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## ORIGINAL

### YOUNG WITH DOWN SYNDROME AND RECREATION SWIMMING ACTIVITY: INCLUSION POSSIBILITIES

### JOVEN CON SÍNDROME DE DOWN Y NATACIÓN RECREATIVA: POSIBILIDADES HACIA LA INCLUSIÓN

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#### ABSTRACT

The purpose of this study was to analyse the perceptions of the participant agents and factors affecting the inclusion of a child with Down syndrome (DS) in a recreational swimming activity program. Program participants included: a child with DS, nine children without diagnosed disabilities, the swimming instructor, the mother of a child with DS and the coordinator of the activity. This study was based on qualitative research approach and data were collected through semi-structured interviews, systematic observation and research diary. The following results were obtained after the inductive process: the need of greater coordination among those involved, designs appropriate programs based on the characteristics of all participants, improve specific training of technicians responsible as well as improve the communication of the agents participating in

order to enable the inclusion of a child with DS in a recreational swimming activity.

**KEYWORDS:** inclusion, recreational swimming, Down syndrome.

## **RESUMEN**

El propósito del estudio fue analizar las percepciones de los agentes participantes y los factores que inciden en la inclusión de un niño con síndrome de Down (SD) en un programa de natación recreativa. Los participantes fueron: un joven con SD, nueve jóvenes sin discapacidad diagnosticada, la monitora de natación, el coordinador de la actividad y la madre del niño con SD. El presente estudio, basado en una metodología cualitativa, recogió la información a través de entrevistas semi-estructuradas, observación sistemática y diario de la investigadora. La utilización de un proceso inductivo permitió categorizar la información y obtener los siguientes resultados: es necesaria una mayor coordinación entre los agentes implicados, adaptar el programa en función de las características de todos los participantes, mejorar la formación específica de los técnicos responsables y la fluidez de la comunicación entre los agentes implicados para posibilitar la inclusión del niño con SD a través de la natación recreativa.

**PALABRAS CLAVES:** inclusión, natación recreativa, síndrome de Down.

## **INTRODUCTION**

The participation of people with and without disabilities in the different activities planned for the entire population is a right, which is considered a priority, as well as the International Law point out in the Charter of the United Nations established in the Convention on the Rights of people with disabilities in 2006. Similarly, Spanish legislation includes such rights and mentions that the States should promote participation of people with disabilities "on an equal basis with others in recreational, leisure and sporting activities" (BOE, 2008, p. 20656).

These rights are in agreement with the evolution of understanding disability. Thus, taking health as a conceptual reference, World Health Organization has moved from a static and unidirectional conception based on a medical-rehabilitation model, where the disease was the source of the problem causing the deficiency, to a broader conception and inclusive, where the health condition depends on several interdependent factors including: body functions and structures, the ability to develop activities, social participation, etc. (Egea-Garcia-Sanchez & Sarabia, 2001). This new approach is based on social and ecological approach and it corresponds to the current guidance, which includes legislation from the concept of educational inclusion. However, people with intellectual disabilities continue having difficulties in participating in sports with their peers group without disabilities.

Inclusive activities are defined as those activities involving "a single system for all, which involves designing the curriculum, methodologies, educational systems, infrastructure, and organizational structures (...) so that activities adapt to understand diversity of the population "(Hernandez-Vazquez, 2012, p. 21). Although some studies show that the participation of young people with intellectual disabilities in sports activities (Norins, Harada, Parker & Brecklinghaus, 2008; Siperstein, Glick & Parquer, 2009), this participation requires more specific attention from professionals with the intention of enhancing the participation of these people in sports with an inclusive orientation.

The inclusion of people with intellectual disabilities in sport could be an important tool for social integration of this group because it could improve their quality of life (Murphy, Carbone and American of Pediatrics Council on Children with Disabilities, 2008). In addition, some studies have reported that the joint participation of people with and without disabilities in sports develops an environment of respect and helps to accept all group members (Norins et al., 2008). However, it is important to know influences of certain factors in order to get an effective sports inclusion program.

