



Image: Nestor Cepeda

BMX TRAINING NEEDS' _REPORT_ TRAINING TO WIN PROJECT

Training to Win: Ref. 622085-EPP-I-2020-I-ES-SPO-SCP

TRAINING TO WIN

This Report presents the results of the Questionnaire on BMX Training Needs, intellectual output of the BMX Training to Win project



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I. INTRODUCTION

BMX Training to Win is an Erasmus + Sport co-founded Project (Ref. 622085-EPP-I-2020-I-ES-SPO-SCP) pretends to promote education in and through sport with special focus on skills development, with emphasis in coach training to improve the quality of sport career development and safety of young athletes (most of BMX are former riders without an specific training and BMX as well as other lifestyle sports are very appropriate to work as creative industries and to work under entrepreneurship models).

Its specific objectives are:

- Objective 1.- To design a BMX integral training program for coaches and trainers, adding scientific evidence and studies.
- Objective 2.- To promote BMX benefits for children and youth (physically, mentally, and socially).
- Objective 3.- To stimulate dual careers for BMX riders supporting their professional and educational development.

Achieving these ambitious objectives implies the **scientific analysis of BMX** from different perspectives, which would be reached by a multidisciplinary team involved in this project. This analysis would result in a complete training programme for coaches and riders.

BMX riders usually are self-coached or trained by other riders; actually, many countries do not have an official BMX coaching program or title. So, to establish a professional environment, coaches and trainers' formation is needed. This will result in a higher quality in the training of young riders, taking care of their safety in practice and enhancing the beneficial effects of their sport.

On the other hand, BMX is one of the fastest growing modalities in Europe, with France in the top, with almost 20,000 federative licenses, followed by The Netherlands. Since BMX is Olympic (Beijing 2008), its growth is exponential, not only in participants but also in media impact, due to worldwide streaming broadcasting of its competitions and events. Main competitions are BMX Supercross World Cup, World Championship and Continental leagues and championships.

The BMX is a very complete and complicated sport given the large number of factors involved:

- Each circuit is different and has different characteristics, so it requires a very high level of adapting skills to all type of obstacles from riders.
- Riders do not run alone, so they depend on the other's actions; decisions such as changing trajectory to advance, or to defend from other rivals, must be taken in tenths of a second. Besides, contact between riders is allowed.

- It is one of the most “explosive” Olympic sports, a 30 second sprint, where reaching the first step ahead is the main training objective. Time between starting position and this first step is usually 3-4 seconds.
- Although the rounds last 30 seconds, a high recovering capacity is needed as a lot of rounds must be done to reach finals.
- Psychology is also decisive as riders compete elbow with elbow in a 50km/h race, with a high risk of falling and injuries, so self-confidence and anxiety control is fundamental to perform at 100%.

This report presents the results of the first intellectual output of the Project, the BMX Training Needs Questionnaire, which will serve as the basis, or diagnostic analysis, of the situation of BMX in Europe, to face the challenges posed by this Project.

The questionnaire was structured in four dimensions: material needs, knowledge needs, sport facilities needs and, finally, environmental needs.

Questionnaire Design Methodology

The BMX Training Needs Questionnaire was designed by a research team from the Universidad San Jorge (Spain). Figure 1 shows the questionnaire design and associated procedures.

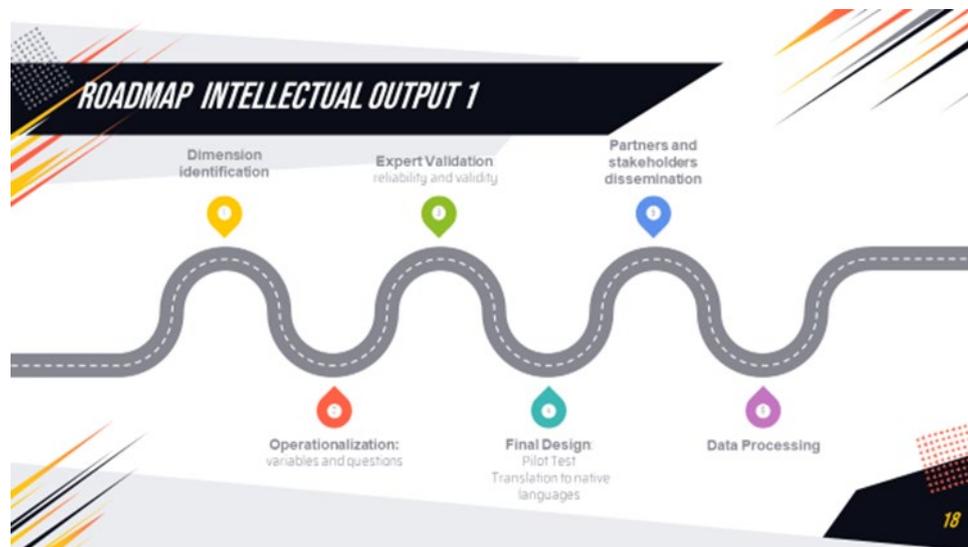


Figure 1. BMX Training to Win Questionnaire Design

It was validated by experts validation (one member per each of the Project partners and local partners, following the procedure, filled in a rubric in which they scored the relevance and uniqueness of each item, adding the comments he considered appropriate.

Figure 2 reflects the identified dimensions, which will later be translated into variables, and these into open and closed questions, to be answered using Likert scales, multiple choice responses, or range, among others.

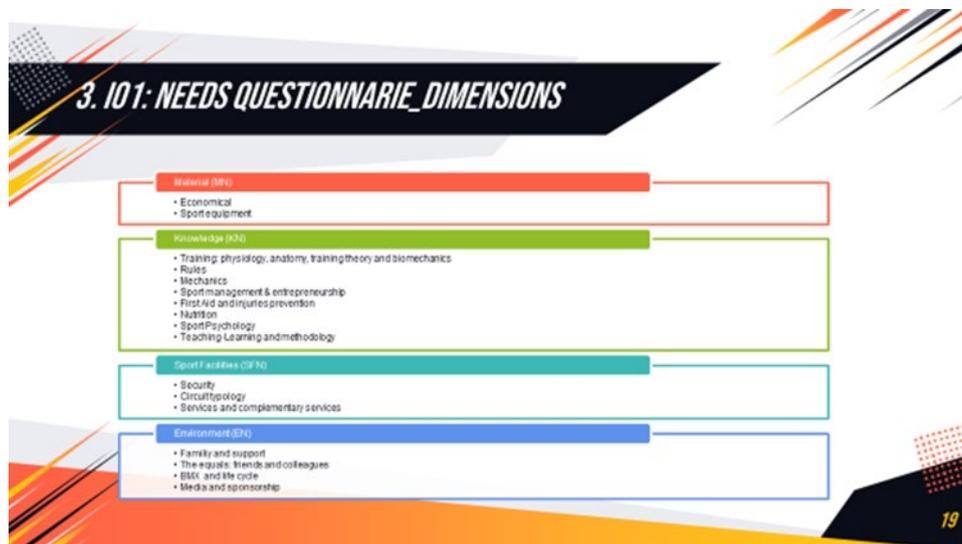


Figure 2. BMX Training Needs' Questionnaire Dimensions

The validation sheets were reviewed by the researchers from Universidad San Jorge (Spain) to arrive to the final version.

