

## **Development and validation of a questionnaire to identify the needs detected by the mixed ability rugby environment (Q-NeMAR)**

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### **Abstract**

The Mixed Ability model champions the right to full participation in sport for everyone. In Mixed Ability sports, and specifically in Mixed Ability rugby, people with and without disabilities participate in the same team, in mainstream clubs, without adaptations or individual classifications, abiding by World Rugby Laws for the game. It is managed internationally by International Mixed Ability Sports (IMAS), a not-for-profit organisation based in the United Kingdom. Today, Mixed Ability rugby is played in more than 15 countries around the world. There is little scientific literature on the matter, but previous research shows the need to give a voice to all the agents that make up the Mixed Ability environment (players, families, coaches and referees) in order to obtain a global and thorough vision of it. Nevertheless, there is currently no tool to measure how the context influences the promotion and visibility of Mixed Ability rugby. This study aimed to create such a tool that fills this gap in scientific knowledge, keeping accessibility as a crucial factor so that everyone involved in this sport can participate in this research. The first step was to build this tool through the Delphi method. Subsequently, the easy-to-read version of the questionnaire was created so that disabled people can easily access and understand it. The result of this study was the Q-NeMAR questionnaire and its easy-to-read version. The future application of the questionnaire could contribute to increasing the literature on this sport as well as giving a voice to all the actors involved in Mixed Ability rugby. This will also enable the development of strategies and policies to improve its visibility in order to create opportunities for inclusion of all people in sport.

**Key Words: Disability sport; human rights; social inclusion; measurement instrument; Delphi method**

### **Introduction**

The relationship between disability and sport has been widely studied in recent decades. However, the scientific literature seems to be focusing predominantly on the health benefits of specific physical activities for disabled people (Armila et al., 2018). Further attention could be given to sport as a recreational activity for disabled people, with a non-competitive focus. Therefore, research and the current practice of sport and physical activity are a reflection of the different models of disability (Agiovlasitis et al., 2018). On the one hand, most investigations see sport as a therapeutic or rehabilitation element, since they start from the medical/functional model of disability (Bach, 2017; Rioux, 1996). On the other hand, studies carried out from the area of social sciences are based on the social model of disability (Oliver, 2004; Union of Physically Impaired Against Segregation [UPIAS], 1975), paying attention to social structures, contextual factors and the relationships that are established between people with and without disabilities (Armila et al., 2018; Di Palma et al., 2016; Graikinis-Evaggelinos et al., 2019). In addition, the legal or justice model of disability (Rioux, 1996; Schalock et al., 2018) also plays an important role in research stating that sport and leisure are universal rights of all citizens. In this sense, it is clear that there is little research about sports for disabled people from the perspective of the social and legal model of disability. This model explains the disability as the result of the interaction between the person and the barriers that exist in their environment, in accordance with the UN Convention on the Rights of People with Disabilities (UNCRPD) (United Nations (UN), 2006). Precisely, article 30 of this document defends the right of all people to participate in leisure and sports within mainstream contexts. Therefore, researches such as that of Chien et al. (2017) shows that a more inclusive offer could increase the participation and independence of disabled people in physical activities, developing their basic capacities, their social network and their self-determination. In the same way, certain authors indicate that sports participation “constitutes an important area of inclusion in the community for people with intellectual disabilities” (Ryan et al., 2018, p.1), and that the promotion of inclusion through sports and leisure leads to empowerment, equality, dignity and respect for diversity (Agiovlasitis et al., 2018).