To Grandisson, Tétrault, & Freeman (2012), personal, social and environmental factors must be considered to support the participation of people with intellectual disabilities. According to Diaz-Pareja (2002), the favourable behaviour towards the inclusion of the participants is a key element in order to carry out this process. Generally, studies agree in pointing out that there are necessary elements in order to have some assurance of success in the inclusion process such as: the teacher responsible for the activity, the context in which intends to develop the activity, the interaction between participants already involved and the learning that are pursued, etc. (O'Brien, Kudláček, & Howe, 2009).

In this sense, the inclusion of people with intellectual disabilities in sports activities require individual and favourable socio-environmental conditions (Hiu-Lun & Fung, 2009) as well as the support of families toward this process, which is not always positive (Heller, Hsieh & Rimmer, 2002). Likewise, Hiu-Lun & Fung (2009) report that instructors and participants' attitude is an important key factor to carry out the inclusion process. Therefore, it is considered necessary that all participants in the inclusion process show favourable behaviour, as the active and joint participation of young people with and without disabilities (Hutzler, 2003; Obrušniková & Válková, 2003).

If these agents of the process show a refusal behaviour, families and the student with Down syndrome (DS) could waive the efforts being made, even leaving the sport activity and so that, avoiding the possibility of obtaining the benefits of the practice of physical activity such as: cardiovascular and entertainment, etc. (Frey, Buchanan & Sandt, 2005; Taylor, Dodd, Shields, & Bruder, 2007). In this sense, Hutzler & Korsensky (2010) report that physical activities for people with intellectual disabilities should have the following criteria: serve the collaborative environment during activities, pay attention and guide families and teacher training for encourage student participation.

Focusing on the swimming activity and taking into account the above-mentioned criteria, it is also important to consider the degree of disability. According to Conatser, Block, & Gansneder (2002), swimming instructors consider that swimming teaching for youth with disabilities in inclusive settings is more feasible when the degree of disability is mild when it is severe. Possibly, these beliefs are motivated by the insufficient training and even quality of the training. Indeed, attending to Conatser, Block, & Lepore (2000), many of the training courses do not provide enough specific information on the characteristics of young people with disabilities and the possibilities that inclusive activities can provide using an aquatic environment as inclusive resort.

From the perspective of young people without diagnosed disabilities and their participation with young with disabilities, Verderber, Rizzo, & Sherrill (2003) report that there are positive beliefs in such interaction in a group of students at the primary stage of education. According to the beliefs of parents and teachers, these young people feel that they should play and contact with students with disabilities more often. Consequently, it is necessary the combination of ways of interacting for all participants involved in the inclusion process. However, although the beliefs of the students seem to go in this direction, it is necessary that those responsible establish guidelines and situations, which favour the rich social interaction.

In this regard, Place & Hodge (2001) provide that social interactions between students with and without disabilities rarely occur. In their study, students with disabilities tended to spend more time together in class and they often distanced themselves from the rest of the students. In addition, they report that teachers did not use the appropriate teaching tool to encourage such social interaction. Nevertheless, the findings of Siperstein et al. (2009) show that the participation in a summer recreational program for boys and girls with and without intellectual disabilities could help the social acceptance of children with intellectual disabilities by their peers without disabilities.

Therefore, we consider as an important factor the need that all participants involved in the inclusion process show a favourable attitude toward the joint participation of young people with and without disabilities (Hutzler, 2003; Obrusníková & Válková, 2003). Therefore, it is necessary to know all factors involved in the inclusion process of people with intellectual disabilities in sports activities.

As far as we know, no studies have analysed factors involved in the inclusion process of people with DS in regular swimming class alongside children without diagnosed disability. Consequently, and considering that participation in inclusive settings is a right of people with intellectual disabilities and it is not always possible to put it into practice in enriching way for all participants, we have been in an aquatic environment alongside students with and without disabilities. According to the literature, those involved in the process and context of the activity are the key for the inclusion process of people with disabilities in standardized activities, hence, we have considered important to analyse the perceptions of the participants involved in an inclusive sport activity.