A total of 8 experts from six countries (coaches, sport managers and former riders) validated the questionnaire. Experts came from

- Spain: BMX School Zaragoza and Zaragoza Deporte Municipal ZDM.
- Latvia: Biedrība "Latvijas Sporta izglītības iestāžu "Direktoru padome" LSIIDP.
- Italy: International Centre for the Promotion of Education and Development CEIPES.
- Slovakia: Iovenský Zväz Cyklistiky (Slovak Cycling Federation) SCF.
- Portugal: Portuguese Cycling Federation UVP-FPC.
- Malta: Malta Street Sport Association MSSA.

Data were analysed using statistical procedures and content analysis.

The online questionnaire was disseminated through the Project website, partners' social networks and Regional and National Federations' mailing sport clubs list. Riders, coaches, sport managers, riders' families and friends and anyone linked to BMX were the target of this Action.

As a result of these actions, 415 responses were obtained, the composition of the sample obtained being exposed in the next section.

Sample description

Of the total responses obtained, two thirds correspond to men (Figure 3).

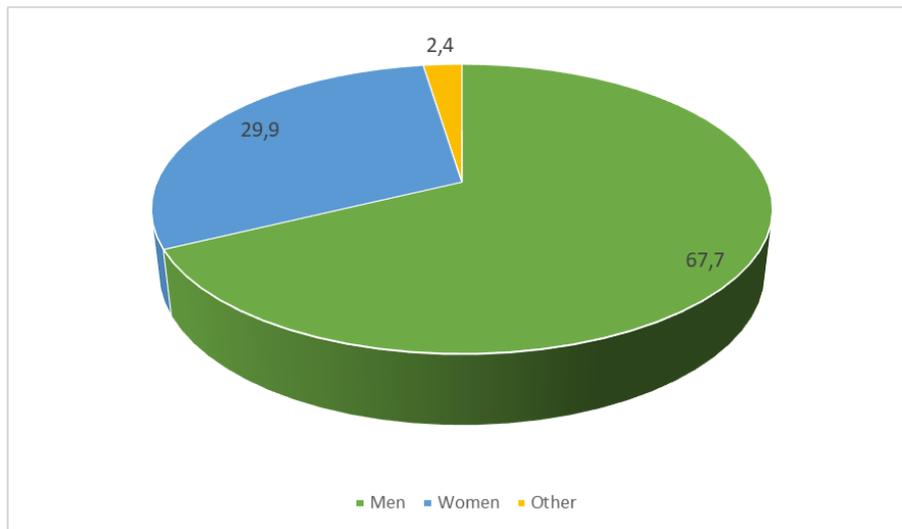


Figure 3. Distribution by gender

In all countries, men answered to a greater extent, although the difference in percentage points is highest in Malta and Portugal (96.8 and 93.8% respectively), being the lowest in Slovakia (57.4%).

The majority who answered are between 26 and 45 years old (46.3%), this being also the same in Spain (47.2%), Slovakia (72.3%), Italy (61.5%) and Portugal (50%). In Latvia, most young people under 18 years of age answered (33.6%) and in Malta those between 18 and 25 (38.7%). Figure 4 shows the distribution by age range.

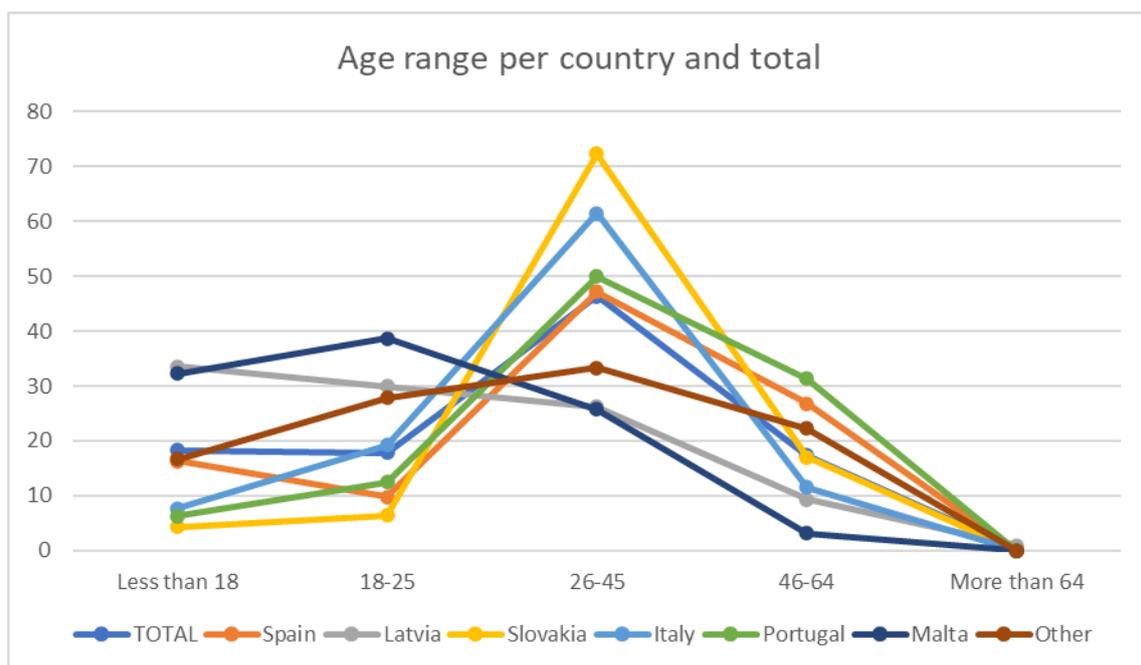


Figure 4. Distribution by age (per country and total)

In general, riders and family answered (38.8 and 36.6% respectively), while coaches represent an 8.7% of answer, sport managers 6.5, fan, supporters, or friends a 5.8% and other, a 3.4% of answers (figure 5). In Latvia and Malta, mostly riders have responded, while in Spain and Slovakia, mostly family members have responded. In Italy and Portugal, many responses come from coaches.

