

## “Key Factors on Talent Development of Expertise Basketball Players in China”

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### Abstract

The aim of this investigation was to explore what are the key factors on Chinese elite basketball player's careers, and understand what facts have helped them to achieve the highest sportive level. The pathway to excellence of three Chinese elite basketball players were analyzed through a semi structured interview with different categories such as Social Context, Sport Context, Tactical Factors or Anthropometric Factors. Results showed that “family tradition”, academic studies, coaches, training structuration and international competitions had influenced the talent development of Chinese basketball players.

**Keywords:** talent development, basketball, China; expertise

### Introduction

Due to the Olympic Games in Beijing 2008, China has built a system of identification and development of talent in pyramidal form composed of four levels, very focused on the talent detection, reaching to recruit children up to 6 years for their centers of training (Hong, Wu and Xiong, 2005). The essence of this program, and similar ones used in various provinces of the country, is based mainly on the use of various test batteries for the detection of the greatest natural talents (Li, Martindale, Wu and Si, 2017; Liu and Li, 2005). The literature agrees that this approach is limited, since, among other factors, they do not contemplate the same conditions as competition, fatigue or other external conditions (Güllich, 2013, Lorenzo, Lorenzo and Jimenez, 2015, Vaeyens et al., 2008); in such a way that, in some cases, early inclusion in talent detection and development programs can have negative effects (Güllich and Emrich, 2012).

There are few studies (Ran, 2007), conducted by scientists in mainland China about the context surrounding the athlete and his pathway to the elite. However, some researchers related to the Asian giant (such as the hongkon J. Wang), have already begun in recent years to consider research associated not only with the detection, but also with the development of talent (Li, Wang and Pyun, 2014).

In the framework of the study of these factors, research often uses the vital itinerary of the athlete as a tool for analysis is traditional (Baker et al., 2003, Beamer, Côté and Ericsson, 1999, Carlson, 1988, Pazo, Sáñez-López, Fradua, Figueiredo and Coelho, 2011). However, it is observed that the studies that follow this methodology have been carried

out, mostly, with a sample from countries with Western culture (ie, American gymnasts in Beamer, Côté and Ericsson, 1999) Swedish tennis players (Carlson, 1988) spanish basketball players (Saenz-López, 2006) or European footballers (Zibung and Conzelmann, 2014).

One of the articles related to one of most popular talent development models, Career Development and Transitions of Athletes (Stambulova, Alfermann, Statler and Côté, 2009) already talked about how cultural particularities, socio-historical context and even geographical location can influence sport, sport system, and athletes in their respective countries.

Until now, it has been difficult to identify career development and transition studies from a cultural standpoint, (i.e., conducted based on the cultural psychology approach). Instead there are numerous studies, which could be called national studies, focused on careers and transitions of athletes from particular countries. They already pointed out that knowledge on career development and transitions, it is centered into four major scientific traditions: North American, West European, Australian, and East European. (Stambulova et al., 2009). It exists a need for expand the spectrum, therefore, the object of study of this research is analyze what are the influential factors in the development of expertise in professional Chinese basketball players.

To date there are several types of research and factors under study, although Baker and Horton (2004) classified them as primary (genetics, training and psychological conditioning) and secondary (resources available, family, maturity of the sport, competitive level, etc.).

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## Methodology

The study was carried out following a qualitative methodology, in which the semi-structured interview was used as a research instrument (Patton, 2002). This interview, based on the vital itinerary of the athletes, was made to 3 Chinese high level players and consisted of open-ended questions, designed to be answered in the form of a monologue, to further deepen with clarifying questions (Vazou, Ntoumanis and Duda, 2005). This instrument, according to Dale (1996), is a perfect combination of the standardized strategy and the conversational interview, which allows exploring aspects that can not be anticipated, since what is relevant for one interviewee may not be relevant for another, as well as to know how the reality of multiple cases is in a detailed way.

To ensure the highest quality of the information collected, we opted for the deliberate selection of the participants or selection of the ideal typical case (Rodríguez, Gil and García, 1999). To achieve a better approximation to the objectives of the study, different exclusion criteria were applied and inclusion of the "ideal typical case" (Robinson, 2014).