The Mixed Ability model (MA) stemmed from these premises. Its main objective is to promote social inclusion through sports, leisure and education, defending human rights. Its practical tool, Mixed Ability sport activities such as in this case Mixed Ability rugby, promotes social inclusion by integrating players in the same mainstream clubs regardless of their (dis)ability, age, social role or previous experience. The Mixed Ability model was first developed in rugby, where it emerged due to the lack of opportunities for disabled people to play contact rugby (Dyer et al., 2019). In other words, MA rugby arose from disabled people, who demanded to play rugby without adaptations in mainstream clubs. Currently, it has been implemented in other sports modalities (Corazza & Dyer, 2017). According to this model, no classification or identification systems are used, and MA rugby abides by World Rugby Laws for the XV-a-side game, with only minor adjustments in order to consider individual needs (Corazza & Dyer, 2017). International Mixed Ability Sports (IMAS) is the organisation which coordinates Mixed Ability sport across the world. Different authors have carried out studies on MA rugby at the international level, concluding that this model contributes to generating healthy lifestyles (Limas, 2020) and that its application is useful as an inclusive pedagogical tool (Damiani et al., 2018, 2019). Corazza and Dyer (2017) assessed the experiences of MA rugby players through an online questionnaire and focus groups, and concluded that MA rugby has significant potential to achieve inclusive outcomes and positive impacts on strengthening social relationships, personal development, and perceptions of disability for those involved. As additionally evidenced by these authors, MA rugby encounters different barriers that prevent it from gaining visibility. Several national Governing Bodies, in fact, do not recognise this provision within their grassroots offer, despite the recommendations of the International Paralympic Committee (IPC) on sport integration processes and the right to access and full participation in sport and leisure on equal terms as enshrined in the UNCRPD. For this reason, its essential to understand how MA rugby can be promoted as a way of inclusion through sport, and what is the role of the different agents involved in achieving this objective.

In this sense, sport environment plays a key role in promoting inclusion in sport. The scientific literature related to inclusion in sport (Cunningham & Warner, 2019; Darcy & Dowse, 2013; Hammond et al., 2019; Jeanes et al., 2018; Kiuppis, 2018; Spaaij et al., 2020) shows that, in most cases, the inclusive provision is separated from the rest of the club and that there is little interaction between the people who form this inclusive section and the rest of the members of the club. MA rugby highlights the need for interaction between the different levels of the sporting environment. In order for the inclusion of disabled players to be successful, it is necessary to involve the rest of the players, their families, disabled people-led and advocacy organisations, club coaching and support staff, committee members and even the referees of this sport. Research such as that of Corazza and Dyer (2017) shows the need to give a voice to all the agents that make up the MA rugby environment in order to obtain a global and complete vision of it. The elaboration of a research tool that is accessible to everyone, regardless of their abilities, is key to achieving this goal. Moreover, different authors have identified different barriers facing inclusive sport (Corazza & Dyer, 2017; Darcy & Dowse, 2013; Kiuppis, 2018). These barriers include those related to lack of time and/or money, support ratios, adequacy of infrastructure, transport, equipment, persisting stigma and prejudice, lack of confidence and self-esteem, communication challenges, lack of awareness of opportunities and lack of realistic role models. The literature shows that there is research in which a tool is created and used to identify the limitations and barriers detected by the environment for the promotion of inclusion in sport. This is the case of studies such as Darcy and Dowse (2013), where the sample was made up of disabled people and their family members or support network. Another example is the research on MA rugby conducted by Corazza and Dyer (2017), involving players with and without disabilities, club coaching and support staff, as well as referees. However, the fact is that to date there is no largely accepted, accessible, validated instrument to identify the needs detected by all members of the sporting environment (players with or without disabilities; family members, personal assistants, carers or support workers; coaches or staff of the clubs; as well as referees) in the promotion of inclusion through sport. Taking into account the barriers in the promotion of inclusive sport and with the aim of giving a voice to all the agents involved in the MA rugby environment, it is essential to create a tool that allows the identification of participants' needs in order to promote this model. This tool must have an easy-to-read version for people with learning disabilities or difficulties, and support must be offered to participate and thus guarantee the access of anyone to the study. The aim of the tool is to know how to promote MA rugby as a way of including disabled people in sport and society, and as a way of guaranteeing the rights of access and full participation of all people in sport as enshrined in the UNCRPD. As a by-product, this will also increase the scientific evidence about this model, determine participants' views of disability and assess the differences in the needs detected by the sport environment depending on the role of the person surveyed.

### **Material & methods**

In order to achieve the research objective, the Delphi method was used because its entire procedure can be carried out electronically (Astigarraga, 2003). Moreover, it is a fast, reliable process that brings a cross-sectional character to the study by considering the experience of professionals from different areas and fields of work. This method allows knowing the opinion of a large number of experts on the subject, and it is very

practical when seeking a consensus for the creation of a measurement instrument. The anonymous contribution of different subjects avoids leadership biases, while offering a broad vision of the key points to investigate.