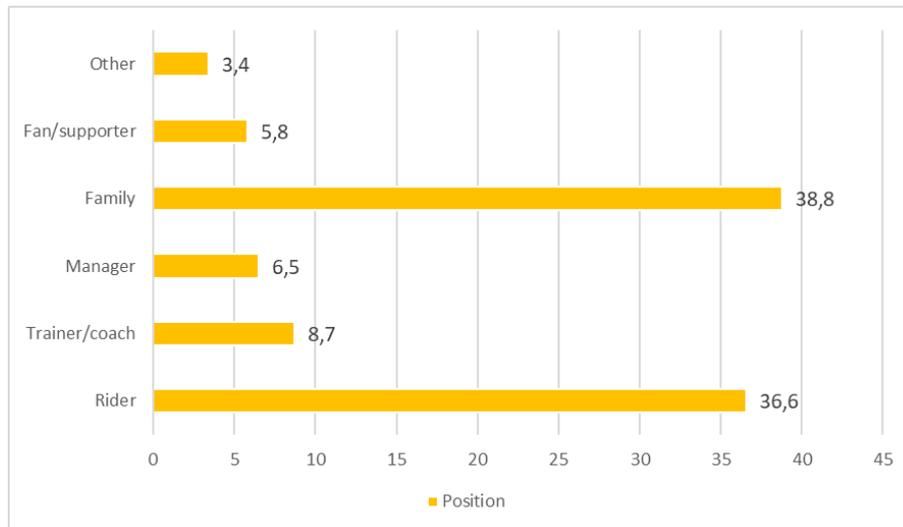


Figure 5. Distribution by position

Of these people, the majority represented sports clubs (59.8%, followed by sports associations (11.3%), sports federations (5.1%) and to a lesser extent local or regional government (1.4%). By country, the people who answered belong mainly to sports associations (Italy and Malta), to sports clubs (Spain, Latvia, Slovakia, and Portugal). Where the federations are represented to a greater extent is in Portugal and Italy, Latvia being where government respondents appear.

The distribution of responses by country is shown in Figure 6.

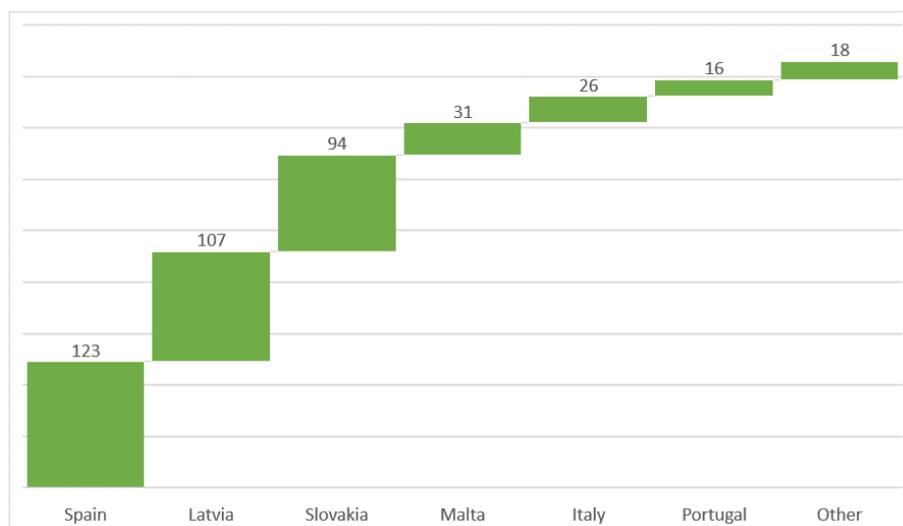


Figure 6. Distribution by country

2. MATERIAL NEEDS

About the cost of BMX, most think it is intermediate (figure 7); those who consider it cheap or very cheap account for 13.5%, while those who consider it expensive or very expensive account for 44.8%. Almost half (46.7%) think that regular BMX equipment costs less than 1,000 euros, 35.9% between 1,000 and 2,000, 11.8% between 2 and 3,000, and finally only 5.5% more than 3000 euros.

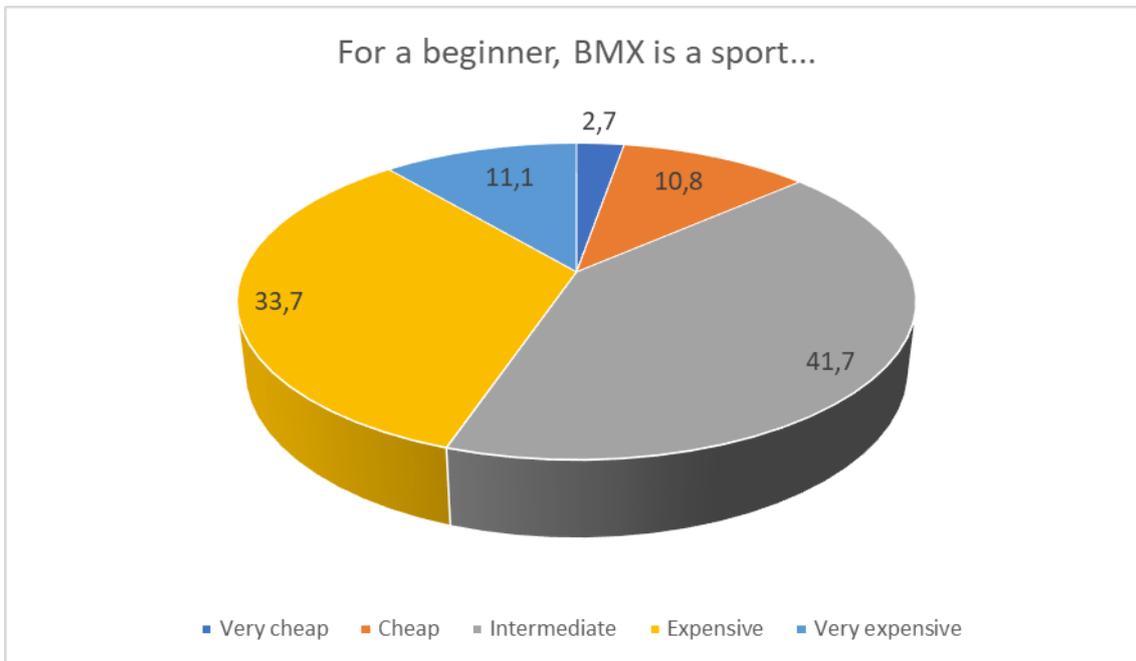


Figure 7. BMX cost perception

The majority (57.3%) believe that riders change their bicycle every 2 years, while 22.4% believe that it is annually. 16.1% by the way are positioned towards every 3rd year while only 4.1% think that every 4 years or more.

Regardless of individual equipment, how much does a BMX season roughly cost (training, travel, facilities, race registrations, etc.) is shown in figure 8, being the answer with greater acceptance the one of more than 2 thousand euros (28.9% of answers).

100% of those who responded consider the bicycle as a material need to practice BMX; 96% integral helmet, 18,5% neck collar, 46% breastplate, 73% kneepads and 81,6% gloves.

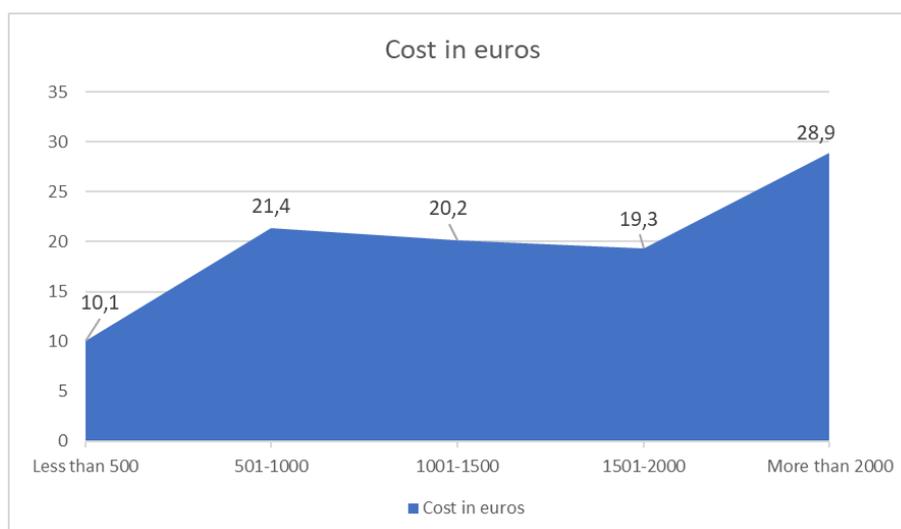


Figure 8. Estimated cost in euros per a BMX season

3. KNOWLEDGE NEEDS

Aligned with the objective of the BMX Training to Win project, the following section focuses on assessing the perception of the knowledge that a coach must have to develop the sports career of their athletes properly. Table I summarizes this section in a general way.

