penalize a player for cheating, whereas the less experienced players believe that players should be penalized. Maybe this could be because the more experience players are not used to players being penalized for this. On the contrary, the newer players feel

that the sanctions that are in place should be used to penalize players when necessary.

3.2.1.2. Age of Players

Taking into account the age of the players, three questions of the survey of the *Class* dimension showed significant correlations: i) *"Do you think that players of classes FT5 and FT6 can be considered as "low classes"?"* with a low positive relationship (r=0.194, *p*=0.021), ii) *"Would you increment the number of class 8 players on the field?"* with a low positive relationship (r=0.236, *p*=0.005), and iii) *"Do you think that CP-Football should maximize the participation of players with higher limitations in their game skills?"* with a low positive relationship (r=0.191 *p*=0.027).

In the first question, the older the player is the more they believe that players of classes FT5 and FT6 are considered as low classes. This could be because the older the players are they are more conscious of the abilities of the players on the pitch. In the second question, the older the player, more they would like to see more class FT8 players on the field and vice versa, the younger a player is, less they want to see class FT8 players. Maybe this is because the older players had got used to playing with two class FT8 players on the football pitch, as the rules in the past have allowed this, whereas younger players have only played with one class FT8 player on the pitch and prefer not to have any more of this class. In the last question of this dimension, the more maturely aged players would like to see more players with higher limitations in their

skills. Although the results of the third question at first glance may seem contradicting to the second question, as they would prefer to see a higher number of less impaired players, which are class FT8, but at the same time they would also like to see more participation of higher impaired players too. Therefore they would like the best of both options. Maybe these players would like that players with higher impairments are more involved in the sport as they may feel that over the years these type of players are disappearing. However, also it is possible that they think that playing with two class FT8 players at one time, gives more opportunity to those that are sat on the bench due to the restriction of only one player being able to play at one time.

In addition, the Classifiers dimension showed a low positive relationship (r=0.269, *p*=0.002) with the question: *"Do you believe that in the last two years there has been a change in the way the classification process has been applied?".* As the relation is positive, this means that the younger players do not believe that there have been any changes in the last two years and that the older players do feel that there have been some changes. Again this could be due to the older players paying more attention to the small details and have seen how things are changing with time where the younger players do not appreciate these changes as much as their older counterparts.

3.2.1.3. Level of Competition

The level of competition refers to the participation of players in the last four major competitions. The values given in the statistical programme

were 1 for participation at Paralympics, 2 for World Championships or ICUP, 3 for International-Regional competitions, 4 for National competitions and 5 for non-participation at any tournaments before. The *Class* dimension had a significant correlation with the question: *"Do you think that players of classes 5 and 6 can be considered as "low classes"?"*, with a low negative relationship (r=-0.202, *p*=0.013). The *Processes of Classification* dimension has also a significant relation with the question: *"Do you think that the current classification system has been a factor that has driven to the exclusion of the sport from the Paralympic Games of Tokyo?"*, with a low positive relationship (r=0.175, *p*=0.037). Finally, the *Players* dimension showed a significant relation between the level of competition and the question: *"Do you believe that a player should be penalized if they fool the classifiers?"*, with a low positive relationship (r=0.218, *p*=0.008).

When looking at the results we can see in the class dimension in the first question the relation is negative. This means that players that have assisted major competitions in the past think the class FT5 and FT6 are considered as low class players. Maybe this is because players who participate in major competitions may believe that more impaired players in classes FT5 and FT6 are interrupting in the fluency of the game making the game slower and less attractive from these players point of view. On the contrary, players that do not get the chance to assist at major competitions are observing the game play of these types of competitions and are unable to see the level of impairment of the classes FT5 and FT6. They feel the activity limitation is minimal

compared to the players of these classes that they have in their teams. In the next question, the relation is positive. This is linked with the last question, as the teams that are unable to classify for major competitions due to having players with more impairment, believe they have not had the chance to participate at major competitions due to the classification process allowing players with minimal impairment to participate. They are observing from outside the competition that in many players they cannot see the impairment of the player and feel that the classification process is to blame for CP-Football being left out of the Tokyo Paralympics. The last question in connection with player's level of competition is if players should be penalized if they are found guilty of cheating. Those players who have attended major competitions believe that players that have cheated should be penalized for it. This could be due to the fact that these players know first-hand the difficulties of reaching a high level of competition and that players that cheat do not have a place in these competitions as they are taking away the chance from other players from participating in such important tournaments such as the Paralympics that are only celebrated every 4 years.

Highlight that within all of the correlations made, the question "Do you think that players of classes FT5 and FT6 can be considered as "low classes"?" was the one that came up in the Age and Level of competition variables. In addition, the question "Do you believe that in the last 2 years there has been a change in the way the classification process has been applied?" appeared in both the Experience and Age correlations, which indicates that to be able to appreciate changes that are made in

the classification process, it is necessary to have experienced the process over time.

3.2.2. Differences between Groups

3.2.2.1. Differences between Classes

To calculate the differences between groups, a one-way ANOVA was done, performing a Scheffe Post Hoc test to allow a comparison between two groups. First of all, the differences between classes FT5, FT6, FT7 and FT8 were calculated. The descriptive and ANOVA data of the between classes results with significant differences are in Table 4.

Table 4. Between Classes Descriptive and ANOVA Data

		N	Average	Standard Deviation	Pair Comparisons	*p*	*d*
CS1	FT5	24	3.54	.66	FT5 vs. FT7	0.003	0.91
	FT6	17	3.35	.61	FT5 vs. FT8	0.001	1.7
	FT7	100	2.84	.88	FT6 vs. FT8	0.001	1.5
	FT8	22	2.27	.83			
CS3	FT5	24	3.12	.78	FT5 vs. FT8	0.003	1.29
	FT6	17	2.59	1.37	FT7 vs. FT8	0.005	0.82
	FT7	100	2.82	1.16			
	FT8	24	1.88	1.12			
PY2	FT7	100	2.56	1.01	FT7 vs. FT8	0.037	0.71
	FT8	21	1.86	.96			

CS1: Do you agree with the measure adopted to include two FT5 or FT6 classes after Río Paralympics 2016? ; CS3: Would you increment the number of class FT8 players on the field? ; PY2: Do you think it is possible to cheat the classifiers? d= Effect Size

With regard to the *Class* dimension, significant differences were obtained in two questions; i) *"Do you agree with the measure adopted to include two FT5 or FT6 classes after Río Paralympics 2016?"* (CS1)

[$F_{(3,22)}$ = 11.02; p<0.001] whose pair comparisons also report significant differences between classes FT5 vs. FT7 (p=0.003, d=0.91, large) in favour of FT5, FT5 vs. FT8 (p<0.001, d=1.7, large) in favour of FT5 and FT6 vs. FT8 (p<0.001, d=1.5, large) in favour of FT6; and ii) *"Would you increment the number of class 8 players on the field?"* (CS3) [$F_{(3,22)}$=5.75; p<0.001] with pair comparisons that show significant differences between FT5 vs. FT8 (p=0.003, d=1.29, large) in favour of FT8, and FT7 vs. FT8 (p=0.005, d=0.82, large) in favour of FT8.

According to these results, we can see that in the first question about the measure of including a minimum of two FT5 or FT6 players on the field, there were three differences found and the results were what we expected. Firstly between classes FT5 and FT7 in favour of FT5, meaning that those in class FT5 were more in favour of the new measure adopted as it personally affects this class. Also maybe the class FT7 players do not agree as much with this measure because they may feel it could reduce their possibilities of participation in the game. Secondly, between FT5 and FT8, again being in favour of FT5, who assure that the increase in the number of FT5 and FT6 classes is the right move. Thirdly, between FT6 and FT8 with a higher agreement of FT6 players as the measure also affects themselves.

In figure 31 we can observe the difference in opinion between the different classes. On the vertical axis is the Likert scale from 1 to 4 (1 being totally disagreeing and 4 being totally agreeing) and along the horizontal axis are the 4 classes (FT5, FT6, FT7 and FT8).