The inclusion criteria was chosen based on the compilation study that defines the elite players (Swann, Moran and Piggott 2015): a) Maximum level of competition; b) Success at the highest level of competition; c) Experience at the highest level; d) 10 years of experience as a player (Ericsson, Krampe and Tesch-Römer, 1993); e) High sport competitiveness in the country; and f) high competitiveness of sport in the world. In our case, in relation to these criteria: a) All of our subjects have played prestigious international championships with their respective teams or with the Chinese national team (Olympic Games, World Championships or Asian Championships) b) All our subjects have managed to participate in the final phase of Play-Offs of Chinese Super League and have achieved some title in their clubs or Chinese national team (Greek League, Greek Cup or FIBA Asia Games); c) All subjects had more than 10 years of experience and most of those years at the highest level of competition; d) Basketball is one of the main sports of the country, with a greater number of clubs, participants and competitive structure; e) Basketball is one of the sports with the highest number of amateur players, professional players and clubs in the world.

Therefore, following the classification of Swann, Moran and Piggot (2015), it is affirmed that the sample for our study qualifies for the denomination "world-class elite", the highest in the ranking for the correct denomination of elite athletes.

In relation to the design of the script of the interview, it was structured following the work of Saenz-López (2006) and the proposal of García Martín, Antúnez and Ibañez (2016), in which 8 dimensions are differentiated: a) Social Context (with factors such as family influence, academic studies, influence of the couple, etc.); b) Sports context (in-

fluence of coaches, sports facilities, structuring of training, etc.); c) Intra-Individual Factors (i.e., motivation, leadership); d) Inter-individual factors (i.e., companionship, roles in the team, etc.); e) Technical Capacity (i.e., dribbling, shooting technique); f) Tactical capacity (i.e., ability to make decisions, movement with and without the ball); g) Physical Capacities (i.e. strength, speed, etc.); and h) Anthropometry (i.e., height, weight, span).

Following the works of Coté, Salmela, Baria and Russell (1993), and Coté, Salmela and Russell (1995), an inductive approach was carried out, in which the comments and sentences part of the responses of the subjects interviewed were identified as "units of meaning" (Tesch, 1990). These units of meaning were revised, and those similar grouped around properties and, later, around categories, using the QDA Milner qualitative analysis program. Thus, the chosen unit of meaning has been the sentence, that is, the space between point and point. Second, the thematic criterion, on occasions when the sentence does not contain an idea by itself, expanding the portion of the text that is included in the unit of meaning (Rodríguez, Gil and García, 1999).

The methodology contemplates the possibility that properties and categories emerge inductively on the basis of the interviewees' answers, conditioned to the contribution of new and valuable information with respect to novel topics, not contemplated by the previous bibliography.

In this type of studies, it is very important to have credibility to provide the interviewees with control and possibilities to modify the information provided (Lincoln and Guba, 1985, Sparkes, 1998). In this sense, the interviewees were able to add, delete or modify the information provided on up to two occasions. The first one just after the interview, and the second after receiving a copy of the literal transcript of the questions and answers collected. Of the 3 subjects, 2 did not change anything and 1 modified 4 units of meaning.

Finally, the internal reliability of the study looking for an image as complete as possible, clear and representative of the situation studied (Gibbs, 2012), is guaranteed with its coding process, performed by two independent external coders, familiar with the qualitative methodology. For this analysis, we first proceeded to the training of the aforementioned coders (Medina, 1996), followed by the location by these of the units of meaning within each property and category. Both codified the same book of analysis without seeing the codings made by the other researcher. After each round of analysis, the agreement between coders was measured, disagreements were reviewed and coded again until reaching a value greater than 90%.

## Results

After coding the interviews, a total of 270 units of meaning were revealed, coded as properties related to the object of study, grouped by categories (see Figure 1).

It is verified that some categories are of little relevance for the interviewees, providing a low frequency of units of meaning to the overall study, and not showing clear information. Therefore, the object of study will be the dimensions: Social Context, Sports Context, Intra-individual Factors, Tactical Factors and Anthropometric Factors.

Following the comments and responses of the interviewees, some properties emerged inductively: i.e. "Family tradition" (as a part of the Social Context category), i.e. "International Experience" (as a part of the "Social Context" category, when they remarked how living out of China

help them to built their personality), or i.e. "International Games/Tournaments Tactical" (as a part of the Tactical category when they specifically remark those tactical improvements in their understanding of basketball).

Clearly, the Social Context and Sport Context categories are the ones with the highest frequency of units of meaning. However, other variables with less frequency (intra-individual factors, tactical factors and anthropometric factors) also provide valuable information due to the degree of agreement in all the participants or the coincidence with previous research.