Table I. Knowledge needs for a BMX coach.

Knowledge	Irrelevant		Little relevant		Relevant		Very relevant		No answer	
	F	%	F	%	F	%	F	%	F	%
<i>Physiology</i>	12	2.9	33	8.0	125	30.1	216	52	29	7.0
<i>Anatomy</i>	17	4.1	21	5.1	129	31.1	224	54.0	24	5,8
<i>Training theory</i>	25	6.0	20	4.8	96	23.1	230	55.4	44	10.6
<i>Technique</i>	10	2.4	9	2.2	31	7.5	331	79.8	34	8.2
<i>Biomechanics</i>	29	7.0	32	7.7	130	31.3	165	39.8	59	14.2
<i>Tactic</i>	9	2.2	9	2.2	41	9.9	328	79.0	28	6.7
<i>Mechanics</i>	18	4.3	41	9.9	160	38.6	179	43.1	17	4.1
<i>First Aid</i>	11	2.7	15	3.6	139	33.5	229	55.2	21	5.1
<i>Nutrition</i>	12	2.9	23	5.5	171	41.2	193	46.5	16	3.9
<i>Psychology</i>	27	6.5	21	5.1	129	31.1	220	53.0	18	4.3
<i>Management</i>	58	14.0	66	15.9	153	36.9	123	29.6	15	3.6
<i>Methodology</i>	34	8.2	33	8.0	91	21.9	231	55.7	21	5.1
<i>Regulation</i>	13	3.1	12	2.9	88	21.2	277	66.7	25	6.0

The most unknown areas have resulted in biomechanics and training theory. The areas where participants consider to a greater extent that coaches are more trained are in technique (79.8% consider it very relevant) and tactics (79%), followed to a lesser extent by knowledge of the regulations (66.7%). Sports management is the area that is considered least relevant (29.9% consider little or nothing relevant). By relevance, the different types of knowledge (relevant and highly relevant categories) get the following endorsement (figure 9).

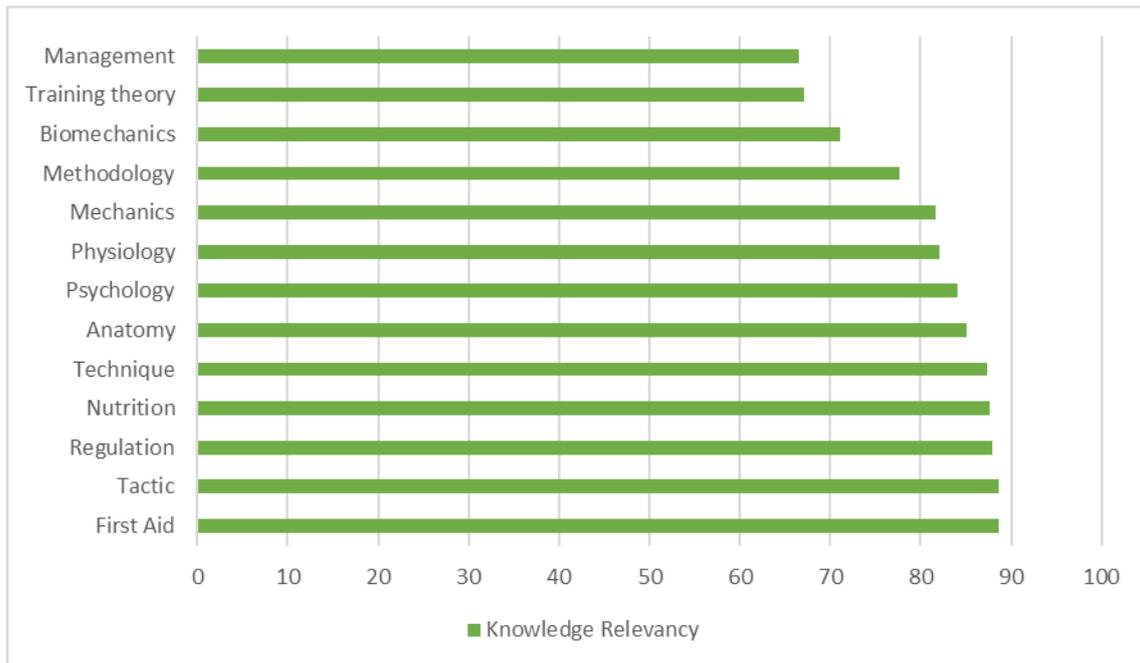


Figure 9: Knowledge relevance

Coaches are, in all the items, those who most value the relevance of having knowledge in all the areas raised, with support for the response of very relevant among the management (47.2%) to the tactics (91.7%), technique (86.1%), training theory (86.1%) or the regulations (86.1%). The riders have a high valuation of the knowledge of technique (82.9%) and tactics (82.2%) by the coaches.

Families, along with fans, are the ones that least value knowledge from coaches, having some support for training theory (62.7%), first aid (68.3%), psychology sports (51.6%) and methodology (56.5%).

When comparing the general results with those of the three countries that provided the most responses, we found that in Spain training methodology and theory stand out. For those who answered from Latvia and Slovakia, technique and tactics stand out (figure 10).



Figure 10. Comparison between needed knowledge in general sample and Spain, Latvia, and Slovakia.

4. SPORT FACILITIES NEEDS

While 30.6% of coaches fully agree that BMX is a safe sport, only 12.5% of fans, 9.3% of family members and 9.2% of riders do. Sports managers and athletes are, in fact, those who most disagree with this statement.

Risk management appears as one of the key factors for performance since 90.4% agree or strongly agree with this statement (figure 11). Regarding the perception of BMX as a risky sport, 58.1% agree and 18.1% totally agree. When asked if BMX is a safe sport, opinion is much more divided (50.6% in favour, 46% against).

