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Participation in Leisure Activities as an Indicator of Inclusion: A comparison between Children with and without Disabilities in Portugal

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Abstract: Participation is recognised as an important indicator of school inclusion and educational success of children with and without disabilities and one of the fundamental human rights. In particular, the participation in leisure activities plays a vital role in children's life and needs to be given a higher attention. The aim of the present exploratory study was to reflect on the inclusion of children with disabilities in Portuguese schools, by portraying and comparing their participation profiles in leisure activities to those of typically developing peers. The participation patterns in leisure activities of 61 children with disabilities and 114 children without disabilities were assessed. Results indicate that the pattern of participation of children with and without disabilities differs whether they are school or community-based activities. Regarding school-based activities, findings reveal that children with disabilities participate more frequently in these activities, but in solitary and constrained spaces at school compared to children without disabilities. For community contexts, our findings indicate that children with disabilities participate in less diverse activities than children without disabilities. In addition, the range of activities is correlated to their level of independence. This exploratory study contributes to an understanding of the pattern of participation of children with and without disabilities.

Keywords: *Participation, leisure activities, children with disabilities, inclusion.*

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Introduction

Participation in leisure activities

In the past few years, a growing interest has been dedicated to the participation of children and youth with and without disabilities, and in particular their participation in play and leisure activities. Defined by the World Health Organization (WHO) (2001, 2007) as the person's involvement in real-life situations, it is through participation that children form friendships, develop skills and competencies, express creativity, enhance physical and mental health and understand the meaning and purpose of life (Law et al., 2006; Solish, Perry, & Minnes, 2010). In turn, play and leisure activities are central daily life activities for children (Bosse & Westermann, 2016; Ismael, Lawson, & Cox, 2015) providing them with opportunities for enjoyment, recreation and goal achievement (Rosenblum, Sachs, & Schreuer, 2010).

Participation has been widely recognised as the main indicator of inclusion and educational success of children with and without disabilities (Eriksson, Welander, & Granlund, 2007; Law et al., 2006; Silveira-Maia et al., 2012; Simeonsson, Carlson, Huntington, McMillen, & Brent, 2001) and one of the fundamental human rights (UN, 2006). In this sense, the Convention on the Rights of Persons with Disabilities of the United Nations (UN, 2006) affirms the obligation of States to "ensure their participation in cultural life, recreational, leisure, and sports activities" (Article 30).

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Studies have shown the importance of enhancing children's participation in leisure activities, given its positive influence on their life satisfaction and support for acquiring age-appropriate skills and a sense of competence (Dahan-Oliel, Shikako-Thomas, & Majnemer, 2012; Law, 2002). Regarding the school context, Simeonsson and colleagues (2001) emphasize that the experience of participation restrictions prevent children from taking advantage of educational and social benefits such activities have to offer. Being active and engaged in motivating activities is, in this sense, a vital dimension of individuals' functioning, well-being and quality of life (Badia, Orgaz, Verdugo, & Ullan, 2013).

Nevertheless, as research evidence repeatedly demonstrates, children with disabilities tend to experience restricted participation in leisure activities in comparison to typically developing peers (e.g., Eriksson et al., 2007; Jarus, Lourie-Gelberg, Engel-Yeger, & Bart, 2011; King et al., 2004, 2007; Martins & Sanches-Ferreira, 2014; Simeonsson et al., 2001; Ullenhag et al., 2012). The diversity of activities and engagement time are commonly restricted due to personal limitations such as mobility and communication (King et al., 2003). Research also indicates that children with disabilities often encounter environmental barriers to leisure activities such as overprotective parents, inaccessible play areas and negative attitudes of others (Harding et al., 2009; King et al., 2003; Livingston, Stewart, Rosenbaum, & Russell, 2011; Shikako-Thomas et al., 2012).

These concerns are central to the contemporary discourse about the rights of all citizens to take full part in the multiple contexts they attend and to be an integral and valued member of the community (Farrell, 2000).