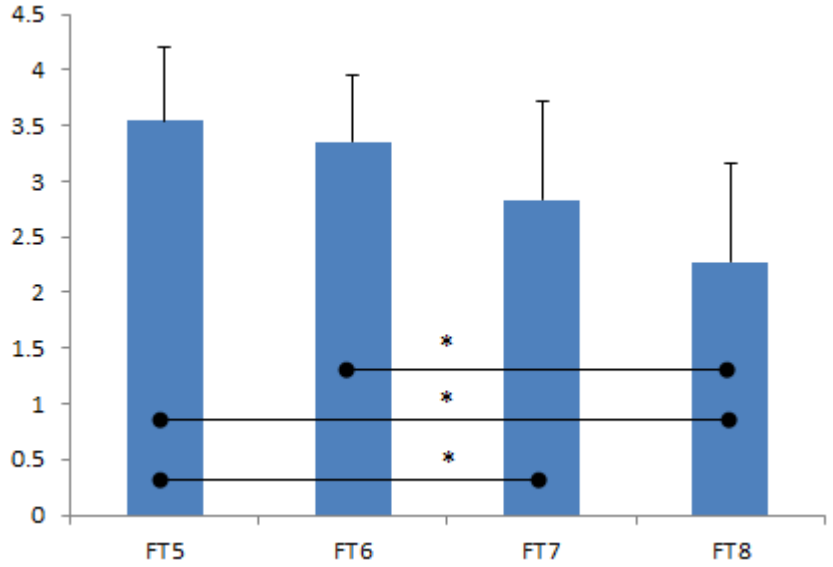

Figure 31. Graphic of mean answers per class to the question "Do you agree with the measure adopted to include two FT5 or FT6 classes after Rio Paralympics 2016?"on a Likert scale of 1 to 4. *p<0.01

The following question about increasing the number of FT8 classes on the pitch is similar to the one in the previous question but the other way round. First off because the ones who were more in favour of incrementing were the FT8 classes as it affects them personally. Comparisons were found with this class compared with FT5 and FT7 who are both against an increment of FT8 classes as it means less chance of participation, as well as a decrease in fairness on the pitch when comparing FT5 players compared to FT8 players when talking about physical capabilities.

In figure 32 we can that FT5, FT6 and FT7 are against the introduction of more class FT8 players, whereas the FT8 players are more in favour of

the introduction of more class FT8 players. We must take note that the results only in this question have been inversed (the Likert scale has been inverted meaning that, 1 is totally agree and 4 is totally disagree) this has been done so that the profile of the graph is similar to the rest of the graphs. For this reason at first glance it may seem that the results are contradictory but this is because of the inversion of numbers that was made when calculating the statistics.

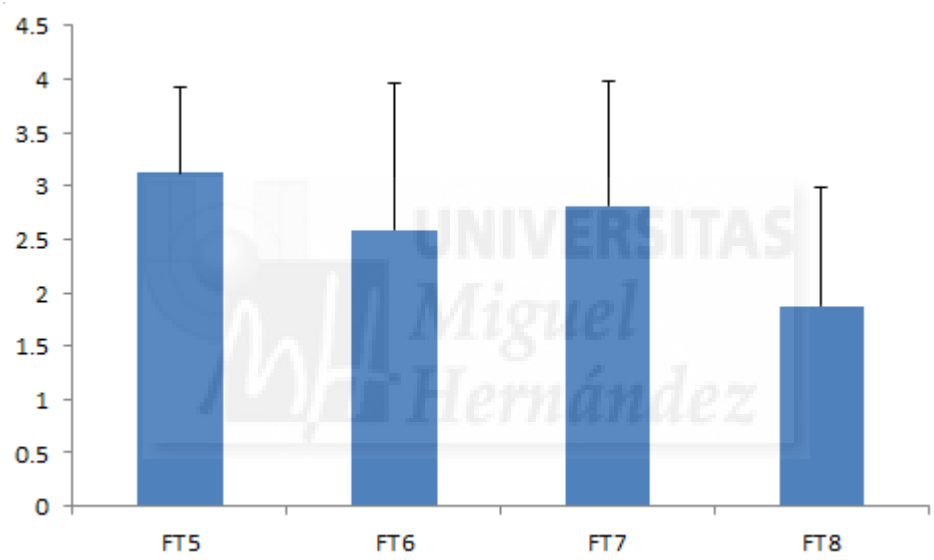

Figure 32. Graphic of mean answers per class to the question "Would you increment the number of FT8 class players on the field?" on a Likert scale of 1 to 4.

In the *Players* dimension, the question *"Do you think it is possible to cheat the classifiers?"* (PY2) also revealed significant differences [$F_{(3,9)}$=3.13; p=0.028] and the pair comparisons show significant differences between FT7 vs. FT8 (p=0.037, d=0.71, moderate) in favour of FT7.

The third question where significant differences between classes were found was between classes FT7 and FT8 when asked if they thought it was possible or not to cheat. The results were in favour of class FT7 who thought that is was more possible to cheat than the class FT8 players. This could be for two reasons, one because FT8 players would say it is not possible, even though maybe they are the class most likely to do this because they are between being eligible and non-eligible or class FT7 or FT8, so they could be tempted to maybe make out they are more impaired than they are. Or because some class FT7 players have witnessed or believe that some players that have been put into class FT7 have cheated, performing in classification below their abilities to be given FT7 class and not FT8 class. This is because players would prefer to be in class FT7 compared to FT8 because the number of FT8 players that can play at one time on the pitch is only one at a time and consequently these players have less of an opportunity to play. The figure 33 shows that class FT8 believe that cheating is not possible compared to the other counterparts.

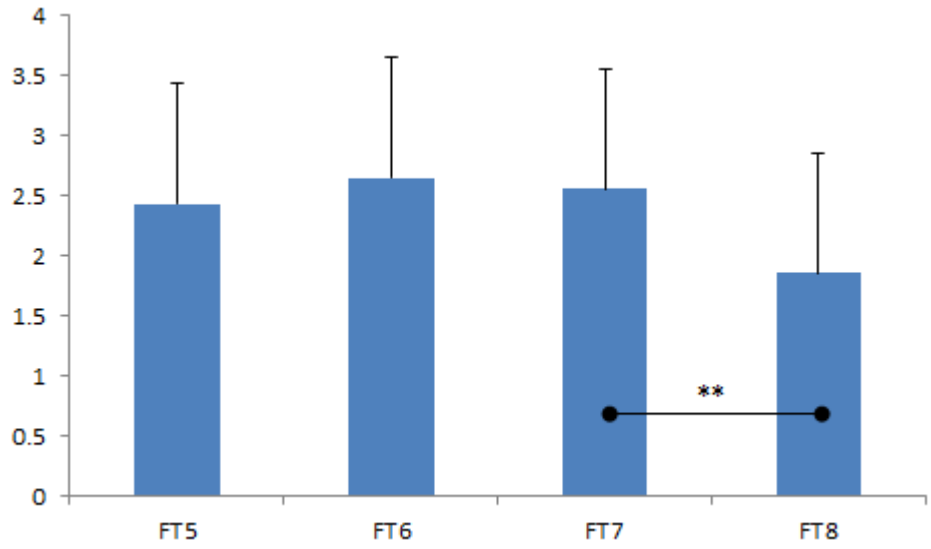

Figure 33. Graphic of mean answers per class to the question "Do you think it is possible to cheat the classifiers?" on a Likert scale of 1 to 4. **p<0.05

3.2.2.2. *Differences between Team Ranking Comparisons*

The same operation as before was made but this time the variable introduced into the statistic programme was the ranking of the team. Ranking of the team is understood as each countries position in the World Ranking previous to the World Championships 2015. The ranking of the teams is the following: 1st Russia, 2nd Ukraine, 3rd Brazil, 4th Netherlands, 6th Argentina, 7th Ireland, 8th Scotland, 9th USA, 10th England, 12th Australia, 13th Northern Ireland, 14th Portugal and 15th Japan. The teams were divided into three, being top 5 teams in the ranking, the middle ranked teams (four following teams after the 5th ranked team) and the bottom ranked teams (the following four ranked teams after the last middle ranked team). The descriptive and ANOVA

data obtained with significant differences between team rankings are showed in Table 5.