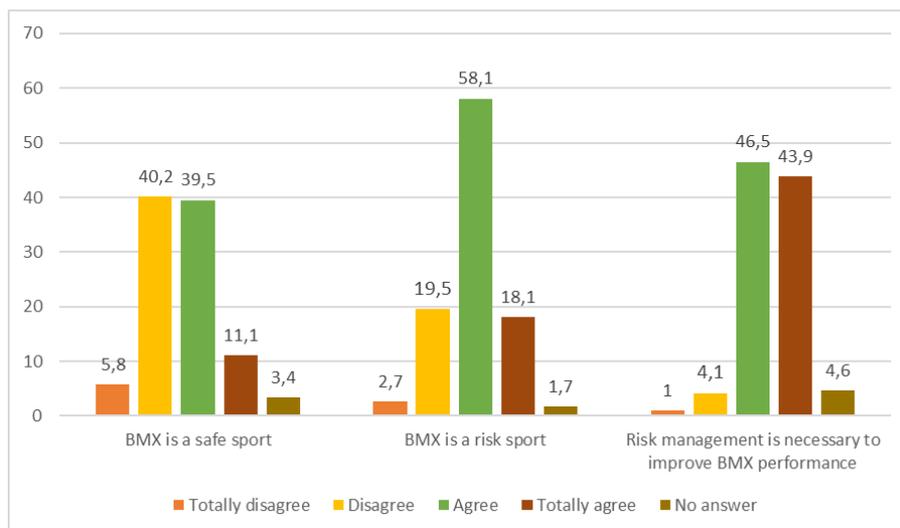


Figure 11. BMX as safe/risky sport

Those who most agree that BMX is a safe sport are the coaches (30.6%). Riders, fans, and family only support him around 10%. Adding those who agree or totally agree, we obtain a perception of the safety of the sport of BMX (figure 12).

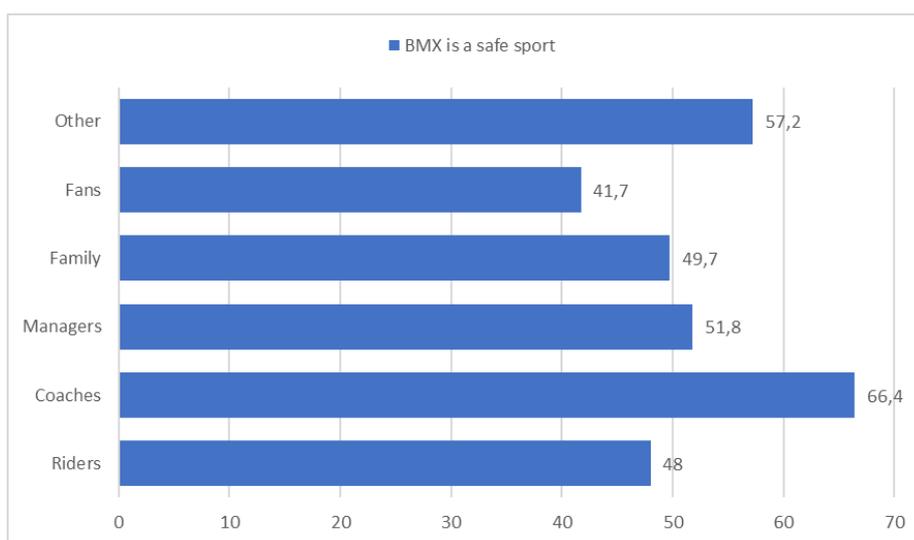


Figure 12. BMX is a safe sport (perception by position)

Sports managers (33.3% 9, followed by family members (19.3%) are the ones who, to a greater extent, fully agree that BMX is a risky sport. In the rest of the categories (riders, coaches, fans), are around 15-16%, when those who agree with those who totally agree are analysed together, the percentage of support is balanced around 75%.

Regarding the relevance of risk management to performance improvement, the greatest support is obtained in the category of coaches and riders (figure 13).

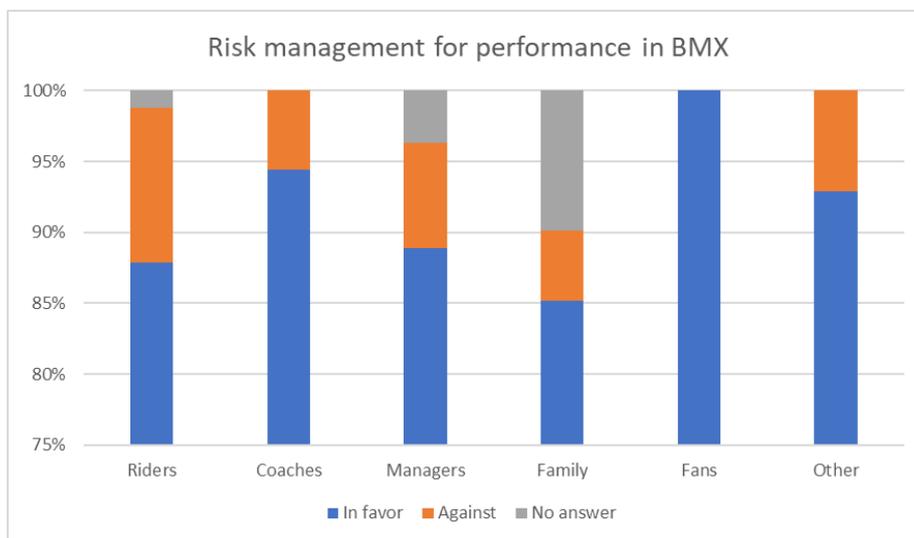


Figure 13. Risk management for performance perception

By country, Spain is the one that perceives BMX to a greater extent as a safe sport, but also the one that, to a greater extent, qualifies it as a risky sport and considers its management as fundamental for improving sporting performance (table 2).

Table 2. Risk perception (based on totally agreement with the statements).

Statement (% totally agree)	General	Spain	Latvia	Slovakia
BMX is a safe sport	11.1	21.1	15.9	3.2
BMX is a risky sport	18.1	30.1	14.0	10.6
Risk management is necessary for BMX performance	43.9	55.3	46.7	33.0

Asked about the elements that make the track safe, the layout of the curves, the width and the first fluid jump are the most highlighted (Figure 14).

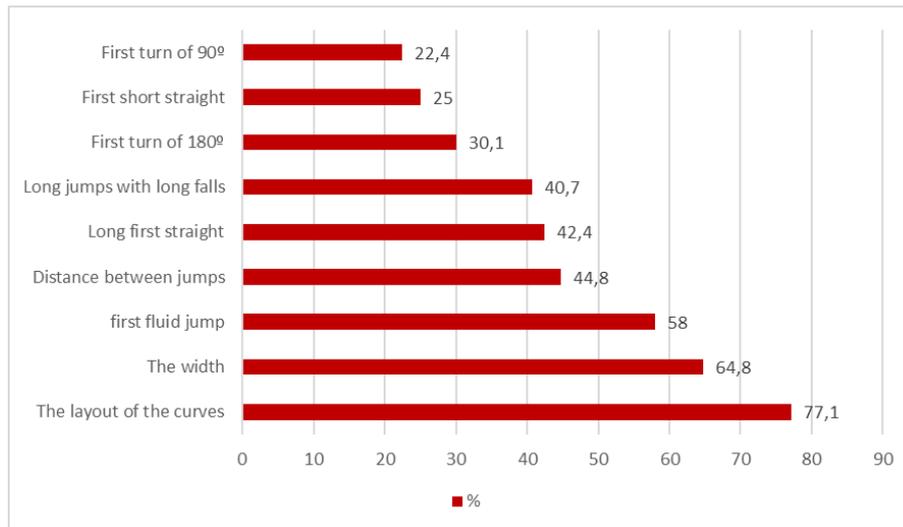


Figure 14. Elements that make a track safe

Regarding to what a coach can do to make training safe, or safer, participants prefer to force athletes to wear protections and to recognize the track before training, followed by to mark damaged or dangerous areas (figure 15).