The phases for carrying out this method are the following: (1) definition: the goal of the consultation is formulated and the dimensions to be explored and possible sources of information are identified; (2) choice of experts: the profile and location are determined, the selection protocol is drawn up, an invitation is issued and a commitment to collaborate is obtained; (3) execution of consultation rounds: the initial questionnaire is developed, the information is analysed, the feedback and consultation round is elaborated, and the responses are categorised and ordered according to the degree of agreement; and (4) results: the information from the final round is analysed and the summative report is prepared. According to different authors, it is best to do three rounds of expert consultation, ranging from open questions to more closed ones. It is recommended that the group of experts consists of between 6 and 30 people (Astigarraga, 2003; Loo, 2002; Reguant-Álvarez & Torrado-Fonseca, 2016).

In this case, the procedure started with the literature review around inclusion in sport and MA rugby, the constitution of the coordinating group, and the design of the draft questionnaire (phase 1). This was followed by the selection of the group of experts (phase 2) and consultation rounds with this group (phase 3). Finally, the questionnaire and the final report were drawn up (phase 4). The tool obtained through this process, which identifies the needs detected by the sporting environment for the promotion and visibility of MA Rugby, is called "Q-NeMAR questionnaire".

#### *Participants*

The coordinating group (CG) was made up of a pre-doctoral researcher and a university professor expert in research methodology, both from Spain, and three IMAS experts (one from United Kingdom and two from Spain). The CG had several meetings to determine the objectives and to draft the questionnaire, as well as to establish the criteria for the selection of the group of experts. This process was part of phase 1 of the Delphi method (definition).

With regard to the selection of the group of experts (GE) (phase 2: selection of experts), the following criteria were considered: (a) knowledge and experience in research in social sciences; (b) experience in inclusion processes and/or inclusive sport; (c) experience in MA rugby. Initially, 26 people were invited by email to participate in the validation process because they met one or more of these criteria. Of these 26 people, 19 accepted the invitation, 2 declined and 5 did not reply. Of these 19 people, 2 did not reply to the first consultation round within the established deadline, so the GE finally consisted of 17 people (n=17). In terms of the composition of the GE, of the 17 people, 5 were university professors and one of them was also an expert in MA rugby; 5 were experts in inclusion processes, 3 of them also being experts in inclusive sport; and 7 were experts in MA rugby. In terms of origin, most of the members of the GE were Spanish (15), plus one person from Chile and another from Ecuador. Once the GE was defined, an informative guide on MA rugby and the Delphi method was sent by e-mail to each member, as well as the commitment to collaborate in the questionnaire validation process and the commitment revocation document as required by the Research and Teaching Ethics Committee of the University of A Coruña (CEID-UDC). Subsequently, the CG collected and kept these commitments in compliance with data protection measures.

#### *Procedure*

The draft questionnaire prepared by the CG was organised into 4 background info sections and 4 specific sections according to the role of the respondent. To group the different roles present in the MA Rugby environment, the CG created 4 target groups based on their experience and the literature on the role of the environment in inclusive sport (Darcy & Dowse, 2013; Jeanes et al., 2018; Pérez-Tejero, 2018; Spaaij et al., 2020): players (with or without disabilities), family members or support persons, coaching and support staff of clubs, and referees. The common sections refer to the concept of disability (section A), the concept of MA Rugby (section B), the needs of MA rugby (section C) and the socio-demographic factors of the respondent (section D). The specific section (E) deals with the personal and contextual factors of the respondent according to their role (section E1: player; section E2: family member/personal assistant/support person/legal representative; section E3: coaches and clubs' staff; and section E4: referee). The last question in section D acts as a filter for the specific part: depending on the answer to this question, the respondent fills in only the specific part that applies to him/her. This will allow us to know the reality of MA rugby from the point of view of the different agents involved in this sport modality. Furthermore, this will allow us to determine if there are statistically significant differences between the needs detected for the promotion of MA rugby depending on the role of the person surveyed.