Legal framework

In the last years, several reforms have been conducted on Portuguese special education services to acknowledge inclusive education principles. The enactment of Decree-Law 3/2008 which promotes a democratic and inclusive school environment oriented to the educational success of all students was a major initiative, advocating the need for schools to ensure greater participation in classroom and school activities for children and youth with disabilities. As a result, traditional special education schools were progressively transformed into Resource Centres for Inclusion which, in partnership with school clusters and the community, facilitate the access and inclusion of children and young people with disabilities in education, work, leisure and social participation (EASNIE, 2016). Recent indicators of quality and inclusive education provided by OECD (2014), highlight the Portuguese pathway towards an inclusive education, in which a clear majority of children with disabilities are in the mainstream schools. As in other Western countries, the question now goes beyond access and centres on improving participation of children with disabilities within the school context as well as in all situations throughout their lifespan (EASNIE, 2011).

The operational definition and the measurement of participation have been, then, a central requirement for outlining next steps on the inclusion process. Through a conceptual analysis of research articles, Imms, Froude, Adair and Shields (2016) have identified two main components underlying participation: (1) "attendance, defined as 'being there' and measured as frequency of attending, and/or the range or diversity of activities; and (2) involvement, the experience of participation while attending" (p.3). As stressed in the systematic review (Imms et al., 2016), the experience of participation includes elements of engagement, motivation, persistence, social connection, and level of affect. Activity competence, sense of self and preferences were identified as related concepts.

Methodology

Research Goal

Based on the idea that participation reflects the progress of the inclusive process, it is important to identify the pattern of participation of Portuguese children and youth in school-based leisure activities in order to develop interventions to support participation in these activities. This study aims to reflect on the inclusion of students with disabilities in Portuguese schools, by portraying and comparing their participation profiles to those of typically developing peers. This aim can be divided into the following questions: (1) how different is the pattern of participation in leisure activities of children and youth with and without disabilities?; (2) to what extent does the pattern of participation vary according to gender, levels of education and functional independence?. In addition to focusing on school-based activities, a comparison of children's participation in home and community context is also undertaken.

Sample and Data Collection

The sample consisted of 175 children, aged 6 to 18 years, 61 (34.9%) with disabilities and 114 (65.1%) without disabilities. There were 80 males (45.7%) and 95 females (54.3%). Table 1 describes the specific demographics of participants.

Participants were sampled from all the 31 classrooms of twelve schools belonging to two cities in the district of Porto with children with disabilities. Children with disabilities were selected by convenience - upon indication of their teachers - taking into consideration the level of comprehension to fill in the questionnaire used in this study. Children without disabilities were randomly selected, four from each class (ten children did not provide the parental informed consent in a timely manner).

Table 1. Demographic information of children with and without disabilities (N=175).

Variables	Children without disabilities (n=114)		Children with disabilities (n=61)	
	n	%	n	%
Sex				
Female	66	57.9	29	47.5
Male	48	42.1	32	52.5
Educational level				
1 st cycle	31	27.2	18	29.5
2 nd cycle	29	25.4	19	31.2
3 rd cycle	34	29.8	16	26.2
High school	20	17.6	8	13.1
Age; Mean (SD)	12.3 (2.9)		12.4 (2.8)	

Participation Questionnaire

Data on perceived participation were collected through a questionnaire regarding children's self-rated participation. Aligned with other assessment measures acknowledging frequency ("how often") and involvement ("how involved") dimensions of participation (Coster et al., 2011; Khetani, Graham, Davies, Law, & Simeonsson, 2015; King et al., 2004), the questionnaire specifically developed for this study sought to measure aspects of children's participation, such as range, frequency, level of social engagement, location and level of satisfaction. Jointly with five teachers and five parents of typically developing children, a list of activities was made according to their daily routines and range of experiences. A total of 24 activities specific to school, home and community settings were included. Each activity was represented on a card with a picture and a brief description. Children were asked to look at each picture and to indicate: (1) in which activities they had participated over the previous month (range of activities); and (2) how often they had participated in those activities (frequency of participation calculated by dividing the frequency - rated on a 5-point scale (1 = once in the last month to 5 = everyday in the last month) by the total number of activities).