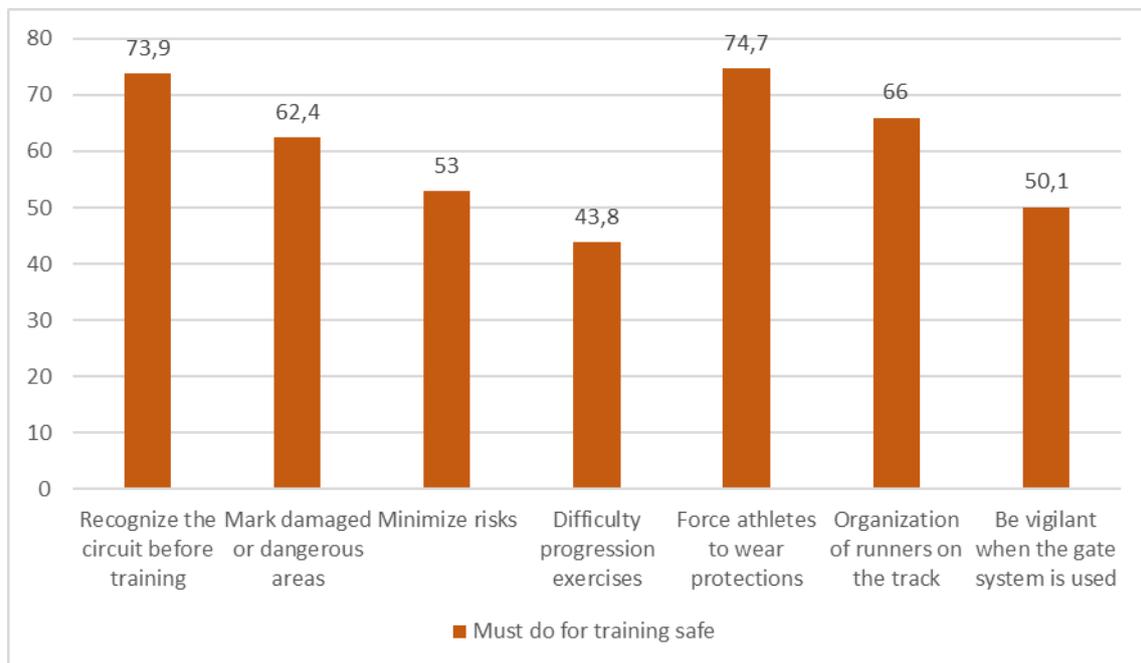


Figure 15. Things that coach can do for a safe training.

Opinions about what makes a circuit to be considered of good quality vary a lot, but the best valued elements are the amplitude (F=69), the design or layout of the track (F=55), that the pavement is in good condition (F=47), that it is well maintained (F=45), that it

exists safety on the track (F=44), smooth and long jumps (F=40), well-designed curves (F=29), fluidity (F=28), or a good gate/start (F=22), among others.

5. ENVIRONMENT NEEDS

The athlete's environment and the support he has from the people who participate in his development process has been shown in the literature as a key factor in improving performance and integral development. Table 3 shows how many participants consider the family as very relevant as support for athletes (59.5%). The lack of initial parental support for BMX stands out, but not in an excessively high percentage (11.8%).

Table 3. Perceived support.

	Totally disagree	Disagree	Agree	Totally agree	No answer
<i>Family is a relevant support for riders</i>	0,5	2,4	36,9	59,5	0,7
<i>Parents use to support their children when choosing BMX as sport</i>	1,2	10,6	54,7	30,8	2,7
<i>Parents usually consider BMX as risky</i>	1,7	8,4	61,2	25,5	3,1
<i>Family members are usually kind and polite when encouraging their children in races</i>	1,0	6,7	58,3	28,4	5,5
<i>Coaches tend to have good communication with families</i>	0,7	5,8	60,2	28,0	5,3
<i>The relationship between riders, coaches and families is usually fluid and positive</i>	1,2	6,0	42,2	47,2	3,4
<i>Friends and colleagues are important in adherence to sport</i>	0,2	2,4	37,9	57,3	2,2

It stands out in terms of the importance given to parental support by coaches and the family itself (75% totally agree). The lowest support is, however, among athletes (39.5%).

40% of families are the ones who, to a greater extent, consider that parents support their children when they choose BMX as a sport, while 21.7% of athletes think in the same sense.

Family members and coaches, with 40%, are the ones who support to a greater extent that parents are usually kind and polite when encouraging their children in races. It stands out that only 15% of the athletes think in this regard, although once we add the categories "agree" and "completely agree", the results are as follows (figure 16):

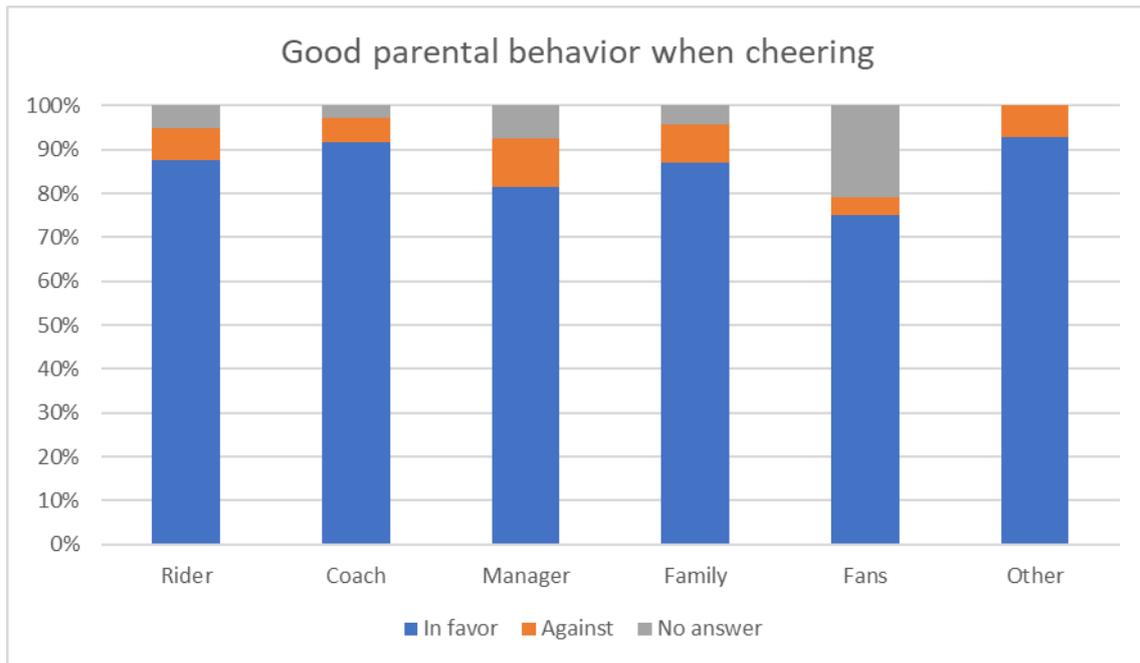


Figure 16. Parental behaviour when cheering

The level of support for claims about good communication between coaches and family members is lower, around 40% among coaches and family members themselves and around 20% among riders and sports managers. When athletes are added to that equation (the relationship between athletes, coaches and family members is usually fluid and positive), support increases (Figure 17).