Table 5. Between Ranking Descriptive and ANOVA Data

		N	Average	Standard Deviation	Pair Comparisons	*p*	*d*
CS1	Top5	49	2.81	.95			
	Medium	55	2.77	.90			
	Bottom	60	3.17	.81			
CS2	Top5	49	3.20	.71	Top 5 vs. Medium	0.001	0.68
	Medium	57	2.61	.94	Top 5 vs. Bottom	0.018	0.62
	Bottom	60	2.77	.70			
CS4	Top5	47	3.11	.79	Top5 vs. Medium	0.03	0.72
	Medium	54	2.52	.84			
CS5	Top5	49	2.55	.84	Top 5 vs. Bottom	0.017	-0.58
	Bottom	58	2.99	.65			
CR1	Top5	49	3.07	.84	Top 5 vs. Medium	0.01	0.72
	Medium	55	2.46	.88	Top 5 vs. Bottom	0.055	0.48
	Bottom	60	2.68	.77			
PY2	Top5	48	2.17	1.06	Top 5 vs. Medium	0.006	-0.61
	Medium	54	2.80	1.02			
PR1	Top5	49	3.04	.91	Top 5 vs. Medium	0.05	3.06
	Medium	54	2.48	.97	Medium vs. Bottom	0.06	3.55
	Bottom	60	3.00	.69			
PR2	Top5	49	2.65	.99	Top5 vs. Bottom	0.026	-0.46
	Bottom	57	3.07	.82			
PR3	Top5	49	3.08	1.08	Top 5 vs. Medium	0.001	0.82
	Medium	53	2.25	.96	Top 5 vs. Bottom	0.001	1.41
	Bottom	57	1.77	.76			
P15	Top5	47	1.78	.846	Top 5 vs. Medium	0.001	-0.88
	Medium	53	2.60	1.03	Top 5 vs. Bottom	0.004	-0.71
	Bottom	58	2.40	.90			

CS1: Do you agree with the measure adopted to include two FT5 or FT6 classes after Río Paralympics 2016?; CS2: Do you think that players of classes FT5 and FT6 can be considered as “low classes”?; CS4: Do you believe that CP-Football should favour show

sport limiting the access of players with a high level of disability?; CS5: Do you think that CP-Football should maximize the participation of players with higher limitations in their game skills?; CR1: Do you agree that classifiers follow the classification code strictly?; PY2: Do you think it is possible to cheat the classifiers?; PR1: Would you agree that observation of a player for classification takes place during a training session of your team? PR2: Would you agree that players could be classified in accredited centres of classification with a sufficient time before a competition?; PR3: Do you believe that there are differences between your countries classification and international classification?; P15: Do you think that the current classification system has been a factor that has driven to the exclusion of the sport from the Paralympic Games of Tokyo? d= Effect Size

More significant differences have been obtained for this between groups variable. Firstly, a total of four questions of the *Class* dimension revealed significant differences: i) *"Do you agree with the measure adopted to include two FT5 or FT6 classes after Río Paralympics 2016?"* (CS1) [$F_{(2,6)}$=3.60; p=0.029] with the bottom ranked teams more in favour; ii) *"Do you think that players of classes FT5 and FT6 can be considered as "low classes"?"* (CS2) [$F_{(2,10)=}$7.76; p<0.001], with pair comparisons that show significant differences between top 5 vs. middle table ranked teams (p<0.001, d=0.68, moderate) and the top 5 vs. the bottom ranked teams (p=0.018, d=0.62, moderate) in favour of the top 5 teams in both cases; iii) *"Do you believe that CP-Football should favour show sport limiting the access of players with a high level of disability?"* (CS4) [$F_{(2,9)}$=6.27; p=0.002], which pair comparisons show significant differences between the top 5 ranked teams vs. the middle ranked teams (p=0.03, d=0.72, moderate) being higher in the top 5 ranked teams; and iv) *"Do you think that CP-Football should maximize the participation of players with higher limitations in their game skills?"* (CS5) [$F_{(2,6)}$=5.12; p<0.007], which pair comparisons show significant differences between the top 5 vs. bottom ranked teams with a slightly

higher average in the bottom teams (p<0.017, d=-0.58, moderate). In addition, with regard to the Players dimension, the question *"Do you think it is possible to cheat the classifiers?"* (PY2) [$F_{(2,10)}$=5.40; p<0.005] revealed significant differences, and pair comparisons show significant differences between the top 5 vs. middle ranked team (p<0.006, d=-0.61, moderate) in favour of the middle ranked teams.

Although in the first question (if players agreed with the new measure of introducing more FT5 and FT6 players) there was not any significant differences between the pair comparisons, the bottom ranked teams were the ones that most agreed with this measure. This is in line with previous results explained above, as the lower ranked teams tend to have more players that fit into the FT5 and FT6 classes (players with higher activity limitations with regard to the game). Whereas, on the other hand, the higher ranked teams dispose of less players of this class as they may belong to FT8 because they have less impairment due to the high level of training they receive or they have more players to choose from in their country, bringing players to the top of each class. In the graph we can appreciate the change in the profile of responses (although not statistically significant) between the opinion of the lower ranked teams compared to the middle and top 5 ranked teams.

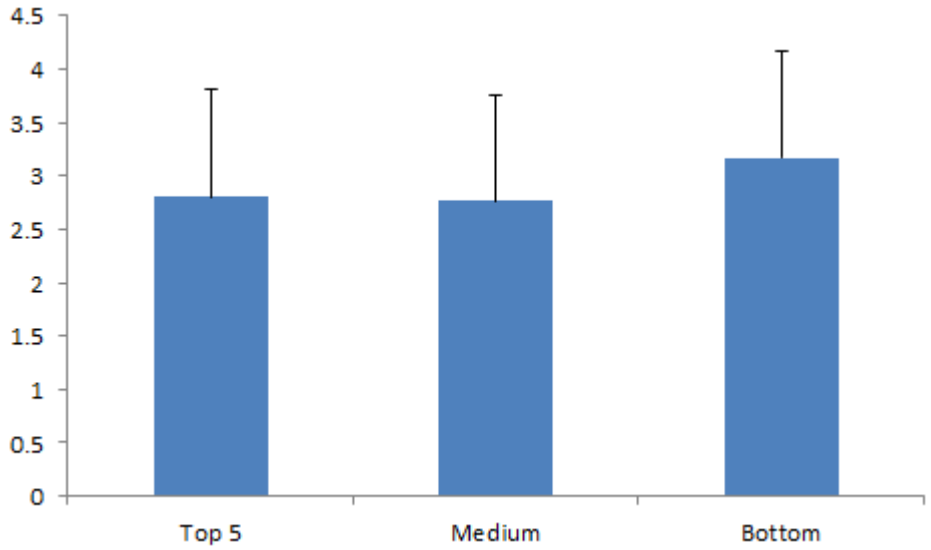

Figure 34. Graphic of mean answers per team ranking to the question “Do you agree with the measure adopted to include two FT5 and FT6 classes after Rio Paralympics 2016?” on a Likert scale of 1 to 4.

The following question asked players if they considered FT5 and FT6 as low classes. There were two significant differences, one between top 5 and middle ranked teams and the other between top 5 and bottom ranked teams. In both cases, the top 5 teams agree more than the other teams that these classes are considered as low classes. This could be because the teams they play against have more impaired class FT5 and FT6 players, as these teams train less and there is more of a difference in quality of play between FT5 and FT6 players from top 5 teams compared to middle and bottom ranked teams. We can see in the graph that the top 5 teams believe that the classes FT5 and FT6 are considered as low classes compared to the medium and bottom ranked teams.

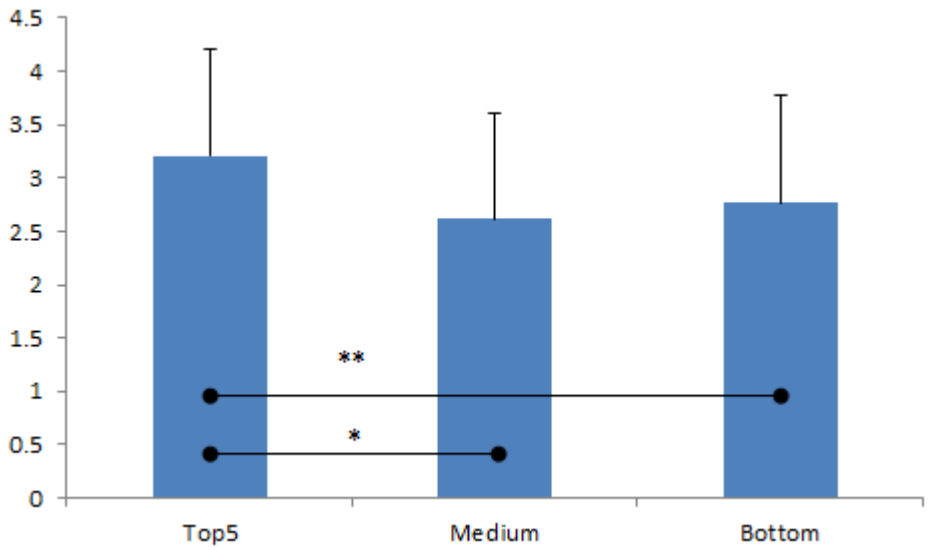

Figure 35. Graphic of mean answers per team ranking to the question "Do you think that players of classes FT5 and FT6 can be considered as "low classes"?" on a Likert scale of 1 to 4. *p<0.01, **p<0.05.

Again the next question is related with the two previous ones and the results are similar, especially if we compared the two graphs in figures 35 and 36. Significant differences were found between top 5 and middle ranked teams. The top 5 teams were those that believed the sport should limit the access to players with higher impairments. As previously argued, these teams are content with the classes that there are at the moment as they are achieving the better results and are not interested in any major changes in the classification system. In figure 36 we can observe this result and compare it with figure 35 above, seeing a lot of similarity between them.