Once the final version of the Q-NeMAR questionnaire was completed, an easy-to-read version was created and validated to improve its accessibility and enable people with learning disabilities or difficulties to participate in this research. It should be noted that the validation process in easy-to-read version is not a scientific process, but rather that the validators reviewed the text to detect possible complex words or complicated wording and modified them to guarantee accessibility and understanding. Two experienced people participated in adapting the questionnaire to the easy-to-read version. Three disabled people and with training and experience in the validation of text in easy-to-read version carried out the validation. In this phase, the

necessary changes were made in the wording and format of the document to adapt it to the guidelines of Inclusion Europe (2015). In addition, 25 items were modified to improve their reading comprehension and make them easier to understand.

#### *Data collection and analysis*

After carrying out phases 1 (definition) and 2 (selection of the group of experts) of the Delphi method, phase 3 (consultation rounds) was initiated. For this purpose, an Excel form was prepared containing all the items of the questionnaire (both questions and answers), as well as an initial introductory sheet explaining the task to be carried out. On this form, the experts had to rate each item between 1 and 5 based on its adequacy to the objective of study, and could make observations or comments on all of them. For each round, the form was sent by email and the deadline for returning the completed form to the CG was 10 days. In addition, reminders of the deadline were sent from the CG on the 7th and 9th day of each round. This phase lasted a total of 10 weeks.

Initially, the CG had decided to modify/delete those items that scored less than 3 on average. However, in the first consultation round (R1) only 1 item obtained an average score lower than 4 (3.97), so it was decided to increase the level of stringency of the review and modify/remove those items with an average score lower than 4.50. Furthermore, it was agreed that the CG could keep items with an average score lower than 4.50 and modify/remove items with a higher average score according to the following criteria: (a) that the CG, after assessing the results and the comments of the GE, considered the item indispensable for the study objective; and (b) that the CG, after assessing the results and the comments of the GE, considered the item dispensable for the study objective. It was also agreed that one item with an average score higher than 4.50 could be modified/removed based on the comments provided by the GE. Regarding the conclusion of the rounds, it was decided to end this phase when the average coefficient of variation (CV) of the round was less than 2.50% (Reguant-Álvarez & Torrado-Fonseca, 2016).

The first version of this form (Q-NeMAR v1) consisted of 256 items related to the vision of disability, the role of social agents in promoting MA rugby, and the personal and contextual factors of the people surveyed. The number of items is so high because in reality, the tool is subdivided into 4 final questionnaires: one for each target group (player; family member/personal assistant/support person/legal representative; coaches and clubs' staff; or referee). As for the type of answers, most of the questions in the questionnaire were answered on a Likert scale (92), while 32 questions were closed-ended, 20 were open-ended and 4 were multiple-choice. Once the assessment of all the experts in the first round (R1) had been received, the first statistical and qualitative analysis was carried out by the CG, which, with the data obtained, produced the second version of the questionnaire (Q-NeMAR v2) with 231 items. One of the objectives in this process was to create a questionnaire that was as closed as possible, avoiding open-ended answers. This consultation round increased the number of questions with Likert-type replies (115) and decreased the number of questions with other types of answers (closed response: 23; open response: 16; multiple response: 0). The form was emailed back to the GE, together with the results of R1, to start the second consultation round (R2). The process was repeated for the third round (R3), in which the third version of the questionnaire (Q-NeMAR v3) with a total of 192 items was sent to the GE. Again, most of the questions were Likert-type (75), while the rest were either closed-ended (25) or open-ended (13). Finally, the final version of the Q-NeMAR questionnaire was developed by the CG and sent to the GE together with the final report of the questionnaire validation process (phase 4: results).

## **Results**

### *First round of expert consultation and analysis of the CG (R1)*

In the first round, out of 256 items, 14 obtained an average score of less than 4.50 (5.47%), which shows that the degree of agreement of the experts in R1 was already very high. Once the quantitative analysis had been carried out, the results were assessed together with the contributions made by the GE. In terms of the decisions taken by the CG, it was agreed to delete 56 items and modify 101 items based on the scores and comments from this round. The main reason for removing items in this round was that the items did not clearly respond to the objective of the study. For example, sections E1, E3 and E4 asked whether the respondent had a disability certificate. Upon review, both the CG and the GE concluded that the answer to this question did not add information to the study, as at no point was the option of segmenting the sample according to the disability variable raised. As for the modifications made, almost all of them were changes in the wording of the items. The average coefficient of variation for R1 was higher than stipulated before starting the consultation rounds ( $CV_{R1}=3.74\%$ ), so the second round (R2) was carried out.