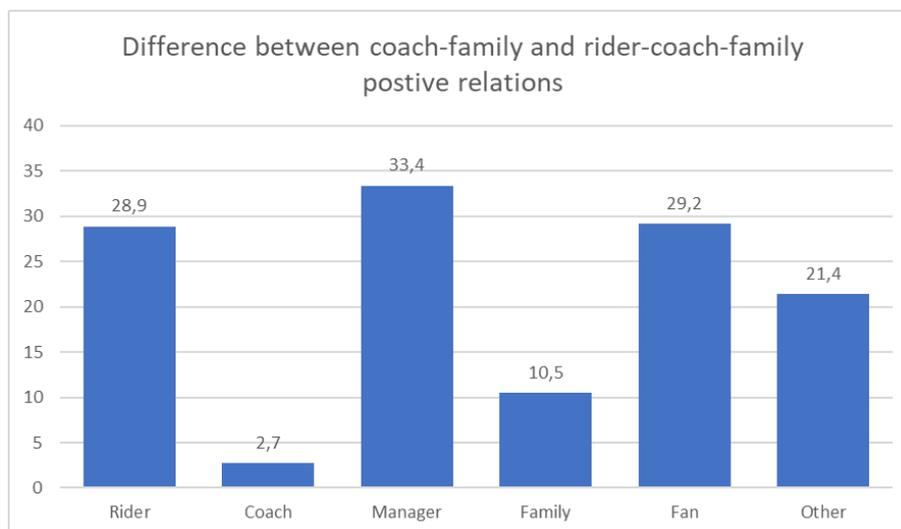


Figure 17. Relationships and communication coach-athlete-family

Regarding the influence of friends and colleagues on continuity in the sport (adherence), around 65% of coaches, managers and family members totally agree. Among athletes, this support drops to 52.6% and 33% among fans.

By country, in Spain the family support is greater appreciated (82,1% totally agree) and in general they value in a more positive way their interactions. Latvia evaluates in a low-grade parents' behaviour when communicating with coaches and when cheering their sons and daughters (only around 11% totally agree with the statement). Figure 18 displays the comparison between general perception (totally agree) and the three countries with several answers that allows to analyse.

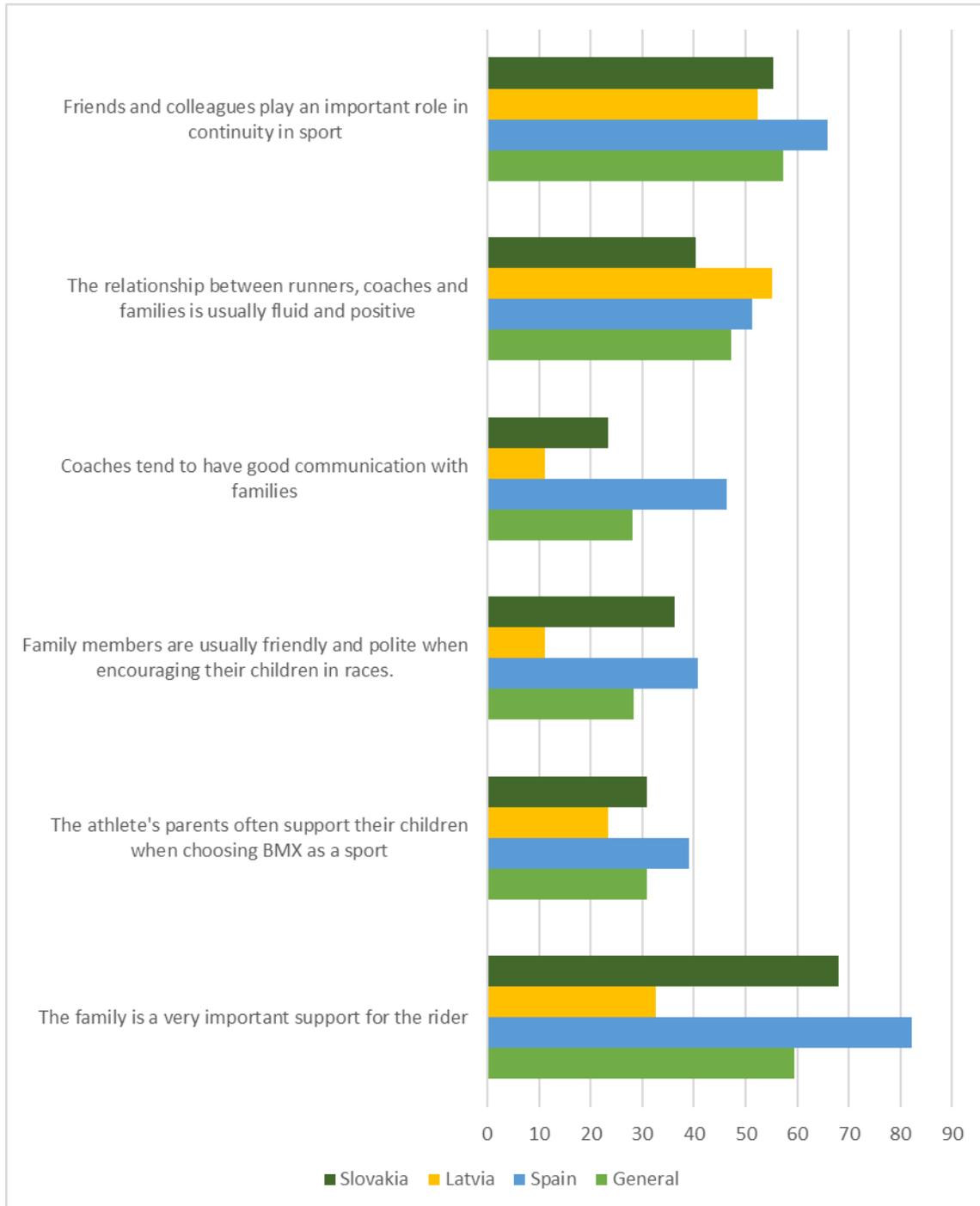


Figure 18. Comparison between perceived support per country.

Table 4 describes the perception of social support, resulting in an intermediate agreement with the sentences. The most valued support is the media power to facilitate getting sponsors and scholarships and to increase participation in their sport. The role of the Project to give visibility to the club or the city is not very backed up.

Table 4. Social support and visibility.