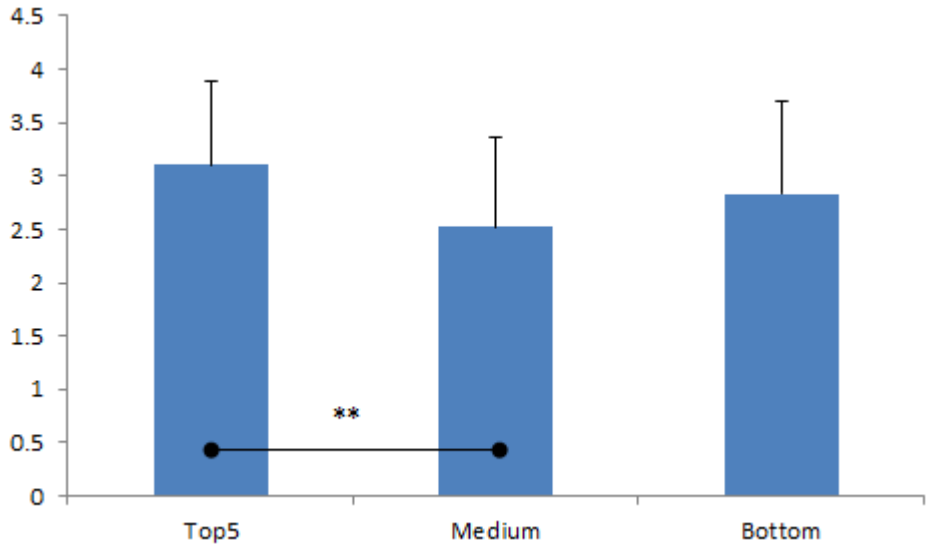

Figure 36. Graphic of mean answers per team ranking to the question "Do you think that CP-Football should favour show sport limiting the access of players with a high level of disability?" on a Likert scale of 1 to 4. $^{**}p<0.05$

The final question of this dimension reaffirmed the previous answers as this question obtained the answers in the same direction. The top 5 teams did not show as much agreement towards maximizing the participation of players with higher limitations in their games as the bottom ranked teams, as the top 5 teams prefer as mentioned above, to limit the access of players with high levels of impairment.

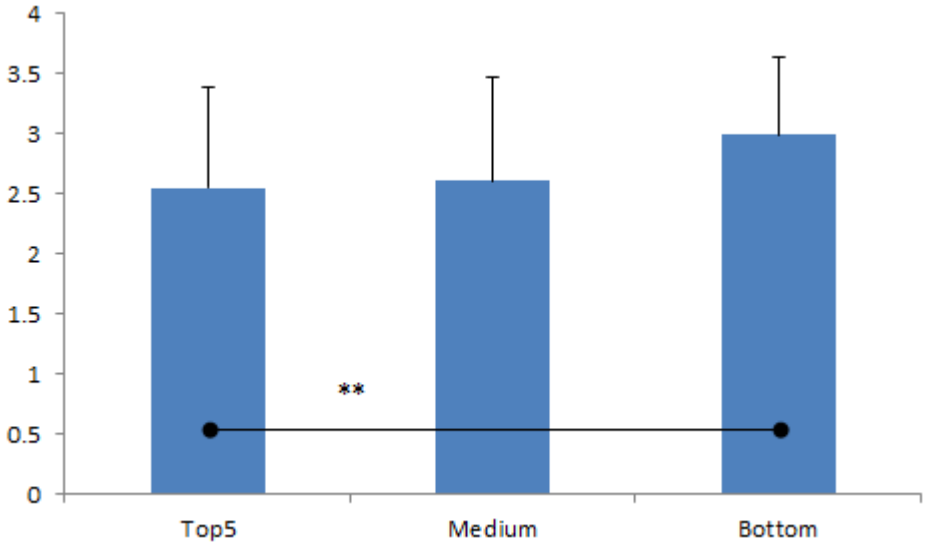

Figure 37. Graphic of mean answers per team ranking to the question "Do you think that CP-Football should maximize the participation of players with higher limitations in their game skills?" on a Likert scale of 1 to 4. $^{**}p<0.05$

In the player's dimension, there were significant differences between the top 5 and the middle ranked teams with the middle ranked teams being the ones that believe that it is possible to cheat the classifiers. Maybe this is because they see the top 5 ranked team's players trying to fool during classification, trying to increase their impairment to more than what they have to obtain in this way a lower class and a better opportunity for their team to win (Figure 38).

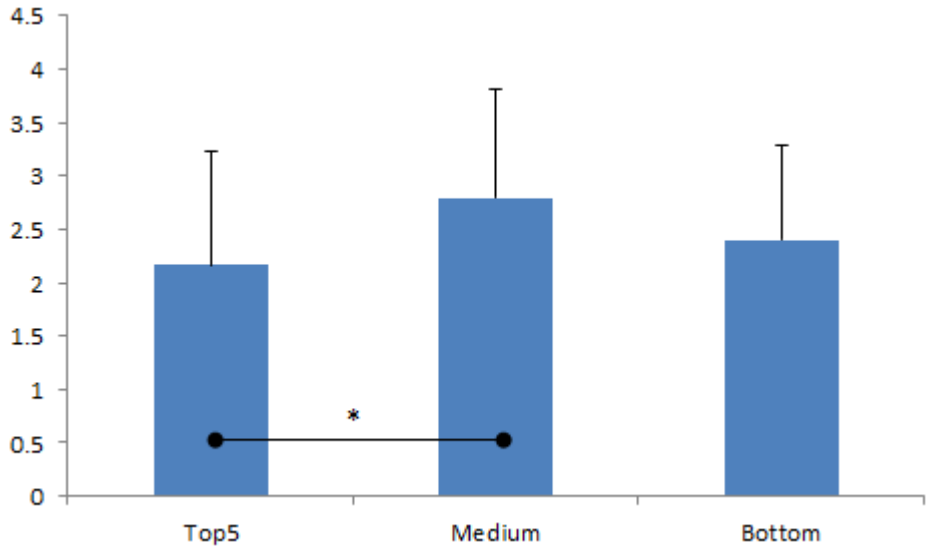

Figure 38. Graphic of mean answers per team ranking to the question "Do you think it is possible to cheat the classifiers?" on a Likert scale of 1 to 4. *p<0.01

With regard to the Classifiers dimension, significant differences were obtained for the question: *"Do you agree that classifiers follow the classification code strictly?"* (CR1) [$F_{(2,10)}$=7.28;p<0.001], whose pair comparisons show significant differences between the top 5 and the middle ranked teams (p<0.01, d=0.72, moderate) being in favour of the top 5 teams, and close to significant between top 5 and the bottom ranked teams (p<0.055, d=0.48, low) also in favour of top 5.

The top 5 ranked teams believe that classifiers follow strictly the classification rules, obtaining significant differences between middle and bottom ranked teams but being higher for the top 5 in both cases. This could be due to the fact that the classifiers tend to have to reclassify or even make non-eligible many players belonging to the top 5 ranked teams. Hence they feel that due to this, the classifiers are strict when it

comes to the rules. The graph indicates that the top 5 ranked teams agree more to this assumption than the other ranked teams. Also, maybe the medium and bottom ranked teams do not think that the classifiers follow the rules strictly, as they see top 5 ranked team players that have superior game skills compared to themselves. Although these differences in game skills could be due to the fact that the top 5 teams have more players to choose from and also train more frequently.

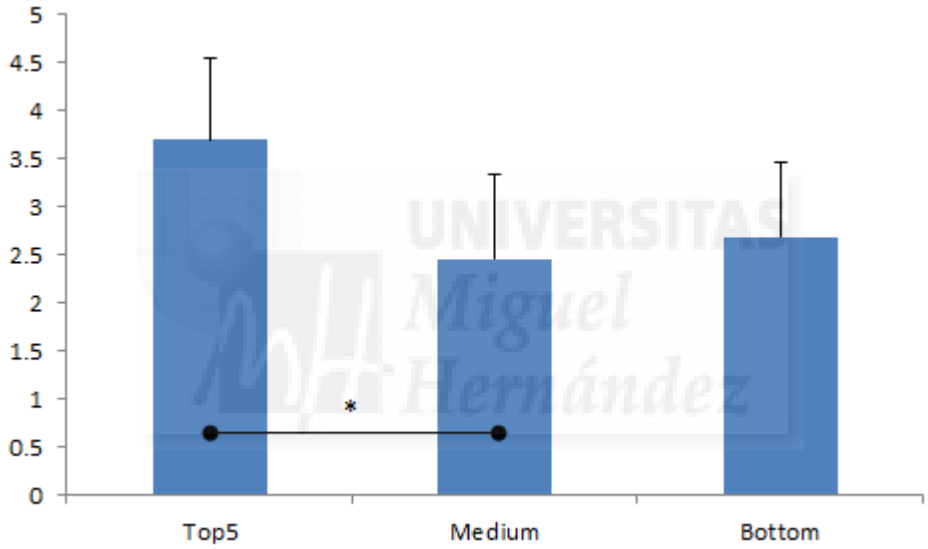

Figure 39. Graphic of mean answers per team ranking to the question "Do you agree that classifiers follow the classification code strictly?" on a Likert scale of 1 to 4. *p<0.01.