The children were also asked to identify the level of social engagement, the location and level of satisfaction while participating in school-based activities, that is, with whom they had done the activity (e.g., alone, with teachers, classmates with disabilities, peers/friends from regular classroom), where they had done the activity (e.g., contained classroom, regular classroom, school services, school social spaces) and how satisfied they were for having participated in the activity. The level of social engagement score represents the mean of the answers (whether the child participates in activities alone, with adults or with friends) and the location score represents the mean measure of the answers (where the activities occurred - from more restricted rooms to broader community contexts), both rated on a 5-point scale. Finally, the satisfaction score represents the level of satisfaction rated on a 5-point scale, with higher scores reflecting higher levels of satisfaction.

The 24 pictures of different activities measured the participation in 7 home-based, 9 school-based, and 8 community-based activities (Table 2). The reliability of this questionnaire was tested with a Cronbach's Alpha of 0.64 for the total score of activities. This value is in accordance with other studies, which reported low to moderate reliability statistics for measures about children's participation (King et al., 2004).

Table 2. Items included in the Participation Questionnaire.

Items	Context
Playing alone (playing with things or toys or doing crafts, drawing, or colouring)	Home-based activities
Watching TV, playing computers or video games	
Playing games with relatives	
Talking on the phone, writing messages, Facebook	
Reading or looking at books, writing letters or a story, playing a musical instrument	
Helping around the house (e.g., clean the room)	
Doing activities with family (e.g., baking and cooking, gardening)	Community-based activities
Going to shopping, to movies and live events	
Going for a walk or a hike and playing in outdoor spaces (e.g., gardens, parks)	
Doing team sports (e.g., football, tennis)	
Playing games at friends' houses	
Visiting (e.g., friends/relatives, monuments, museums)	
Going to a party (e.g., birthday parties; carnival)	
Running errands (e.g., going to the grocery shop, supermarket, bakery)	
Participating in community organizations (e.g., religious activities, choirs, volunteering)	

Table 2. Continued

Participating in school clubs (e.g., music, theatre)	School-based activities
Going for a walk or a hike at school	
Doing gymnastics (scholar sport, football, dancing)	
Playing games in school	
Internet, Facebook, messages	
Going on a full-day outing (e.g., study visits)	
Doing research on the internet, in books, and in magazines	
Doing homework	
Getting extra help for schoolwork from a tutor	

Functional Independence Measure for Children (WeeFIM)

The WeeFIM (Guide for the Functional Independence Measure for Children, 1993) was used to evaluate the level of functional independence of children in basic daily living and functional skills. The WeeFIM contains 18 items distributed among the following subscales: self-care, sphincter control, transfers, locomotion, communication, and social cognition. The amount of assistance required to complete each item is scored on a 7-point rating scale (from 1 for total assistance to 7 for complete independence). The WeeFIM has been used in many studies and has evidence of excellent consistency across raters and stable scores (Ottenbacher et al., 1996; 1997; Sperle, Ottenbacher, Braun, Lane, & Nochajski, 1997).

Data Analysis

SPSS Version 21 was used for statistical analysis. Descriptive statistics were used to analyse demographic variables. For each participation dimension – i.e., range of activities, frequency, social engagement, location and satisfaction – the mean score was calculated by dividing the sum of scores by the total number of activities pertaining to each setting. A t-test for independent groups was used in order to compare the patterns of participation in children with and without disabilities concerning the range of activities score and the mean of frequency, of social engagement, of location, and of satisfaction scores. The comparison between boys and girls followed the same procedure. In addition, analyses of variance were conducted to compare patterns of participation in the four educational levels groups and correlation coefficient was computed to analyse the relation between the level of children independence and participation dimensions.