### *Second round of expert consultation and CG analysis (R2)*

In the second round, 6 of the 231 items scored less than 4.50 on average (2.60%). As was the case in R1, in this round most of the comments related to changes in the wording of the items. Regarding the elimination of items, it was mostly due to detecting that such items did not respond to the aim of the study (for example, asking about personal supports for the practice of MA rugby when the objective of the questionnaire was to assess the needs of the environment and not of the individual person). The CG decided to remove 41 items and modify 45 more. The average coefficient of variation for R2 was again above 2.50% ( $CV_{R2}=2.63\%$ ), so the third round of consultation (R3) was started.

*Third round of expert consultation and CG analysis (R3)*

In the third round, of the 192 items to be evaluated, only 4 obtained an average score of less than 4.50 (2.08%). However, the CG decided to keep these items because they considered that their scores reflected the GE's approach to disability, since their experience as professionals in this field provides them with a view framed within the social model of disability (Oliver, 2004; UPIAS, 1975). The 4 items were related to statements falling within medical-rehabilitative models mainly, which are far from the concept of disability that MA rugby aims to promote. On the other hand, all of the comments of the GE referred to the wording of the items. The CG decided to modify only 4 items on the basis of these comments. In this case, the average coefficient of variation of the GE responses was lower than stipulated at the beginning of this phase ( $CV_{R3}=2.30\%$ ) and therefore, according to the criteria established when the validation process started, this was the last consultation round.

*Final result of applying the Delphi method*

Tables I and II show the results for each section in the 3 validation rounds (R1, R2 and R3) and table III shows the overall results for each of the rounds. All the tables show the following descriptive statistics: mean, standard deviation and quartiles. Additionally, table I shows the number of items in each section and table II shows the coefficient of variation, the number of items with average scores below 4.50 and the number of total items in each round. Finally, table IV shows the decisions taken by the CG in each of the rounds and table V shows the final structure and content of the Q-NeMAR questionnaire.

**Table I**

*Results by sections (common sections)*

	Section A			Section B			Section C			Section D		
	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
Average	4.60	4.65	4.82	4.53	4.86	4.99	4.80	4.78	4.86	4.88	4.96	4.95
Median	4.63	4.84	4.94	4.92	5.00	5.00	4.83	4.86	4.91	5.00	5.00	5.00
Stand. Dev.	.401	.418	.337	.839	.346	.061	.221	.236	.185	.166	.078	.102
Q1	4.35	4.42	4.81	4.50	5.00	5.00	4.69	4.86	4.77	4.78	4.92	4.96
Q2	4.63	4.84	4.94	4.92	5.00	5.00	4.83	4.95	4.91	5.00	5.00	5.00
Q3	5.00	4.95	5.00	5.00	5.00	5.00	4.98	4.78	5.00	5.00	5.00	5.00
N of items	20	19	18	12	4	4	56	62	57	18	13	13

Note. Source: own elaboration.

**Table II**

*Results by sections (specific sections)*

	Section E1			Section E2			Section E3			Section E4		
	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
Average	4.89	4.95	4.92	4.91	4.94	4.95	4.91	4.94	4.95	4.89	4.94	4.93
Median	5.00	4.98	5.00	5.00	5.00	5.00	4.97	4.98	5.00	5.00	5.00	5.00
Stand. Dev.	.198	.061	.176	.172	.117	.126	.149	.118	.099	.271	.132	.168
Q1	4.79	4.91	4.89	4.83	4.93	5.00	4.85	4.93	4.94	5.00	5.00	5.00
Q2	5.00	4.97	5.00	5.00	5.00	5.00	4.97	4.98	5.00	5.00	5.00	5.00
Q3	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	4.94	5.00
N of items	38	30	23	18	21	21	60	56	42	34	26	14

Note. Source: own elaboration.

**Table III**

*Results of the expert consultation rounds*

		R1	R2	R3
N	Valid	17	17	17
	Lost	0	0	0
Average		4.84	4.87	4.91
Stand. Dev.		.181	.128	.113
Q1		4.82	4.80	4.87
Q2		4.87	4.92	4.95
Q3		4.97	4.97	4.99
CV		3.74%	2.63%	2.30%
Items score <4.50		14 (5.47%)	6 (2.60%)	4 (2.08%)
Total items		256	231	192

Note. Source: own elaboration.