Finally, about the *Processes of Classification*, a total of 4 questions showed significant differences in this topic: i) *"Would you agree that observation of a player for classification takes place during a training session of your team?"* (PR1) [$F_{(2,10)}$=7.29; p<0.001], whose pair comparisons show significant differences between the top 5 vs. middle

ranked teams (p<0.05, d=3.06, large) in favour of the top 5 ranked teams and and close to significant between the middle vs. bottom ranked teams (p<0.06, d=3.55, large) being in favour of the bottom teams; ii) *"Would you agree that players could be classified in accredited centres of classification with a sufficient time before a competition?"* (PR2) [$F_{(2,5)}$=4.15; p=0.017], which pair comparisons show significant differences between the top 5 vs. bottom ranked teams (p<0.026, d=-0.46, low) in favour of bottom ranked teams; iii) *"Do you believe that there are differences between your countries classification and international classification?*" (PR3) [$F_{(2,46)}$=26.37; p<0.001], whose pair comparisons show significant differences between the top 5 vs. middle ranked teams (p<0.001, d=0.82, large) and top 5 vs. bottom ranked teams (p<0.001, d= 1.41, large) being in favour of top 5 teams in both and the middle vs. bottom ranked teams (p=0.031, d=0.55, moderate) in favour of medium ranked teams; and iv) *"Do you think that the current classification system has been a factor that has driven to the exclusion of the sport from the Paralympic Games of Tokyo?"* (P15) [$F_{(2,18)}$=10.60; p<0.001], whose pair comparisons show significant differences between the top 5 vs. the middle ranked teams (p<0.001, d=-0.88, large), in favour of the middle ranked teams and top 5 vs. bottom ranked teams (p=0.004, d=-0.71, moderate) in favour of the bottom ranked teams.

In the processes of classification, similar values to previous questions were obtained in the question about the differences between national and international classification. The top 5 and the middle ranked teams were those that felt there are differences between their national

classifiers and the international classifiers. One of the reasons of these results could be because the lower ranked teams do not have national classifiers and consequently receive their classes at international competitions from international classifiers. Whereas the higher ranked teams tend to have national classifiers and coinciding with the previous question, these same ranked teams believe that the international classifiers are stricter than their national counterparts. In figure 40, we can see the difference in opinion between the top 5 and the bottom ranked teams.

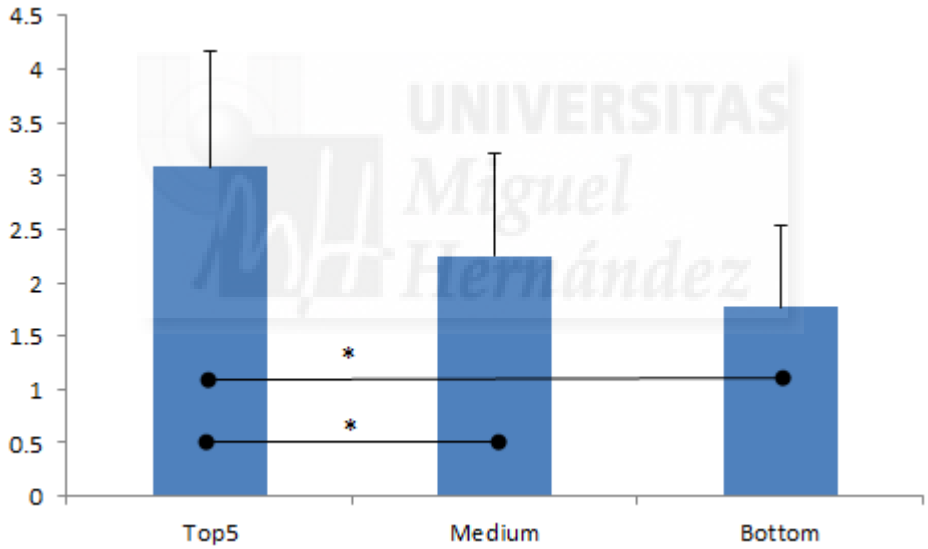

Figure 40. Graphic of mean answers per team ranking to the question "Do you believe that there are differences between your countries classification and international classification?" on a Likert scale of 1 to 4. *p<0.01

Finally, another question from this dimension is if the classification process was to blame for the exclusion of CP-Football from the Tokyo Paralympics. Both middle and bottom ranked teams obtained higher

values defending that the current classification system is to blame. They may think that the classification process was one of the reasons because it has become too soft and has led to CP-football looking like mainstream football. The top 5 ranked teams are the ones whose players seem less impaired compared to say the bottom ranked teams and consequently would not think that the classification process was to blame because maybe classification has played a part in these teams participating at the Paralympics. The contrast between the top 5 ranked teams compared to the other teams can be seen in figure 41.

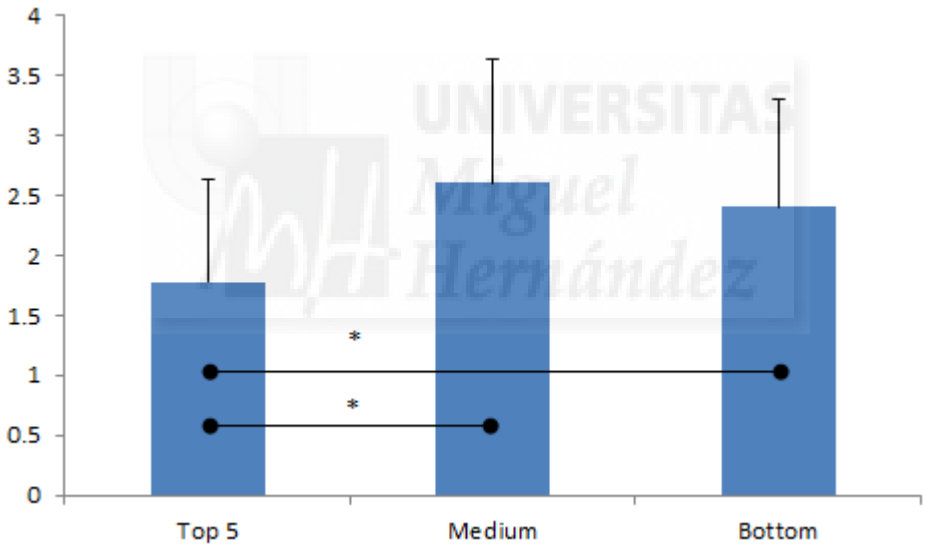

Figure 41. Graphic of mean answers per team ranking to the question "Do you believe that the current classification system has been a factor that has driven to the exclusion of the sport from the Paralympic Games of Tokyo?" on a Likert scale of 1 to 4. *p<0.01.

4 Conclusions

UNIVERSITAS
Miguel
Hernández

4a. CONCLUSIONS

To conclude this thesis, I would like to resume the main findings of the investigation as there is so much information that has been obtained and detailed. There were a total of 53 one to one interviews made and 165 questionnaires completed. There have been numerous interesting findings on what the CP-Football population thinks on the existing classes, classifiers, the players that form the sport and the processes of classification. When comparing results between the interviews and the questionnaires, there were a series of questions that happened to obtain the highest percentages in both methods.

The highest unanimity of percentages obtained in the interviews were in the following questions:

- Would you increment the number of class FT8 players on the field? We must take into account that this question was only asked to the head coaches but even so it obtained a total of 90% disagreeing to incrementing the number of players of this class.
- Do you think that the level of training and the physical condition influence in the way a player is classified?, with a total of 86.53% agreeing to this.
- What is your opinion on the measure adopted after Rio Paralympics Games 2016, to include in the team one more player of classes FT5 or FT6?, with 84.91% agreeing to this.