Results

Pattern of participation in leisure activities of children and youth with and without disabilities

The range and frequency of participation in the total activities for children with and without disabilities are presented in Table 3. As stated, the focus of this study is on the pattern of participation in school-based activities; therefore, this context will be the target of scrutiny for all subscales. These data are also presented in Table 3.

Table 3. Descriptive data and t-tests for the Participation Questionnaire for children with and without disabilities.

Variable	Children without disabilities (n=114)		Children with disabilities (n=61)		t-value	p-value
	M	SD	M	SD		
Total activities						
Range of activities	17.04	2.45	15.93	2.61	-2.77	<0.001
Frequency	3.56	0.38	3.69	0.34	2.19	0.03
Home-based activities						
Range of activities	5.99	0.93	5.92	1.04	-0.48	0.63
Frequency	4.05	0.50	4.08	0.40	0.34	0.74
Community-based activities						
Range of activities	5.94	1.33	4.84	1.42	-5.12	<0.001
Frequency	3.07	0.60	3.07	0.63	0.05	0.96
School-based activities						
Range of activities	5.11	1.42	5.18	1.22	0.35	0.73
Frequency	3.54	0.64	3.79	0.55	2.59	0.01
Social engagement	4.37	0.95	3.71	1.06	-4.24	<0.001
Location	3.55	0.63	3.14	0.67	-3.95	<0.001
Satisfaction	4.12	0.51	4.23	0.45	1.38	0.17

Significant differences were found between the scores of children with and without disabilities on the following subscales: range of activities and frequency of participation in the total activities; range of community-based activities; frequency, level of social engagement and location subscales of participation in school-based activities. Regarding the 24 activities, children without disabilities scored significantly higher on the range of activities undertaken compared to children with disabilities, indicating that they participate in a greater number of activities. This is also verified for the diversity in community-based activities. Quite the opposite, children with disabilities document significantly higher frequency of participation in the total and school-based activities. Concerning school-based activities, children with disabilities scored lower on subscales measuring level of engagement and location. These findings indicate that children with disabilities are more likely to perform solitary activities, in the presence of adults, and in more constrained spaces in schools (i.e., a contained classroom where the support is provided at the individual level).

Pattern of participation according to gender, levels of education and functional independence

Table 4 provides descriptive data and comparison between males and females for each subscale. No significant differences were identified in community and school-based activities either for children with and without disabilities. These results indicated that females and males are not likely to participate differently in these contexts in terms of the range of activities, frequency of attendance, level of social engagement, location, and satisfaction. A significant difference was found for children with disabilities, with females reflecting to participate in a higher number of home-based activities than males.

Table 4. Descriptive data and t-tests for the Participation Questionnaire based on gender.

Children without disabilities Variable	Male (n=48)		Female (n=66)		t-value	p-value
	M	SD	M	SD		
Total activities						
Range of activities	16.96	2.51	17.09	2.43	-0.28	0.77
Frequency	3.53	0.38	3.58	0.39	-0.68	0.50
Home-based activities						
Range of activities	5.98	0.91	6.00	0.94	-0.12	0.91
Frequency	4.09	0.56	4.03	0.45	0.68	0.50
Community-based activities						
Range of activities	5.92	1.32	5.95	1.34	-0.15	0.88
Frequency	3.09	0.61	3.05	0.61	0.31	0.76
School-based activities						
Range of activities	5.06	1.42	5.14	1.43	-0.27	0.79
Frequency	3.40	0.71	3.64	0.56	-1.96	0.06
Social Engagement	3.48	0.71	3.60	0.57	-1.01	0.32
Location	3.89	0.38	3.84	0.38	0.67	0.50
Satisfaction	4.15	0.55	4.10	0.48	0.46	0.65
Children with disabilities Variable	Male (n=32)		Female (n=29)		t-value	p-value
	M	SD	M	SD		
Total activities						
Range of activities	15.69	2.87	16.21	2.30	-0.78	0.44
Frequency	3.64	0.34	3.74	0.33	-1.09	0.28
Home-based activities						
Range of activities	5.63	1.21	6.24	0.69	-2.41	0.02
Frequency	4.04	0.44	4.12	0.35	-0.88	0.38
Community-based activities						
Range of activities	4.94	1.48	4.72	1.36	0.58	0.56
Frequency	3.03	0.68	3.12	0.58	-0.56	0.58
School-based activities						
Range of activities	5.13	1.18	5.24	1.27	-0.37	0.71
Frequency	3.76	0.57	3.82	0.53	-0.45	0.65
Social Engagement	3.23	0.67	3.05	0.68	-1.04	0.30
Location	3.50	0.52	3.43	0.51	0.57	0.57
Satisfaction	4.28	0.44	4.17	0.45	0.91	0.37