Consequently, the aims of this study were to analyse the factors affecting the inclusion of a child with DS in a program of children with and without disabilities through the perceptions of the participants involved.

## DEVELOPMENT OF RESEARCH

In this research, the reality of events were analysed using a qualitative methodology, using a case study with the intention of understanding the perceptions and behaviours of participants, interpreting the information obtained through the various instruments used (Stake, 2005). In order to do this, a recreation swimming activity was observed for three months (a total of 24 classes), where students with and without disabilities participated all together.

### Participants

**Students.** Students who participated in the swimming activity were a child of eight years old with DS and 9 children without diagnosed disability (4 boys and 5 girls) between 7-8 years old. The child with DS had attended to swimming classes with students without disabilities during two years before starting with the group of this study and his experience was not very positive.

**Swimming instructor.** The swimming instructor is 18 years old and she had one year of training and experience as a swimming instructor. However, she had not training or experience in teaching swimming to people with disabilities. Her extensive experience as a swimmer led her to train as a coach in this sport; however, she had never been taught to swim to students with intellectual disabilities and never in a group of students with and without disabilities.

**Mother of the student with DS and the coordinator of the activity.** The study also included the mother of the student with DS and the coordinator of swimming activities. Most of the families of students who attended the swimming activity resided in the same locality and near to the sports centre. The families were invited to participate in the study and they were informed of the whole process.

### Context and procedures

The activity was conducted in a swimming pool of the following dimension: 12x25 metres and another of 5x25 metres, depending on the purpose of the sessions. The aim of the activity was the development of motor skills with a recreational focus and the learning of specific skills that would enable students develop themselves in the aquatic environment. The swimming program lasted nine months. Classes took part on Saturday and Sunday mornings with duration of 30 minutes each session.

The student with DS started his swimming class in the month of September with one monitor and students group without disabilities different from the monitor and student group of this study. The reason for the change of group was due to the student with DS did not fit well and obey the previous monitor. At the

request of the family, the student with DS was changed to another group in early December. Consequently, this study took place in the last months of the swimming activity (from April, May and June of 2009).

In order to comply with the ethical commitment, we have used pseudonyms to protect the identities of those who participated in this study, families were asked to sign an informed consent and persons responsible for the activity were asked for the appropriate permissions for the study.

### **Instruments for obtaining information**

Information for the study was obtained through interviews and observations of daily classes. The use of these instruments allowed relating the information obtained, triangulating and contrasting perceptions of the participants throughout the whole process (Flick, 2007).

**Interviews.** Semi-structured interviews were used to gather information from participants in the research process (Patton, 2002). The purpose of the interviews was to understand factors that facilitate or hinder the inclusion of children with DS in swimming activities through their perceptions, beliefs and ways of interacting families, non-disabled student and instructor regarding the relationship with the student with DS and the swimming activity. The interviews lasted approximately 30 minutes and were audiotaped for later transcription.

The researcher arranged an appointment with the interviewees and then, the interviews were conducted by way of conversation. We came with a predetermined script taking into account the reference of the study subject and the possible factors, which could influence the inclusion of people with intellectual disabilities in sports activities. Interviews were personalized based on their role of the swimming activity. For example, the questions toward the swimming instructor were related to their experience and training, and the questions toward the coordinator were related to the activities program. At the end of the research process, we conducted an interview at each of the following participants: swimming instructor, mother of the student with DS, one student without disabilities and sports coordinator of the sport centre.

Families of the other students declined authorization for realizing interviews to their children, except one mother of a student without disability, which we already mention before. We could not interview the student with DS due to his cognitive limitations.

**Non-participant observation.** The observation was performed to describe the context and participants where the object of study was unfolded. Garcia-Llamas (2003, p. 210) defines observation "...one in which the observer looks at the reality without acting on it, records facts or phenomena as they are happening at a particular time". Thus, we registered during the observation process the most important action related with the student with DS and the rest of the student without disabilities.