- Would you agree that classification observation of a player could be done during a training session as well as during a match?, with 83.01% agreeing to this possibility.
- What effect would it have for the sport if other eligibilities were to participate if it was proven that other impairments have an impact in the game?, with 75.47% against the introduction of other physical impairments into the sport as it would have a negative effect.
- Do you prefer a more spectacular football or a football were the impairment of the players is more visible to see?, with 75% agreeing to wanting players that have more visible impairment.

The questions that obtained the highest agreement in the questionnaires were the following:

- Do you agree with the measure adopted to include two FT5 or FT6 after Rio Paralympics 2016? (M=2.92/4 of the Likert scale)
- Would you agree that players could be classified in accredited centres of classification with a sufficient time before a competition? (M= 2.92/4 of the Likert scale)
- Do you agree that factors like the level of training and the physical condition influence in the way a player is classified or in the result of a classification? (M=2.89/4 of the Likert scale)
- Do you think that the players of classes FT5 and FT6 can be considered as “low classes”? (M=2.84/4 of the Likert scale)

- Would you agree that observation of a player for classification takes place during a training session of your team? (M=2.84/4 of the Likert scale)

As we can see in both the interviews and the questionnaires the same questions with greater consistency of results were obtained. These were the following: Do you agree that factors like the level of training and the physical condition influence in the way a player is classified or in the result of a classification?; Do you agree with the measure adopted to include two FT5 or FT6 classes after Rio Paralympics 2016?; Would you agree that observation of a player for classification takes place during a training session of your team?; and Would you agree that players could be classified in accredited centres of classification with a sufficient time before a competition?

Consequently, we can say that although we interviewed only a proportion of players (2 players from each team with a minimum of a Paralympic cycle experience in CP-Football) we can say that the results have coincided with the remaining 165 players that completed the questionnaire.

The top answers obtained cover different areas of classification and it has been evidenced that there is a need for changes and innovation in the classification system voiced by all of the components of the CP-Football family (Players, Head Coaches, Classifiers and Board Members). Hence, a series of modifications could be made to the classification system taking into account numerous opinions that were collected. First

of all, instead of four classes (FT5, FT6, FT7 and FT8), the classes could be divided into three groups A, B or C. Group A would be formed by athletes with Diparesia, group B with Ataxia and/or Diskinesia and group C by players with Hemiparesia. Each group would again be divided into subgroups (1, 2, 3) where number one would be the most impaired player within his/her group and number three the least impaired. This decision might help to reduce problems in decision making for cut-off points between classes and non-eligible players.

As 90% disagreed with incrementing class FT8 players, the minimal impairment criteria will be modified in the IFCPF Rules and Regulations 2018, making it more rigorous, where the activity limitation or impact of the impairment on the game can be more easily observed. A total of 86.53% thought that the level of training or physical fitness of a player was influencing on the class a player received in classification and believing that this was punishing a player for his hard work. For this problem, a number of novel tests from Campayo´s (2016) study that are not sensitive to training, could be applied for evaluating players. As well as this, reduced game situations could be introduced to the technical classification process making it more comparable to real life situations. The percentage of people who agreed with classifiers observing during training sessions was of 83.01%. Hence this high percentage, it has been agreed that in the IFCPF Rules and Regulations 2018, classifiers will observe training sessions of teams with the aim of improving and making classification processes more complete. Also, all processes of observation both during training sessions, technical evaluation and

during matches could be filmed so classifiers can watch back what they have recorded and discuss among each other what class a player should receive. This also would allow to compare performances between training sessions and competitions.

It has been agreed not to introduce more IPC eligible impairments to CP-Football, which is in line with the results of 75.47% against the introduction of other eligible impairments to the sport. Also a high percentage agreed to the possible introduction of classifying out of competition in an accredited classification centre. Consequently, the new IFCPF rules will include the possibility to classify at a Non-Competition Venue, as stipulated in the IPC International Standard for Athlete Evaluation (2016) in section 14.3.

Also, other changes being made in the IFCPF Rule and Regulations 2018 are the introduction of minimal professional/academic requirements for classifiers, making classification more reliable as the background of the classifier can add to the correct decision when classifying. The number of classifiers on the panel will be reduced to two classifiers, which was a concern for some people if the number was to be reduced, although this measure has been taken to reduce expenditure and allow more panels to work at one time when there are many players to be classified, although there can be up to three classifiers depending on the competition. In addition, when required, classification processes can be prolonged if a player needs to be observed for a longer period to come to the correct decision of class. With all of these modifications being made, classification is shifting towards a more evidence-based

classification system giving it more credibility complying with IPC´s Athlete Classification Code (IPC, 2015).

4b. CONCLUSIONES

Para concluir la presente Tesis Doctoral, me gustaría resumir los principales hallazgos de la investigación, debido a la cantidad de información obtenida y detallada. Hubo un total de 53 entrevistas individuales y 165 cuestionarios completados. Han habido resultados interesantes sobre lo que opina la población de CP-Fútbol sobre las clases, clasificadores, jugadores que forman parte del deporte y los procesos de clasificación existentes. Cuando comparamos los resultados entre las entrevistas y los cuestionarios, vemos que hay una serie de preguntas que coinciden en los porcentajes más altos de respuesta. Los resultados cuyos porcentajes de respuesta han sido los más elevados en las siguientes preguntas:

- ¿Te gustaría poder alinear más jugadores de la clase FT8?Debemos tener en cuenta que esta pregunta sólo fue dirigida a los entrenadores, y el 90% estuvieron en desacuerdo para aumentar el número de jugadores de esta clase.
- ¿Crees que factores como el nivel de entrenamiento y la condición física influyen en la manera de ser clasificado un jugador?, con un total de 86.53% de acuerdo.
- ¿Qué opinas de la medida adoptada a partir de los Juegos Paralímpicos de Rio acerca de incluir en el equipo un jugador más de las clases FT5 o FT6?, con un 84.91% de acuerdo con esta medida.
- ¿Estarías de acuerdo en que la observación para realizar la clasificación de un jugador se haga durante un entrenamiento,

además que durante un partido? Estando de acuerdo un 78% con esta posibilidad.

- ¿Qué efectos tendría para el deporte el permitir la elegibilidad de otros impedimentos si se demuestra que tiene un impacto en el juego? El 75.47% se mostraron en contra de la introducción de otro impedimentos físicos en el deporte, ya que opinan que tendría un efecto negativo.
- ¿Prefieres que se vea un fútbol más espectáculo o un fútbol donde sea más visible la discapacidad de los jugadores?, con un 75% de acuerdo en que quieren ver a jugadores con una discapacidad más visible.

Las preguntas del cuestionario con los porcentajes más elevados de respuesta fueron:

- ¿Qué opinas de la medida adoptada a partir de los Juego Paralímpicos de Rio acerca de la norma de incluir en el equipo un jugador más de las clases FT5 ó FT6? (M=2.92/4 en la escala Likert)
- ¿Estarías a favor de que los jugadores sean clasificados en centros acreditados de clasificación con un tiempo de antelación adecuado antes de una competición? (M=2.92/4 en la escala Likert)
- ¿Opinas que factores como el nivel de entrenamiento y la condición física influyen en la manera de ser clasificado? (M=2.89/4 en la escala Likert)
- ¿Crees que los jugadores de las clases FT5 y FT6 clases son considerados “clases bajas”? (M=2.84/4 en la escala Likert)

- ¿Estarías de acuerdo en que la observación para realizar la clasificación de un jugador se haga durante un entrenamiento, además que durante un partido? (M=2.84/4 en la escala Likert)

Como podemos observar en las entrevistas y cuestionarios, las mismas preguntas con los porcentajes más altos han coincidido: ¿Opinas que factores como el nivel de entrenamiento y la condición física influyen en la manera de ser clasificado?; ¿Qué opinas de la medida adoptada a partir de los Juegos Paralímpicos de Rio acerca de la norma de incluir en el equipo un jugador más de las clases FT5 o FT6?; ¿Estarías de acuerdo en que la observación para realizar la clasificación de un jugador se haga durante un entrenamiento, además que durante un partido?, y ¿Estarías a favor de que los jugadores sean clasificados en centros acreditados de clasificación con un tiempo de antelación adecuado antes de una competición?

Podemos decir que, aunque sólo se entrevistó una proporción de jugadores (2 jugadores de cada equipo con un ciclo Paralímpico como mínimo de experiencia), los resultados han coincidido con los restantes 165 jugadores que completaron el cuestionario.

Los resultados con altos porcentajes de respuesta cubren diferentes áreas de clasificación y se ha evidenciado la necesidad de cambios e innovación en el sistema de clasificación demostrado por todos los componentes de la familia de CP-Fútbol (jugadores, entrenadores, clasificadores y gestores del IFCPF).