The subscales were also examined to determine whether they varied among students in different cycles using one-way ANOVAs and Bonferroni post-hoc tests (Table 5).

Table 5. Descriptive data and one-way analysis of variance for the Participation Questionnaire subscales based on children's educational level.

Children with disabilities Variable	1 st cycle (n=18)		2 nd cycle (n=19)		3 rd cycle (n=16)		High school (n=8)		F	p-value	η_p^2
	M	SD	M	SD	M	SD	M	SD			
Total activities											
Range of activities	16.33	2.25	15.11	3.13	17.19	2.23	14.50	1.41	3.12	0.033	0.037
Frequency	3.62	0.35	3.70	0.43	3.76	0.21	3.67	0.27	0.51	0.675	0.007
Home-based activities											
Range of activities	6.22	0.88	5.79	1.36	6.06	0.77	5.25	0.71	1.90	0.139	0.060
Frequency	3.87	0.48	4.09	0.43	4.27	0.21	4.13	0.22	3.26	0.028	0.035
Community-based activities											
Range of activities	4.39	1.61	4.63	1.57	5.50	0.89	5.00	1.08	2.04	0.119	0.017
Frequency	2.94	0.66	3.13	0.73	3.20	0.55	2.97	0.45	0.60	0.618	0.001
School-based activities											
Range of activities	5.72	1.07	4.68	1.06	5.63	1.31	4.25	0.71	5.52	0.002	0.068
Frequency	3.86	0.30	3.71	0.77	3.78	0.44	3.86	0.60	0.28	0.838	0.014
Social Engagement	3.00	0.63	3.12	0.65	3.56	0.62	2.66	0.56	4.18	0.010	0.075
Location	3.34	0.39	3.46	0.58	3.44	0.56	3.84	0.41	1.86	0.146	0.096
Satisfaction	4.48	0.34	4.14	0.40	3.89	0.34	3.86	0.48	9.22	<0.001	0.155
Children without disabilities											
Variable											
	1 st cycle (n=31)		2 nd cycle (n=29)		3 rd cycle (n=34)		High school (n=20)		F	p-value	η_p^2
	M	SD	M	SD	M	SD	M	SD			
Total activities											
Range of activities	17.65	1.56	17.83	2.62	16.35	2.65	16.10	2.51	3.75	0.01	0.037
Frequency	3.63	0.35	3.48	0.44	3.51	0.39	3.64	0.29	1.26	0.29	0.007
Home-based activities											
Range of activities	6.00	0.89	6.28	0.84	6.03	0.90	5.50	1.00	2.95	0.036	0.060
Frequency	4.06	0.44	3.91	0.57	4.02	0.54	4.30	0.32	2.68	0.051	0.035
Community-based activities											
Range of activities	5.97	1.14	6.52	1.18	5.74	1.46	5.40	1.31	3.42	0.020	0.017
Frequency	3.11	0.45	3.09	0.61	2.98	0.73	3.11	0.59	0.33	0.807	0.001
School-based activities											
Range of activities	5.68	1.17	5.03	1.61	4.59	1.40	5.20	1.28	3.43	0.020	0.068
Frequency	3.70	0.68	3.55	0.66	3.44	0.68	3.44	0.39	1.09	0.356	0.014
Social Engagement	3.74	0.60	3.62	0.62	3.55	0.62	3.14	0.57	4.26	0.007	0.075
Location	3.64	0.40	3.82	0.41	4.04	0.30	3.94	0.22	7.50	<0.001	0.096
Satisfaction	4.41	0.33	4.11	0.52	3.95	0.55	3.97	0.47	6.05	0.001	0.155

The one-way ANOVA indicated that there were differences in the pattern of participation of children with and without disabilities in home- and community-based activities. Children without disabilities from high school participating in a significantly lower number of activities than younger children. Children with disabilities tend to participate more frequently in home-based activities as they are older.