The observations were collected for 12 weeks in a total of 24 classes (two classes per week). Each class lasted 30 minutes. Through observations, we could obtain information about the actions and behaviours of the swimming instructor, students with and without DS and families. Thus, some examples of factors observed were related to teaching guidelines (types of tasks, adaptations of the activities, organization of students,...) used by the swimming instructor with students with and without DS.

**Researcher's Diary.** The purpose was to collect daily reflections of the researcher based on observable behaviours of the participants and the change that participants perceived. The diary was used as a tool for gathering information. According to Zabalza (2004) the researcher's diary can allow to approach the study of the process of teaching because providing information about the beliefs and conceptions of the agents involved. Perceptions and reflections of participants were written in the researcher's diary once each swimming classes and meeting with the participants were finished.

### **Information analysis**

The information was analysed using an inductive process where an individual analysis of each participating agent was performed by two researchers following cross-referencing information between cases (LeCompte & Schensul, 1999). The information was collected for 12 weeks. The interviews were recorded, the observations were made and we took notes and daily reflections in the researcher's diary for a total of 24 sessions. All information was manually transcribed, coded and classified in different categories and subcategories by researchers, following a process of inductive reasoning. Finally, a readjustment of the process was made globalizing and obtaining information from the following categories: (a) Training and technical role of swimming instructor; (B) Perceptions of the participants involved about the possibilities and orientation of the swimming activity to enable the participation of students with intellectual disabilities; and (c) perceptions of the participants involved about the possibilities of participation of students with DS.

To validate the report, it was conducted a triangulation of the information obtained through each instrument, based on the contributions of the literature. We have documented the analysis of the results using quotes coming from the research instruments, referring to the person providing the information and instrument that includes: In- Interview, Ob-Observation, Di-Journal.

## **RESULTS AND DISCUSSION**

As we have observed in the introduction to the document, there are little empirical references about factors affecting the participation of young people with DS in learning sports and recreational inclusive environments as swimming activity. Given this situation and being aware of the limitations that offer a case study design, the qualitative study has allowed an approach to the events, which might occur in the process of teaching and learning through behaviours and perceptions of the participants involved in the process.

The results of the present study are presented regarding the above-mentioned categories, as they allow structuring information from the perceptions and behaviours of the participants and the environment in which the swimming activity occurred.

*(a) Training and technical role of swimming instructor.*

The swimming instructor had no prior knowledge or experience of teaching people with disabilities. She perceived that she need more training, and she requested help in dealing with the teaching and learning process, as we see in her comments made during the interview:

I do not have enough training because I have little experience in this area. As well, I do not know how to act in many cases (Swimming instructor: In).

This need for new knowledge for physical activity instructor, it is a reality in recreational and educational context with inclusive settings (Crawford, O'Reilly & Flanagan, 2012; Diaz-Cueto, 2009; Hutzler & Korsensky, 2010 Mendoza-Laiz, 2009). In the case of the swimming instructor of our study, she initially reported some worries and insecurities, as we can observe in the following quotes, where she focus in the security measures that the aquatic environment require and also, the attention demanded by the student with disability:

Having a child with DS in my class was new. At first, I did not feel well, it was hard work, but now he is like any other student, you have only to be more careful with him. I am worried about the care I must be taken because he does not have sufficient autonomy. I can not leave him alone (Swimming instructor: In).