Por ello, se introducirán una serie de modificaciones podrían en el sistema de clasificación, teniendo en cuenta las numerosas opiniones recolectadas. El primero de todos sería que en vez de cuatro clases (FT5, FT6, FT7 y FT8), las clases podrían estar divididas en tres grupos A, B o C. El grupo A estará formada por atletas con Diparesia, grupo B con Ataxia y/o Diskinesia y grupo C de jugadores con Hemiparesia. Cada grupo estará dividido en subgrupos (1, 2, 3) donde el número uno sería el jugador con mayor impedimento dentro de su grupo y número tres el que menos. Esta decisión podría ayudar a reducir los problemas en la toma de decisión en los puntos de corte entre clases y jugadores no elegibles.

Como un 90% de los entrenadores estuvieron en desacuerdo con aumentar el número de jugadores de la clase FT8, el criterio mínimo de impedimento será modificado en las reglas y regulaciones de IFCPF en 2017, siendo más riguroso, donde la limitación en la actividad o el impacto del impedimento en el juego puede ser observado con más facilidad. Un total de 86.53% de los entrevistados pensaron que el nivel de entrenamiento o estado de forma física del jugador influiría en la clase que recibe durante la clasificación, opinando que esto sería como una forma de castigar al jugador por su trabajo o entrenamiento. Para resolver este problema, una serie de test noveles se introducirán, que no son sensibles al entrenamiento del estudio de Campayo (2016) serán aplicados para evaluar a los jugadores. Además, se introducirán situaciones de juego reducido en la parte técnica de la clasificación para acercarla más a situaciones reales de juego. El porcentaje de acuerdo

con que los clasificadores observen durante las sesiones de entrenamiento fue de 83.01%. Debido a ello, en las reglas y regulaciones del IFCPF 2017, los clasificadores podrán observar sesiones de entrenamiento de los equipos con el objetivo de mejorar y completar así los procesos de clasificación. También todos los procesos de observación, tanto durante las sesiones de entrenamiento, evaluación técnica y partidos serán filmados para que los clasificadores lo puedan ver de nuevo y discutir entre sus compañeros hasta decidir la clase que debe recibir el jugador. De esta manera, se podrá comparar el rendimiento entre sesiones de entrenamiento y competición.

Se ha decidido no introducir más impedimentos elegibles de IPC en CP-fútbol, dado el alto porcentaje (75.47%) en contra de esta posibilidad. Muchos estuvieron de acuerdo en que la clasificación se podría llevar a cabo en centro acreditados de clasificación. Como consecuencia, las nuevas reglas de IFCPF podrán incluir la posibilidad de clasificar en un lugar fuera de la competición, estipulado en el Estándar Internacional de Evaluación del Atleta de IPC (2016).

Otros cambios en las reglas y regulaciones de IFCPF (2017) son la introducción de requerimientos académicos/profesionales mínimos para los clasificadores, dando así más rigor al proceso de clasificación, ya que la experiencia del clasificador puede contribuir a una correcta decisión. El número de clasificadores en el panel será reducido a dos, que aunque esto era una preocupación para algunos, esta medida se ha tomado para reducir gastos y permitir así a más paneles funcionar a la vez cuando hay muchos jugadores por clasificar, aunque podría haber tres clasificadores

en el panel de clasificación según la competición. Además, si es necesario, los procesos de clasificación pueden ser prolongados si hubiera que observar a un jugador durante más tiempo antes de concederle una clase definitiva. Con todas estas modificaciones, la clasificación está desplazándose hacia un sistema de clasificación basado en evidencias, dándole así más credibilidad y cumpliendo de esta manera con el Código de Clasificación de Atletas (IPC, 2015) y los estándares internacionales (IPC, 2016).

5 Limitations and future study prospects

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5. LIMITATIONS AND FUTURE STUDY PROSPECTS

There were some limitations to the thesis. The main limitation was the lack of specific scientific literature to contrast our findings. However, this is the first research that has been made bordering the IPC Code and International Standards implying various agents using a qualitative methodology. Hence, this thesis could be used as a starting point for other studies that would like to research on the processes of classification in Paralympic sports. Complying with the IPC Code is essential for sports to be able to remain and participate in the Paralympic Games as mentioned in section 1.3 of the IPC Code 2015.

Another limitation was the low number of classifiers and board members that were interviewed, being three of each. This could lead to some confusion when interpreting the results part, as the results vary from 100%, 66% or 33% which are big differences. However, this problem was not solvable because the number of classifiers and board members in CP-Football is very low and were the only ones that attended the World Championships 2015. The present thesis forms part of a bigger project in which the aim is to transform the CP-Football classification process so that it complies with the IPC Code 2015 and International Standards on how current classification systems must be. Previous to this project was the PhD by María Campayo called “Battery of tests for optimizing the classification process in CP-Football players with hypertonia, ataxia and athetosis”. This thesis presented the quantitative results of the battery test used which was related to the data obtained in an IPC Agitos project. In that project, a series of results

were discovered through a group of expert classifiers on the athlete's classes as they performed the different tests. Furthermore, in January 2016 an IFCPF Classification Committee meeting took place at the Miguel Hernandez University with the aim of confirming the main principals for the new classification system. At this meeting, the classifiers with the most experience assisted with the outcome of putting together all of the pieces of critical information obtained over the last few years to try and develop an evidence-based classification system. The thesis by Campayo (2016) together with the meeting conclusions and the qualitative results of the interviews of players, head coaches and board members, in addition to the quantitative results of the questionnaires of the players, will hopefully help towards the modification of the IFCPF Classification Rulebook.

Possible future study prospects and lines of investigation could be the follow up of the modifications made in the classification system to see if the changes have been positive or not. An evaluation of the new rules should also be carried out to verify if they are adequate. This information may be obtained with a series of surveys or even interviews to find out the opinion of the IFCPF members. Also, it will be necessary to apply with any new modifications of the IPC Code and International Standard of Athlete Evaluation.

There are plans in place to improve the communication between classifiers and head coaches of teams, which will allow more participation of trainers in classification processes making it easier for teams to understand the decisions made by classifiers. Even more

modifications will be made if necessary after evaluating the changes mentioned with the objective of amplifying the steps indicated by Tweedy et al. (2014) for the development of evidence-based classification. The process this thesis has followed could be an example for other Paralympic sports who would like to find out the opinion of the participating members in their sport. This enables to address any concerns and can help modify their classification processes towards an evidence-based system.

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7 Annexes

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7. Annexes

7.1 Annex 1. Questionnaire

QUESTIONNAIRE: WHAT DO YOU THINK ABOUT THE CP-FOOTBALL CLASSIFICATION?

The Sport Investigation Centre of the Miguel Hernández University in collaboration with IFCPF is working on analysing the current classification system with the aim of tackling future changes in the system and the processes of classification, complying with the standards of the new classification code of the International Paralympic Committee (2017). This projects objective is to find out your opinion, as we believe that your opinion is important and this will allow us to consider them in future decision making.

<table>
<tr><td colspan="2">Name:</td><td>Surname:</td></tr>
<tr><td colspan="2">Date of Birth (DD/MM/YY):</td><td>Country::</td></tr>
<tr><td colspan="2">Email:</td><td>Telephone:</td></tr>
<tr><td colspan="3">Diagnosis: Cerebral Palsy ☐ Acquired Brain Injury ☐
Others (Indicate):</td></tr>
<tr><td colspan="3">Moment of the impairment: Congenital ☐ Acquired ☐ Indicate when:</td></tr>
<tr><td colspan="3">What class do you compete in? FT5 ☐ FT6 ☐ FT7 ☐ FT8 ☐</td></tr>
<tr><td colspan="3">How long have you been competing in CP-Football?</td></tr>
<tr><td colspan="3">Have you competed in regular football/non CP-Football?</td></tr>
<tr><td colspan="3">Do you train in a specific group or regular football (inclusive)?</td></tr>
<tr><td rowspan="3">Name and year of the last 4 main competitions that you have competed in:</td><td>Year</td><td>Competition</td></tr>
<tr><td></td><td></td></tr>
<tr><td></td><td></td></tr>
</table>

Position: Goalkeeper ☐ Defence ☐ Midfield ☐ Striker ☐		
Level of studies: Primary School ☐ Secondary School ☐ University ☐		

Please indicate your level of agreement with the following questions with a circle around the number that most suits your opinion, 1 meaning that you totally disagree, 2 that you disagree, 3 you agree and 4 you totally agree. Thanks for your collaboration.