	Totally disagree	Disagree	Agree	Totally agree	No answer
<i>In BMX, the support of the media is needed to get scholarships and sponsorships</i>	0,7	5,8	47,2	43,6	2,7
<i>In BMX it is necessary to appear in the media to increase participation</i>	0,2	4,3	51,8	42,2	1,4
<i>Social networks are the main channel for young people to learn about BMX</i>	1,4	8,7	44,1	42,9	2,9
<i>This project gives visibility and support to my sport</i>	1,4	3,1	42,7	41,7	11,1
<i>This project gives visibility to my club</i>	1,9	8,2	39,0	36,4	14,5
<i>This project gives visibility to my city (branding)</i>	1,9	9,4	40,5	32,3	15,9

Per country is reflected in figure 19.

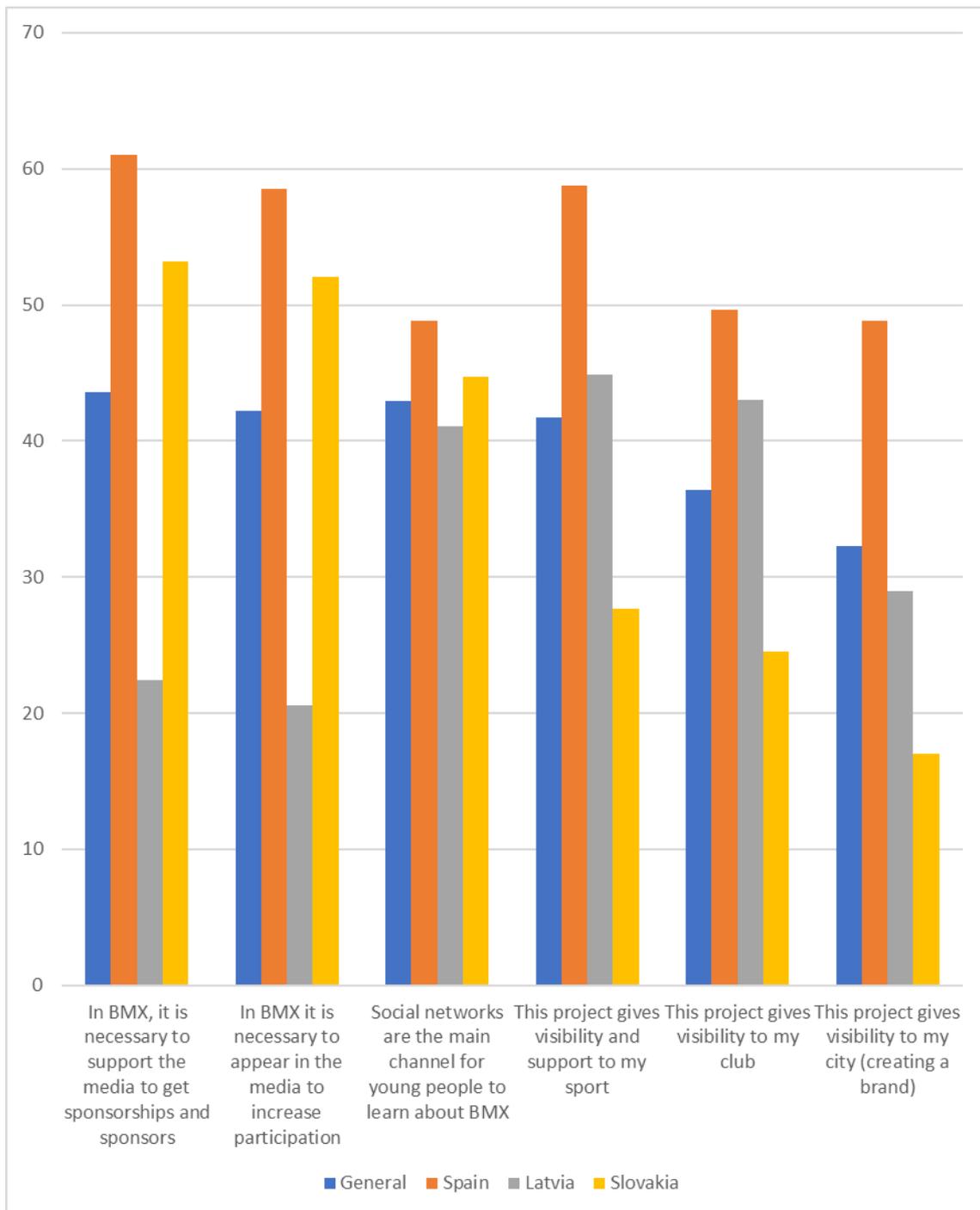


Figure 19. Social support perception per country

6. CONCLUSIONS

1.- The total number of responses obtained has been somewhat lower than planned, especially due to the inequality between the participating countries. However, the final sample is adequate to be able to consider this diagnostic study with a certain representativeness of the BMX community; this being not very numerous, as it is a minority modality.

2.- The people who answered are mostly riders and family members, which explains the greater presence of men (both in athletes and in BMX trainers, women are a minority) and the most frequent age ranges.

3.- The sport of BMX is considered to be of medium cost compared to other sports, since it requires an initial investment, at least in bicycle, helmet, gloves and protections. This material can be purchased for less than 1000 euros, but it evolves towards higher costs as you want to improve. To this is added, in the case of competitions, training, travel, repairs and set-ups and other costs that represent around 2,000 euros per season.

4.- The knowledge needs are greatest on the part of the coaches, followed by the riders. Family members and fans or friends are the ones who least value the need for knowledge to be able to train athletes properly. Training actions, at different levels, should act in these three groups: coaches, athletes and family members.

5.- In line with the previous comment and due in part to the fact that coaches, by valuing knowledge more, are more trained and have a greater perception of control, they are the ones who consider BMX to be a safe sport to a greater extent. On the contrary, family members have a low perception of security. The result is noteworthy among the riders who answered (only 9% consider their sport safe) and requires further investigation to know the aspects of risk perception and management as fundamental elements not only for the improvement of performance but for the enjoyment over time of the activity and preservation of their health.

6.- The preferred elements to perceive a track as safe are the outline of the curves, the width, a fluid first jump and, to a lesser extent, the distance between jumps, a long first straight, or having long jumps with long falls.

7.- Regarding what coaches can do to guarantee or improve safety, there are track recognition tasks, forcing riders to wear protections, organizing riders correctly on the track or marking dangerous areas.

8.- In overview, family support is considered a fundamental element for the development of riders, and it is considered that the communication and relationship between coaches and families is adequate, and their behaviours appropriate in general. The differences that appear between countries in this regard should be studied in greater depth to assess whether they are due to cultural factors or the characteristics of the people who have responded to this questionnaire.

9.- The assessment of the role that the media and social networks have in promoting their sport and the races of the riders is not very high. Training in this sense would be of great value to better manage the resources available to athletes, clubs and federations.

10.- In the same way, the potential that projects like this have to make sport visible and promote, to the organizations involved or to create branding, is perceived at a very low level by the participants in this study.

Limitations

- Those of non-random sampling and the method (online survey). Weakness in the representativeness of the sample and control over the veracity of the answers.
- The difference in the response rate between the different countries participating in the project, which means that the general results can only be compared with Spain, Latvia and Slovakia, which obtained an adequate number of responses.



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