The lack of information and specific training in the disability area, adversely used to be identified as a major barrier to care students with disabilities (Forbus & Horvat, 1989; Lepore, Gayle, & Stevens, 1998; Rimmer, Riley, Wang, Rauworth & Jurkowski, 2004). The instructor of our study compensated this need with the training received as swimming instructor and the experience that she was acquired observing the needs of the practice itself. The swimming instructor focus on the need toward the knowledgement of the characteristics of students with disabilities and the information which families could provide her about particularities of the student with DS, being aware that knowledge brings her own experience were not sufficient:

As a swimming instructor you have to be informed about the children's characteristics. It is necessary to talk to the parents. Furthermore, you have to get information about them if you want to teach them; the information you get by seeing them during the lesson it is not enough. (Swimming instructor: In)

In this regard, the swimming instructor considers that it is very important to feel and appear positive to the attention of students with disabilities:

If you do not have an attitude with these children, you cannot get anywhere. You have to be patient and not say: they cannot swim so I give up. (Swimming instructor: In)

Thus, the monitor behaviours allowed that she paid enough attention to the student with disability:

The explanations given by the teacher are clear. First, she explains the group and second, she focus on the student with DS. In the explanations, she makes visual examples so that everyone understands her message, especially the children with DS". (Researcher: Ob)

The importance of this way of perceiving the role as a teacher when a student with disabilities participate in a learning environment with other students without disabilities, it is interpreted such as it will help the swimming instructor to make decisions about her training in this field so, following Conatser et al. (2000), this allows the swimming instructor to feel and be more positive towards inclusion of people with disabilities in ordinary swimming programs.

*(b) Perceptions of the participants involved about the possibilities and orientation of the swimming activity to enable participation of students with intellectual disabilities.*

The coordinator's observation refers to the fact that swimming may be an activity that could have bearing on social integration; however, this would be dependent on the instructor's approach.

I think that swimming can be a sport, which has an effect on social integration. Although, I also believe that the way in which classes are taught can impact. For example, if the classes consist of swimming the front crawl for four laps, there will be little integration among students, but if you are in small pool, as the kindergarten, they play more games and this will have an influence. (Coordinator: In)

In this sense, the research is related with the guidance of teachings and the possibility of joint participation of students valuing the mobility limitation of student with DS (Rodríguez-Hernández, Graupera & Ruiz, 2002). She considers that the playful approach is the most appropriate for the student to participate with students with DS together with other students in the activity:

When teaching swimming is more technique, the student with DS seems more separated from the group. The motor skills of the student with DS differ from those without disability due to their disability. On the other hand, recreational lesson allow having more integration opportunities to the student with DS. (Researcher: Di)

In this respect, the swimming instructor adjusted her teaching approach by introducing the element of play into the learning of swimming techniques. She gave priority to have fun and to generate a positive attitude towards the activity, using games as a teaching tool. The swimming instructor set in second terms to gain technical skill in the swimming styles and integration into the social group:

The activities that are undertaken in my classes are focused on both technical education and recreational swimming. First, I appreciate the fact that they have fun, they feel good and they want to come the next day. For this reason, I use games in my classes. Second, I am trying to get them to mingle and learn the techniques of the different styles of swimming.  
(Swimming Instructor: In)

The relation between skills acquisition and technique in the swimming styles does not seem well defined. An interpretation of the instructor's statement could be that the objective is to have the student become not only independent but also acquainted with moving in water as well as allowing him to relate to other classmates.

For example, in relation to the techniques with the student with DS, the aim is that the student with DS gets to be more self-sufficient and integrate with his peer group. The games are the same for all, but the techniques cannot be in this way. (Swimming instructor: In)

Meanwhile, the mother of the student with DS shows high hopes in the possible learning that swimming lesson can provide to her child. In this way, this is observable in its manifestation when we asked her about the expectations of the swimming classes. The mother of the student with DS considers expectations were fulfilled:

Learn to swim (...) the truth is that it is appreciable he can learn to swim. From one course to the next one, it's quite noticeable. At first, when I came here he was not able to get into the pool, he did not want to go in. We had to get him in. (DS Mother: In)

This perception is also reflected in the researcher's diary:

In today's activity, the student with DS has been able to swim without armbands and any auxiliary equipment for the first time. Furthermore, he jumped when the swimming instructor ordered him. He used to sit on the swimming pool ledge and then he got into the pool. These events are a sign of progress from the student with DS since he started swimming.  
(Researcher: Di)