		Totally disagree	Disagree	Agree	Totally agree
1.	Do you agree with the current classification system formed by 4 classes?	1	2	3	4
2.	Do you agree with the measure adopted to include two 5 or 6 classes after Río Paralympics 2016?	1	2	3	4
3.	Do you think that players of classes 5 and 6 can be considered as “low classes”?	1	2	3	4
4.	Would you increment the number of class 8 players on the field?	1	2	3	4
5.	Currently in CP-Football players with ataxia, athetosis and hypertonia are eligible. Do you believe that it could be beneficial for the sport to allow other impairments if it is proven that they have an impact in the game? (e.g.: limited range of movement, limb deficiency, etc.)	1	2	3	4
6.	Do you agree that classifiers follow the classification code strictly?	1	2	3	4
7.	Would you agree that observation of a player for classification takes place during a training session of your team?	1	2	3	4
8.	Would you agree that players could be classified in accredited centres of classification with a sufficient time before a competition?	1	2	3	4

9.	Do you believe that there are differences between your countries classification and international classification?	1	2	3	4
10.	Do you agree that factors like the level of training and the physical condition influence in the way a player is classified or in the result of a classification?	1	2	3	4
11.	Do you think it is possible to cheat the classifiers?	1	2	3	4
12.	Do you believe that a player should be penalized if they fool the classifiers?	1	2	3	4
13.	Do you believe that CP-Football should favour show sport limiting the access of players with a high level of disability?	1	2	3	4
14.	Do you think that CP-Football should maximize the participation of players with higher limitations in their game skills?	1	2	3	4
15.	Do you think that the current classification system has been a factor that has driven to the exclusion of the sport from the Paralympic Games of Tokyo?	1	2	3	4
16.	Do you believe that in the last 2 years there has been a change in the way the classification process has been applied?	1	2	3	4

7.2 Annex 2. Consent Form

CONSENT FORM FOR PARTICIPATION IN THE PROJECT

TITLE OF THE PROJECT: What do Head Coaches and Players think about CP-Football classification?

RESEARCHERS: Samantha April Cammidge (PhD Student), María Campayo (Assistant Professor), Dr. Vicente Beltrán (Professor), Dr. Raúl Reina (Professor and Principal Investigator); Miguel Hernández University of Elche

This study has been approved by the project evaluator of Miguel Hernández University. These rules are used by the ethic committee of the university and the ethic experimentation committee. You are free to discuss any doubts of your participation with me Samantha April Cammidge by emailing at samantha.cammidge@gmail.com

I, the person who signs following _____

Confirm that I have read and understood the Information and Participation for this project and that the specific parts of the document that are relevant to me have been revised. The information that I have received includes a description of the main objectives of the project, the methods, my role, my rights and my responsibilities.

I am conscious that I can withdraw from this project at any moment without any personal negative effects (even if I have signed this consent form) and I have the right to ask for any explanation on any aspect of the investigation. I understand that all information that I give will be treated with confidentiality and that I will not obtain any type of benefits apart from the ones explained on the Information and Participation Sheet.

Therefore, I sign my participation consent:

Name: _____

Signature: _____

Date: _____

7.3 Annex 3. Approval Project

ÓRGANO EVALUADOR DE PROYECTOS
VICERRECTORADO DE INVESTIGACIÓN E INNOVACIÓN
S A L I D A | E N T R A D A

Dr. D. Raúl Reina Vaillo
Dpto. Psicología de la Salud

412/2015

Elche, a 3 de Noviembre de 2015

Investigador Principal	Raúl Reina Vaillo	
Tipo de actividad	Otros	Tesis
Título del proyecto	¿Qué piensan los entrenadores y jugadores sobre la clasificación en CP-Football?	
Códigos GIS estancias donde se desarrolla la actividad	St. Georges Park, Inglaterra; CID	
Evaluación Riesgos Laborales	Conforme	
Evaluación Ética	Aprobado	
Registro	2015.151.E.OEP; 2015.283.E.OEP	
Referencia	DPS.RRV.04.15	

La evaluación ética del proyecto es favorable.

Se considera que el presente proyecto/contrato/prestación de servicios carece de riesgos laborales significativos para las personas que participan en el mismo, ya sean de la UMH o de otras organizaciones y, por tanto, se autoriza su realización.

Atentamente,

Alberto Pastor Campos
Secretario del Órgano Evaluador de Proyectos
Vicerrectorado de Investigación e Innovación

Manuel Miguel Jordán Vidal
Presidente del Órgano Evaluador de Proyectos
Vicerrectorado de Investigación e Innovación

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Órgano Evaluador de Proyectos
VICERRECTORADO DE INVESTIGACIÓN E INNOVACIÓN
UNIVERSIDAD MIGUEL HERNÁNDEZ DE ELCHE

7.4 Annex 4. Cover Letter

Dear colleague,

From IFCPF, in collaboration with the Sports Investigation Centre of the Miguel Hernández University (CID), we write to you to ask for your participation during the Cerebral Palsy Football World Championships, England 2015. On this occasion, our work consists of finding out the opinions of the Head Coach and players of the participating teams in this event, to possibly take into account for future decision making on the system and processes of classification in CP-Football.

During our time in England we are going to conduct an interview with the objective of obtaining the opinion of the Head Coach and two players with the most experience of the team about the current classification system and your concerns of this system. Also, we would like all players that form each team to take part in a questionnaire with the same objective. This questionnaire will be available in English, Spanish and Portuguese.

This may be a great opportunity for Head Coaches and players to voice their thoughts on the CP- Football classification, allowing us to obtain a detailed vision of the classification in this sport.

In the document attached you can find the instructions and information about the interview and the questionnaires, which must be read by the Head Coach and two players of the team. The following actions will take place:

a) Interview with the Head Coach: estimated time 25-45 minutes.
b) Interview with 2 players of the team: estimated time of 25-45 minutes per player. The team should propose two players, one preferably with a high limitation and another with a low limitation in the actions of the game.
c) Questionnaire to be filled in by every player of the team: estimated time 15 minutes.

Can you please confirm your participation before the 13th of June. If you have any enquiries please contact me by email at samanth.cammidge@gmail.com.

However, the confirmation of participation in this study can also be confirmed between 14th and 20th of June communicating with Raúl Reina rreina@ifcpf.com

Many thanks and best regards,

Samantha April Cammidge (PhD Student of Miguel Hernández University, Elche, Spain)

Raúl Reina, PhD Director and Principal Investigator of this project.

7.5 Annex 5. Participant Information

Project Title: What do Head Coaches and Players think about CP-Football classification?

Researchers: Samantha A. Cammidge (PhD Student), María Campayo, Vicente Beltrán and Raúl Reina: Miguel Hernández University of Elche, Spain.

With the creation of the new International Federation of Cerebral Palsy Football (IFCPF) and the near publication of the New International Paralympic Committee Classification Code and the International Standard for Athlete Evaluation. We would like to obtain your opinions over possible changes in the system and classification processes for a new classification rulebook that will be published after the Río 2016 Paralympic Games.

The principal objective of this project is to find out the opinion of the agents implicated in this sport through an interview and a questionnaire of the participating teams in the Cerebral Palsy Football World Championships 2015. The information submitted could be taken into account in future decisions in CP-Football classification.

YOUR ROLE IN THIS PROJECT

You have been invited to participate in this project because of your role in CP-Football. If you decide to participate, a series of questions will be made by a team of experts with the objective of obtaining your sincere opinions on the present and future classification system in this sport.

The interview will be conducted by Samantha April Cammidge or by María Campayo Piernas of the Miguel Hernández University. Each interview will last between 25 and 45 minutes per person and the interview will be recorded (only audio) for a posterior analysis. This interview will be done with the Head Coach and two players of each team, at a time previously agreed with the interviewers. The interview

can be done in English, Spanish or Portuguese and in the case that a Head Coach/player cannot communicate in any of those languages the presence of an interpreter will be needed.

Regarding the questionnaire, players will be asked to fill in the questionnaire individually and in a personal manner being as honest as possible. The questionnaires shall be filled in anonymously and will require an estimated time of 15 minutes. The questionnaire will be available in English, Spanish or Portuguese and in the case that a player doesn't understand they can require the help of a translator from the team.

YOUR RIGHTS AS A PARTICIPANT AND BENEFITS

Your participation is voluntary and you are in your right to withdraw from the project at any moment or deny answering certain questions. Withdrawal or negation will not have any effects outside of this project.

Any type of information obtained will be confidential.

The benefits of participating in this investigation will be the contribution of valid information towards possible future changes in the system and processes of classification, helping to optimize all relative aspects of CP-Football classification.

YOUR RESPONSABILITES

We ask for maximum truthfulness during the interview as your answers may be considered for decision making on future changes that could be made in the system and processes of classification in the future.

ETHIC

This study has been designed under the ethic conditions of the Miguel Hernández University. You can send any questions or doubts to my email at samantha.cammidge@gmail.com

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