Regarding school-based activities, differences were also found in the participation pattern, namely in the following subscales: range of activities, level of social engagement, location, and satisfaction. Although the participation pattern of children with and without disabilities tends to be similar. For both children with and without disabilities, post hoc results indicated that children from the 1st cycle participated in significantly more activities and with more satisfaction than children from the 2nd, 3rd cycle and high-school. These findings indicate that, with increasing age (analysed via the children educational level), children participate in less diverse activities. Also, satisfaction with participation in activities tends to decrease across these age/educational level groups. Furthermore, children from high-school

participated in activities with significantly lower social dimension than other children. Children from the 1st cycle participate more in restricted spaces in the school (e.g., classroom).

Table 6. Correlations between the Participation Questionnaire subscales and WeeFIM scores for children with and without disabilities.

Variable	Total (n=134)	Children with disabilities(n=57)	Children without disabilities(n=77)
	WeeFIM	WeeFIM	WeeFIM
Total activities			
Range of activities	.225**	.143	-.058
Frequency	-.196*	-.169	.129
Home-based activities			
Range of activities	0.179*	.235	-.115
Frequency	0.011	-.067	.168
Community-based activities			
Range of activities	0.343***	.196	-.045
Frequency	.011	.040	-.013
School-based activities			
Range of activities	-.085	-.127	.021
Frequency	-.297***	-.241*	.096
Social Engagement	.153	.124	-.220
Location	.651***	.481***	-.097
Satisfaction	-.073	-.006	.033

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

With respect to all participants, results of the correlational analysis showed that WeeFIM scores are positively correlated with the range of activities undertaken by children at home, $r = .179$, $p = 0.039$, and in the community, $r = .343$, $p < 0.001$ (Table 6). This suggests that the higher the level of independence, the higher the number of activities in which children participate. However, this finding was not observed for school-based activities.

Besides, WeeFIM scores of children with disabilities are negatively correlated with participation frequency scores in school-based activities, $r = -.270$, $p = 0.042$. In other words, the lower the level of independence is, the higher the frequency of a child's participation in school-based activities is. Results also showed that WeeFIM scores of children with disabilities are positively correlated with the social dimension of activities, $r = .481$, $p < 0.001$, suggesting that, within this group, a higher level of independence means more social engagement. In addition, no significant difference was found between WeeFIM scores and level of participation across school-based activities for children without disabilities.

Discussion and Conclusion

This study examined the pattern of participation in leisure activities of children and youth with and without disabilities in the three main environments in which they spend a considerable amount of time – school, home and community. A deeper analysis of participation in school-based activities was conducted in order to understand if inclusive discourses that guide educational policies of several countries, including Portugal, have adherence to reality. Furthermore, we compared patterns of participation taking into consideration the child's gender, educational level and the varied levels of independence in daily living activities. Overall, differences were verified for the total activities between children with and without disabilities on both the number of activities undertaken as well as the frequency of their participation. More specifically, the pattern of participation differs in the community and school-based activities.