In response to perceptions of the research, satisfaction with the learning acquired are based on behaviours observed and the chances of the student with DS to increase their autonomy in the pre-activity routines and their possible relationships with other participants:

In the latest classes, the student with DS has arrived to the pool, he has sat with his classmates and he has gone to take a shower when the teacher has said it. He has done this entire task by himself. It was normally the swimming instructor who had to be on top so that this happened. (Researcher: Di)

For the mother of the student with DS, the learning acquired during swimming classes impact on a greater participation on leisure activities and free time with the family:

I am more relaxed when we go to the river because he knows how to swim. Before swimming classes, he would grab me by the neck and we had to hold onto him. We still have to go in with him, we take care of him but he can go on his own with some flotation devices as a rubber ring or armbands. Before, he was terrified and he clung to you. (DS Mother: In)

The orientation of the teaching and learning observed in this study has a direct relationship with the adaptations that the swimming instructor was incorporated into the diverse tasks. Thus, the swimming instructor adapted the requirement in model technique of swimming without asking an exact reproduction of the model and taken into account the student's motor skill possibilities:

The exercises are the same for all. If students have to swim front crawl with an overarm movement; the student with DS will do it with one arm. However, he is not employing the same technique as another child because he cannot do it. (Swimming instructor: In)

On this point, the swimming instructor declared that the adaptations that she used was focused on the use of games in order to motivate all students:

Yes, I used many games in order to play with him so he could participate and the whole class did not consist of swimming. (Swimming instructor: In)

Likewise, the swimming instructor was gradually reducing its dependence on aquatic environment and promoting its autonomy in this media through the use of flotation equipment:

I combine a lot of material. For example: armbands, rubber ring, etc. If he is using two armbands, I gradually take them off during class. (Swimming instructor: In)

Also, the swimming instructor said that the student with DS required more attention because she used the imitation as a procedure to communicate with him and even, this procedure seem to increase his interest toward the swimming class:

Yes, I am taking care of him. I want that the student with DS see how other students do the activities. For example, I say him, "Look at this person" and he sees him and does it. It seems that he participates more in this way. I think it must be taken into account. (Swimming instructor: In)

The swimming instructor complement the teaching using the imitation model with verbal and non-verbal communication:

The swimming instructor explains through the verbal and sometimes non-verbal languages. That is, the teacher performs the exercise out of the water in order all student see what they have to do and she use a student to act as a reference (imitation). (Researcher: Ob)

Another adaptation that the swimming instructor used is to maintain the swimming distance depending on the motor skill possibilities and fitness of all students:

If the rest of the group is doing two laps, the student with DS has to do half or one lap so that everyone will finish together. I do it in order to everyone finished the exercise at the same time, and to give my instructions to all group because if I do not do that in this way, there is no integration. Although, the student with DS does fewer laps, he is doing it and then I can instruct them all together. (Swimming instructor: In)

*(c) Perceptions of the participants involved about the possibilities of participation of students with DS.*

In response to the evidences of the coordinator of the swimming activity, the protocol established for the incorporation of young people with disability in this activity is not always carried out, despite being a requirement recent development:

They instituted a protocol of action last year because there was not protocol before. Previously, people with disabilities came to swimming classes without any assessment. Now, it is suppose that people with a disability come to the swimming pool and the sport coordinator has to assess their level. However, the protocol is not always followed. (Coordinator: In)

Because it is not follow the guidelines initially established to know the personal characteristics of students with disabilities, it is interpreted as the loss of an important occasion for obtaining relevant information and broadcast it to other families and participants in the process of teaching and learning. Moreover, this fact could interrelate with: (i) the teacher's knowledge about the possibilities and constraints participation of the student with DS, (ii) the knowledge of the usual context of students, (iii) the knowledge of their duties and body structures, (iv) and its possibilities in performing the tasks (World Health Organization, 2013).

Possible, this transmission of information may collaborate to avoid the perception of social discrimination that many families manifest (Hiu-Lun and Fung, 2009).