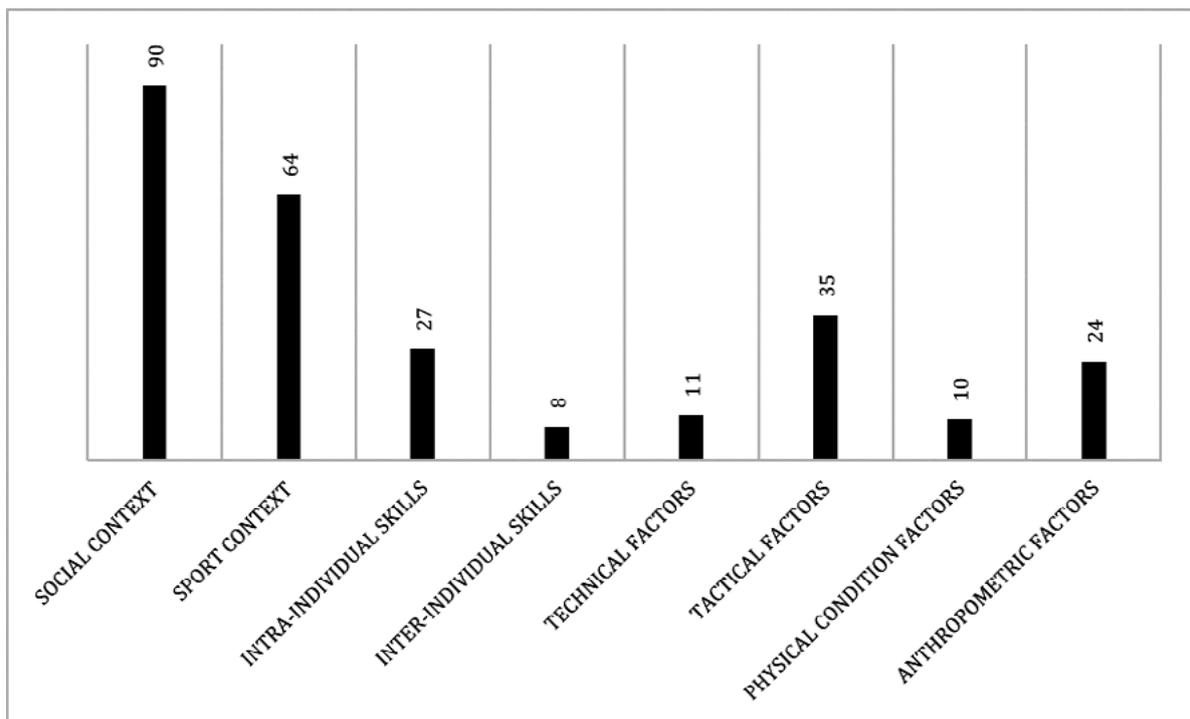


Figure 1. Meaning units frequency grouped by category

### Social Context

The family and especially the influence of family tradition is presented as a major factor during the career of players, as well as when choosing basketball as a sport to practice and future professional dedication.

*"When I was 8 years old my parents wanted at all costs to play basketball. My parents believed that I should play, since basketball is our family tradition. The two of them had played professionally in the past and believed that I should follow in their footsteps and become a professional player like they were" (Player 1).*

Within this category, the interviewees also stress the importance of continuing with their studies and not abandoning the academic system at an early age, as is usual in China.

*"Well, the first thing, respecting the family tradition in our case, the studies are highly valued. That's the biggest reason why I chose to study abroad and play basketball there, instead of staying in China and playing professionally before.*

*I believe that studies are very important not only to help you in your basketball skills, but also because it also affects your whole life, it is your ability to learn" (Player 3)*

### Sports Context

In the Sports Context category, the attention of all the subjects towards the positive influence of the coaches stands out among the results.

*"Without a doubt, the coaches. My first coach, coach Ming, helped me a lot in how to be disciplined, professional. It led me to a professional level. Another coach who helped me a lot was coach Fan, in the National Team, who helped me develop my skills very well at a higher level. He taught me exactly when and how to use what I had learned" (Player 2)*

However, in spite of highlighting the positive effect of the coaches on a personal level, all the subjects referred to a poor management and structuring of the training during their training, with a final annotation referring to that lately they felt a slight improvement in this sense .

*"In the programs in which I practiced, you could say that they are not very scientific, as, for example, the veteran generation of coaches that I had, that could use many squats and front jumps (that destroy the knees). Many players did not survive that system without mercy. Now the coaches are much better, they know better the terms for injury prevention" (Player 3)*

### **Intra Individual Skills**

In this section, we can see results that refer to motivation, both in a positive way (family tradition and personal ambition as maximum motivations), and in a negative way (over-training).