**Table IV**  
*Number of items according to Coordinating Group (CG) decisions*

	R1	R2	R3
Keep item	99	145	188
Modify item	101	45	4
Remove item	56	41	0
Total items	256	231	192

**Note.** Source: own elaboration.

**Table V**  
*Q-NeMAR structure and final content*

Kind	Section	Questions
Common	A. Disability concept	1-3
	B. Mixed Ability Rugby concept	4
	C. Mixed Ability Rugby needs	5-11
	D. Socio-demographic factors	12-16
Specific	E.1. Players	E1.17-E1.22
	E.2. Family members/personal assistants/legal representatives/support persons	E2.17-E2.21
	E.3. Coaching and support staff of clubs	E3.17-E3.28
	E.4. Referees	E4.17-E4.20

**Note.** Source: own elaboration.

## Discussion

The aim of this study was to create a tool to identify the needs detected by the actors involved in the sports environment in order to promote MA rugby as a way of including disabled people in sport and in society. In addition, this tool should enable the growth of the scientific literature around MA rugby, the understanding of participants' views on disability and the comparison of the different interpretations of this sport according to the role of the person surveyed (player; family member, personal assistant, carer or legal representative; member of the coaching or support staff of clubs; or referee). On this basis, a descriptive survey methodology was used, as this allows data to be obtained and processed quickly and efficiently, as indicated by Casas-Anguita et al. (2003). The limited scientific evidence available on MA rugby and the conviction about the importance of collecting consensus and representative opinions, according to Reguant-Álvarez & Torrado-Fonseca (2016), from professionals related to research, inclusion processes and sport resulted in the choice of the qualitative technique known as Delphi method. In fact, as Astigarraga (2003) indicated, the interdisciplinary debate during this process has been very enriching and a key to achieving the objective of the study. The background and experience of the group of experts in different fields provided comments from different approaches, many of them complementary, which were beneficial to the final outcome of the process. For example, the participation of professionals with expertise in inclusion processes was decisive in keeping the focus of the questionnaire on the needs of the environment, and not falling into individual support needs or the segmentation of the sample according to the disability variable (which were not the aim of the study). Besides, the involvement of MA rugby specialists who experience the day-to-day reality of the sport led to modifications such as including the option of a gender related category, despite the fact that there is no such category in this sport (there is only a male and female category). Therefore, the use of the Delphi method has helped to analyse the questionnaire from different approaches and, consequently, to generate an interdisciplinary measurement instrument, the Q-NeMAR questionnaire, that considers the interaction between the different dimensions of the human being involved in sport (biological, personal and socio-cultural) (Devis, 2000) and the participation of all the people who make up the sport environment. Apart from that, when using a qualitative technique that requires the process to be kept dynamic (Loo, 2002), it is essential that the collaborators are clear from the beginning what their involvement will consist of and how long it will last, in order to keep the number of experts constant throughout the process. For this reason, it was decided to carry out the entire procedure electronically, which allowed the participation of professionals from different countries (Spain, United Kingdom, Chile and Ecuador) and broke down the physical barriers caused by the confinement due to the COVID-19 pandemic.

In addition, the fact of creating a questionnaire accessible to everyone has also been taken into account. The UNCRPD highlights in its article 9 the right of all people to accessibility, not only in the physical environment or in transport, but also in information and communications. Based on this, the easy-to-read version of the questionnaire was created. As Callus & Cauchi (2020) point out, using easy-to-read information is a way of defending the rights of disabled people. However, the same authors show that easy-to-read information does not by itself guarantee that disabled people have access to information. In this sense, there are several critical voices that question the use of easy-to-read information in a merely symbolic way, as a "marker of ideological commitment to inclusion" (Chinn & Homeyard, 2017, p. 1190), rather than as a practical tool to facilitate knowledge (Walmsley, 2010; Mander, 2015; cited in Chinn & Homeyard, 2017). Different authors highlight the