The training needs that the swimming instructor previously expressed, it is also perceived by the coordinator of the activity. However, the coordinator of the activity considers that it is a personal responsibility and instructor could always log in to this information:

I believe that it is necessary to be trained. Furthermore, if you are not trained or you do not have the opportunity, you can take on a student with these characteristics in your class, you can look up information on Internet or in a library or get training to find out what you are faced with. I do not think that everyone has the opportunity to do a specialised course but I consider the information is there. (Coordinator: In)

This comment contrasts with the position expressed by the mother of the student with DS. She believes that it is enough that the swimming instructor is patient and shows students with DS what he has to do in order that he can imitate it:

The swimming instructor needs to be very patient and constantly repeat the same things. They have to be very repetitive. Especially, when they have to see what they have to do. (DS Mother: In)

In the coordinator opinion, the participation of young people with and without disabilities together is a benefit for all because this participation offers the possibility that people without disabilities can learn and accept this population:

"I think they should learn together and are accepted as they are".  
(Coordinator: On)

This opinion contrasts with contributions of Hiu-Lun & Fung (2009) when they show that there are families who still perceive discriminatory behaviour towards their children. In our case, the mother of the child with DS believes that the information is simplified so that it is focus on the deficiency. In addition, people refer to child with disability as "this child is sick", which makes it much social harm to people with disabilities. Therefore, these joint activities help children to know more about people with disabilities, and they know socially with their social characteristics and realities:

Also, swimming activity contributes to: we are not all equal; there are children with disabilities, etc. Because people see and wonder what happened to him. Some mothers tell their children that he is sick. This occurs in the park every day. Mother said, "This child is sick!" My son has not got heart trouble; he is a child with DS. People are sick when they need medication and they have to go to the doctor, but my son does not go to the doctor and he is not sick. He just has a disability and he has DS. (DS Mother: In)

However, the mother of the child with DS considered that some reason of no participation of people with disabilities in these classes are related to fears because parents are afraid that their children could be hurt, fears that the mother of the child with DS does not share:

It's very difficult. Parents are afraid to enrol their children in swimming classes in case their children fall down or drown. I think that a child without disability can also drown. Of course they're afraid. (DS Mother: In)

An important factor to enable the inclusive orientation in sports and recreational activities is the interaction of the participants involved in the process of teaching and learning (O'Brien et al., 2009). In this sense, the perception of the mother of the child with DS on communication with the instructor refers exclusively to specific moments. It seems that such communication is not very fluid which causes a low perception of the existing communication between the instructor and the student with DS:

I do not have communication with the swimming instructor. When I have to ask her something, I ask her and she has not problem. (DS Mother: In)

In accordance with the contributions of Place & Hodge (2001) when they show that social interaction between students with and without disabilities during classes does not always occur. In the case of this study, we did not observed social interactions during the development of the swimming activity due to there were no relevant communication between students. Possibly, this fact was due to difficulties in communication student with DS. However, we did not observed a broad relationship between boys and girls students without disabilities:

Most of the time, the student with DS participates with other children, but not interact with them too much. The rest of students did not talk too much with him. Among the group itself, girls talk more to each other as well as boys does. (Swimming instructor: In)

This perception is shared by the mother of the student with DS and non-disabled student, referring to the same reason and also that the student with DS has a slower rhythm of swimming:

The student with DS does not have good social relationships with his group. I understand that he does not speak clearly and it is one of his problems. Many children are scared because they do not know what he is saying. (DS Mother: In)

I play more with my classmates (with no disability) because I talk and play more with them. (Non-disabled student: In)

Besides the difficulty of students with DS to maintain verbal communication, it also seems that his motor skill limitation hinders their interaction with students without disabilities:

I do not wait the student with DS because he is very slow sometimes.  
(Non-disabled student: In)

This perception is shared by the researcher when she observed that students without disabilities do not seem very interested, or found difficulty to talk with the student with DS. This could be motivated by the limitation of oral communication of the student with DS:

I have observed as the student with DS said something to children of the next group. The other children have stopped to look at him but they did pay too much attention. (Researcher: Ob)

However, some of the researcher's observations allow perceiving some moments of interaction between students with and without DS and the swimming instructor:

Regarding the relationship of the child with DS with the instructor and classmates I have observed that the student with DS pays more attention to the instructor. The student with DS tries to relate more and talk with adult persons, while he did not effort to maintain a relationship with his peers group, except sometimes he splashes them or looks at them.  
(Researcher: Ob)

## CONCLUSIONS

Taking into account the possibilities of participation in an inclusive environment of a young with DS, it is considered, as most relevant factors, the awareness of the instructor on the need for specific training for serving students with disabilities in inclusive settings. Despite the difficulties of swimming instructor about their lack of training and specific information, she has believed in he manifestations and behaviours to support the participation of the students with disabilities in their classes. We have able to observed on the swimming instructor anxious moments when the student with DS demanded more attention. The swimming instructor solved this situations adapting learning situations and causing greater involvement of the student.

It has been observed that the approach of the activity has been a key factor in order develops an inclusive process. Indeed, collaborative orientation and design tasks allowed joint participation with student with and without disabilities. In addition, the recreational point of view of this study offered nearby moment of inclusive participation for the student with DS. It has also been observed that the interactions between students decreased when the monitor focused on a technical approach. This type of pedagogical approach caused some difficulties in the relationships among students without disabilities and it could even lead to rejection of the contact with the student with DS because of their low level of

motor skills in the water. In this case, the difficulty to communicate with the student with DS has been an important element in such communication.

Likewise, It is also considered important to highlight the confidence of the mother of the student with DS in swimming as an activity that can support an active participation for the student with DS at least in his immediate environment. The swimming instructor feels optimistic towards the continuity of the student with DS in this activity due to improvements detected in the student with DS on the domain of the aquatic environments. Possibly, it helps to enrich this environment as an inclusive social tool.

However, it is important to highlight the possible factors that have been observed. These factors should be improved to help shape this aquatic activity from an inclusive orientation:

- To define properly the performance protocols that provide relevant information, which help people with disabilities to participate in mainstream environments, establishing specific criteria to be carry out.
- To implement training and awareness programs towards the participation of people with disabilities in mainstream environments. In the present study, the preference of coordinator toward students with disabilities and their not inclusion in activities with people without disabilities may convey a lack of interest in the possibility of generating inclusive environments. Therefore, it is a priority to collaborate among of participants involved in the inclusive process.
- To design programs which provide appropriate adaptations to allow joint participation of all learners. The communication between the technician and families must be fluid in order to get these adaptations acquire a real significance in the environment. However, it has not happened in the present study.
- An important factor for carrying out the inclusion process, it is the interaction between the participants in the process of teaching and learning. In our study, we observed that communication between students with and without disabilities did not happen. Possibly, and according to Heller et al. (2002), it could influence the unfavourable opinion from families toward the inclusion process. This opinion may is transmitted to their sons, producing a difficulty in achieving this inclusive process.

Finally, we consider appropriate to take into account the limitations presented by this case study as research design. The contributions collected in this document refer to a particular environment that cannot be generalized. Each reader can make comparisons and contrasts their practice studies and they can do all parallels that they consider more enriching. Our purpose has been to let you know about the reality, which we have been fortunate to share thanks to the generosity of those responsible. Likewise, we are also aware of the need to obtain information from more participants involved in the process of teaching and learning, but in our case it has not been possible. We are meaning to

participants without disabilities, families of young people with and without disabilities, which can provide valuable information through interviews, questionnaires, focus groups, etc. to know how the inclusive process can be enriched. In conclusion, it is considered that the participants in our study have perceived the swimming activity as favourable context for the inclusion of children with intellectual disabilities. However, it is important to know the factors that influence this process in order to enable the joint participation between children with and without disabilities.

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