*"In basketball, in order to be successful, motivation is very important. My biggest motivation came from my parents. Once, they told me: you have to play basketball, you carry it in the genes" (Player 2)*

*"I think having free time is important, because we practice too much. We used to practice 3 times a day, about 7 or 8 hours a day in total. Many times you are simply too tired, it is important to have balance in life. I think that if we had more free time, without the effects of over-training, we would have more opportunities to improve our development" (Player 1)*

### **Tactical Factors**

From the analysis of this category we can highlight the mention and importance that all interviewees attribute to playing important international tournaments, and how this contributed to their tactical development (competitions both at the club level and at the international level).

*"It helped me on all levels, mentally, tactically ... Now I understand the game differently. When I talk to other foreign teammates we now share the same vision about many aspects of the game, not before. When I was in China, I had a more limited understanding of the game" (Player 1)*

### **Anthropometric Factors**

In this category, respondents agree on the need to improve basic physical abilities. They also emphasize the importance of height, as an important facilitator component to reach the elite (although not essential).

*"I believe that it is a minimum requirement in this area to become a professional but I do not believe that it is the most determining requirement. If you do not have anthropometry, you will have to work on other aspects to develop compensate" (Player 2)*

### **Discussion**

The influence of the family as a key support element in the career of the athlete coincides with other previous studies (Bloom 1985, Côté, 1999, Gulbin et al., 2010, Hayman et al., 2011, Pummell, Harwood and Lavalley, 2008). In this sense, it is observed how the influence and the great importance of the family tradition is something taken into account by a large part of the population in China (Fulgini

and Zhang 2004). Another peculiarity to be taken into account in the Chinese population is the fact that there is a high percentage of unique children, as for example all the subjects in our sample, all the possible positive influences coming from older siblings that stand out in previous investigations (Côté, 1999).

As a last point to note within the social context dimension, highlight the negative effect of the abandonment of studies, as the players can not take advantage of all the cognitive benefits provided by the educational system (Garcia-Naveira and Jerez, 2012). In China this is a common practice, as all CBA professional clubs demand their players full and exclusive basketball dedication, both when joining their junior or senior club.

In the sporting context, the results of the research coincide with previous ones on the role played by the coach in the development of the player, both in its sports and personal dimension (Fraser-Thomas and Côté, 2009, Miller et al., 2002; Sanchez, Lorenzo, Jimenez and Lorenzo, 2017). The players of the study have highlighted the importance for them to receive the support of the coach when making decisions or overcome personal difficulties, functions that have been attributed to the coach as a mentor, beyond the sports sphere. This circumstance has been found as a fundamental element to achieve the expertise in sport (Bloom, Durand-Bush, Schinke and Salmella, 1998, Lorenzo, Jimenez and Lorenzo, 2017, Petitpas et al., 2005, Si et al., 2011).

The study players also point out their perception of poor training structure. In this line, it must be taken into account that the amount of training is not a perfect indicator of expertise, and that training without permanent concentration does not imply an improvement in performance (Ericsson, 1996). What is learned, retained and transferred is significantly influenced by the way in which it is trained and by the structure of the training (Christina and Alpenfels, 2002). There are researches in sports such as wrestling, skating and hockey (Deakin and Copley, 2003, Starkes, 2000) that justify that coaches should try to make more profitable the time of the training session, instead of worrying about looking for more hours of training practice. This must be observed through the Chinese socio-cultural prism, in which an adequate professional ethic is understood mainly on the basis of very long and extensive working hours (Beltran, 2000).

Regarding coaches role, Stambulova, Alfermann, Statler and Cote (2009) There are also differences in sport systems, societal norms, and cultural traditions, which may further influence athletes' career development. For example, in Russia and China, professional coaches work with all age and performance levels, whereas in Sweden and the United States, volunteer coaches dominate in children's/youth sports. This single factor may influence career development in that although young athletes who are trained by professional coaches can get higher quality supervision in the formation of their technical skills, they can also experience more coaching

control over their life and less overall enjoyment than the athletes who are trained by volunteer coaches.

In reference to intra-individual factors, it is important to highlight the role of the athlete's motivation on the road to sports expertise. A priori, according to previous studies, children with excessive pressure from their parents tend to practice sports as a duty rather than understanding it as a form of entertainment, which entails a greater risk of abandoning sports activities (Gould and Petlichkoff, 1988; Holt and Dunn, 2004; Kidman, 1999). However, especially in the case of China there is a curious phenomenon, because for the players interviewed in our work, this "pressure to reach the elite" follows its family tradition, which means that it is not perceived negatively, but rather from a positive point of view, closer to the concept of commitment. This undoubtedly reinforces the development of talent, coinciding with studies that consider long-term commitment as essential to reach the highest level of capacity (Bloom, 1985).