risk of providing easy-to-read information without offering the necessary support for its understanding, depending on the individual communication needs (Oldreive & Waight, 2012; cited in Chinn & Homeyard, 2017). To avoid this, several authors defend the need to include disabled people in the process of preparing easy-to-read content (Chinn & Homeyard, 2017; Goodwin et al., 2015), and others, such as Sutherland & Isherwood (2016), stress the importance of attending to individual support needs to understand the easy-to-read information. Based on these contributions, the validation process of the easy-to-read version of Q-NeMAR questionnaire has involved the participation of disabled people with experience in MA rugby, who become authors of accessible information and referees of their quality. These new roles represent an increase in their value and social capital, as indicated by Chinn & Homeyard (2017), by becoming information providers and getting involved in the research process (Goodwin et al., 2015). In addition, participants will be offered the possibility of requesting individualized support to cover the questionnaire. This is because it is understood that the elaboration of an easy-to-read version is only a tool to facilitate understanding, but that it may be necessary to attend to individual needs for support in order to respond to the Q-NeMAR questionnaire (Callus & Cauchi, 2020; Chinn & Homeyard, 2017).

As for the final result of the process, the Q-NeMAR questionnaire was finally structured in 8 sections that respond to the objectives of the study. Section A (concept of disability) will allow us to discern the respondents' view of disability. Section B and C will be used to determine the needs identified by the environment for MA rugby to grow, taking into account different dimensions: visibility, promotion, financial support, training, accessibility, intrapersonal factors and interpersonal factors. The definition of these dimensions was the result of the barriers faced by inclusive sport (Corazza & Dyer, 2017; Darcy & Dowse, 2013; Kiuppis, 2018) and the quality of life dimensions of Schalock et al. (2017). Moreover, the aspects used by the Sanitas Foundation Chair of Studies on Inclusive Sport and the Spanish Rugby Federation to find out the opinion of Spanish clubs on the process of inclusion of disabled people in rugby had also been considered (Fernández-Zamarro, 2020). Finally, the consensus of the GE during the validation process of the questionnaire was key in defining these dimensions. Regarding the specific sections, each of them refers to a specific role or set of roles (section E1: player; section E2: family member/personal assistant/support person/legal representative; section E3: member of the coaching and support staff of clubs; and section E4: referee) and will provide information on the personal and contextual characteristics of the respondent (age, country, years of experience in MA rugby...) in order to segment the sample and obtain information on the influence of these variables in the identification of needs for the promotion of MA rugby. In the same way that the dimensions referred to in sections B and C were determined, the identification of the different roles or group of roles arises from the review of the scientific literature that focuses on the sport environment within the processes of inclusion in sport (Corazza & Dyer, 2017; Darcy & Dowse, 2013; Pérez-Tejero, 2018) and, in this case, from the consensus of the CG.

### **Conclusions**

In conclusion, the Q-NeMAR questionnaire will contribute to identify the needs detected by the environment to promote and make MA rugby more visible as a way of including disabled people in sport and society, thus filling the current gap in the scientific literature on this subject. Furthermore, it will be an accessible tool and its future application could contribute to increasing the body of scientific knowledge on this sport and give a voice to all the agents involved in MA rugby. Finally, the tool obtained in this process will be used to determine whether there are significant differences in the identification of needs depending on the role of the respondent and what is the predominant view of disability in the MA rugby environment.

With regard to the limitations of this study, the main one is that all members of both the CG and the GE were guided by the social and rights-based model of disability, understanding it as the result of the interaction between the person and the barriers present in the surrounding environment. This led to lower average scores on questionnaire items that were positioned in medical or rehabilitative models of disability. However, the CG detected this limitation and decided to keep these items despite their scores, so that the questionnaire would cover all options related to the different ways of understanding disability.

To conclude, as future lines of research, the application of this questionnaire and its cross-cultural adaptation are proposed. The first one will allow us to develop strategies and policies to improve opportunities for inclusion in sport and community. The second one will make it possible to compare the results in different countries and cultures. In addition, the Q-NeMAR questionnaire could also be adapted and applied to other team sports other than rugby.

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### **Conflicts of interest**

Martino Corazza is the Co-founder and Director of IMAS. Carla da Silva, David Izquierdo González and Oier Barruso are collaborators of IMAS.

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