With respect to the tactical dimension, the subjects emphasize how to play against foreign players and international tournaments enriched them technically-tactically. This aspect shows a certain relationship with other studies (Berry, Abernathy and Côté, 2008, Memmert and Roth, 2007) that talk about how to perceive and act in different situations of the game has positive influences on the improvement of tactical capacity. The Chinese Basketball Federation (CBA) also believes in this competitive improvement effect after exposing the Chinese players to new stimuli and competing in international tournaments, so it has taken the decision to form two national teams to "motivate and obtain the maximum performance of the players in the international competitive system" (official announcement CBA, April 12, 2017).

Regarding the anthropometric dimension, the considerations of the players were aligned with the studies of Ruiz and Sanchez (1997), in which the height and the scope are considered useful, but not fundamental in the process to become experts, since that can be compensated with dedication, sacrifice or the use of other qualities. This is consistent with the multifactorial model of talent and the "compensation effect" described by Simonton (1999).

Finally, it is important to highlight the important role of cultural influence in China. This cultural influence has an impact at all levels, both on the factors that affect the performance previously mentioned, considered as primary (ge-

netics, training and psychological conditioning) and on the secondary levels (available resources, family, sport maturity, competitive level), etc.). (Baker and Horton, 2004). As Stambulova highlights in several studies, we must understand the environment of talent development as a context with diverse levels penetrated in all those levels by the national culture (Stambulova and Alfermann, 2009). To understand in depth the development of talent and sport transitions, we must consider athletes within a cultural context, understanding their psychological approaches also influenced by this cultural context (Stambulova and Alfermann, 2009).

This premise is taken into account in the design of the model described by Henriksen, Stambulova and Roessler (2010), called ESF (Environmental Success Factors) or success factors of the environment, in which cultural factors play a major role in the development and the results obtained (Henriksen, Stambulova and Roessler, 2010).

## Conclusions

As a result of the study carried out, the following conclusions can be drawn:

- 1) The "family tradition" (highly valued and strongly rooted in Chinese culture) is a very influential element for the player, when making the decision to play basketball and when overcoming difficulties along the way to the elite, is considered by the subjects as one of the main motivations.
- 2) The Chinese elite players negatively value the abandonment of the studies for the exclusive dedication to professional basketball.
- 3) Regarding the sporting context, participants describe their coaches as an important positive figure in their development, but also their perception of poor training structure, mainly due to an excessively high volume of training hours.
- 4) The Chinese elite players considered that playing international competitions and competing against foreign players entailed an enrichment of their tactical capacity, positively influencing the development of their talent.
- 5) Cultural factors and their transversal influence must be considered in all the dimensions of talent development, since in the case of basketball in China they have an important specific weight.

### "Factores clave en el desarrollo del talento de la experiencia jugadores de baloncesto en China"

#### Resumen

El objetivo de esta investigación fue explorar cuáles son los factores clave en el desarrollo del talento de tres jugadores de baloncesto chinos de élite y comprender qué hechos los han ayudado a alcanzar el nivel deportivo más alto. El camino hacia la excelencia de estos jugadores de baloncesto de élite chinos se analizó a través de una entrevista semiestructurada con diferentes categorías, como contexto social, contexto deportivo, factores tácticos o factores antropométricos. Los resultados mostraron que la "tradición familiar", los estudios académicos, la influencia de los entrenadores, la estructuración de entrenamientos y las competiciones internacionales habían influido en el desarrollo del talento de los jugadores chinos de baloncesto.

**Palabras clave:** desarrollo de talento; baloncesto; China; expertos.

## "Factores-clave no desenvolvimento de talentos de especialização jogadores de basquete na China"

### Resumo

O objetivo desta pesquisa foi explorar quais são os fatores-chave no desenvolvimento do talento de três jogadores de basquete chineses de elite e entender que fatos os ajudaram a atingir o mais alto nível esportivo. O caminho para a excelência desses jogadores de basquete chineses de elite foi analisado por meio de uma entrevista semiestruturada com diferentes categorias, como contexto social, contexto esportivo, fatores táticos ou fatores antropométricos. Os resultados mostraram que a "tradição familiar", os estudos acadêmicos, a influência dos treinadores, a estruturação de treinamentos e as competições internacionais influenciaram o desenvolvimento do talento dos jogadores de basquete chineses.

**Palavras-chave:** desenvolvimento de talentos; basquete; China; especialistas.

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