For community contexts, our findings indicate that children with disabilities participated in a lower number of activities than children without disabilities, and the range of activities they participated in is correlated with the level of independence. This result is in line with those of earlier studies that have repeatedly demonstrated that children with disabilities experience restricted participation in many activities (e.g., leisure and recreation activities outside school and social engagement) compared to children without disabilities (Law et al., 2006; King, Law, Hurley, Petrenchik, & Schweltnus, 2010; Bedell et al., 2013; McDougall, DeWit, King, Miller, & Killip, 2004). Such results can be explained by the documented family difficulties and fewer opportunities to engage in social and recreational opportunities in the community, that usually are associated with greater participation in home-based activities (Law et al., 2006; Majnemer et al., 2008). Indeed, the absence of differences in the pattern of participation between children with and without disabilities in home-based activities found in our study was not totally unexpected. Significant challenges in participating in activities outside the environments of institutions and home have been also reported by several authors (e.g., Bosse & Westermann). The participation of children and young people with disabilities in community contexts demands from the professionals the understanding of inclusion, self-determination and empowerment as pre-requisites for the short-term involvement in leisure activities and for the long-term transition to post-school life.

Furthermore, environmental factors including facilitators of access to community contexts (e.g., communication, mobility, social attitudes) needs to be taken into consideration for fostering the participation in leisure activities of persons with disabilities.

The comparison between groups of children with and without disabilities showed no differences in the range of school-based activities in which they had participated. Moreover, it was found that children with disabilities participated more frequently in school-based activities than their peers without disabilities. These findings were not expected, given the tendency verified in earlier studies of restricted participation of children with disabilities in school-based activities (Eriksson et al., 2007; Simeonsson et al., 2001). Reinforcing these results, by examining correlations between WeeFIM and Participation scores, it was found that children with disabilities that present lower independence for everyday activities participated more frequently in school-based activities.

When we analyse these data, it is important to take into consideration that more participation is not necessarily better participation (Forsyth & Jarvis, 2002; Law et al., 2006). Children with disabilities (and within this group, with more severe impairments) can participate more often in the activities, but do so in constrained school spaces and in isolated activities performed alone or in the presence of adults. In fact, these were the characteristics revealed by children with disabilities in our study. Surrounded by more professionals and members of school staff, children with more severe impairments are more often requested to participate in the activities, but still do so alone or in interaction with adults, therefore with low social engagement. This result suggests limited social contacts of children with disabilities with others, which embodies a negative indicator regarding critical aspects of inclusion as it is the sense of belonging and the development of social skills (Klaas, Kelly, Gorzkowski, Homko, & Vogel, 2010). Given the importance of environmental factors in participation (WHO, 2001, 2007), future studies could examine characteristics of social environment that is, how typically developing peers behave towards children with disabilities, and in what extent teachers and other school stakeholders support those interactions.

Furthermore, the pattern of participation of children with disabilities indicates that educational services remain mainly centered on the support provided by professionals rather than on the school mobilization for inclusion in which the social dimension of activities of whom and where of participation should be reconceived. This suggests that perhaps professionals are at the first stage of implementing inclusion, that is, they need to build and feel competent with a new set of behaviours, routines, and ways of working before they can teach and involve others. Nevertheless, transforming schools into inclusive communities requires embedding social participation opportunities into the dynamics and the culture of each school. For that, schools must foster a culture of practice in which students' participation in social activities is a valued resource for learning and identity building.

Research has indicated that the right to education for children with disabilities that has motivated governments to develop policies fostering inclusive education does not, however, guarantee the full participation of children within regular schools (Koster, Pijl, Nakken, & Van Houten, 2010; McDougall et al., 2004; Nepi, Facondini, Nucci, & Peru, 2013). It is important for teacher education and continuing professional development to focus on how children participation in activities can be enhanced through teaching, modifying classrooms and other learning environments (e.g., playground) to ensure that all children benefit from their education.

Furthermore, the evidence of a significant correlation between the level of children independence and intensity scores of participation also highlight the need to plan interventions more focused on accommodation of different levels of functioning and supports needs than on the dichotomy of children with and without disabilities (in the case of this study, this dichotomy also applies for children identified or not as with special educational needs).

It is also noteworthy that children with and without disabilities scores did not differ in terms of satisfaction with school-based activities. The definition of leisure activities includes the notion that these activities are enjoyable and preferred by children (Heah, Case, McGuire, & Law, 2007). Acknowledged as one predictor of participation in activities (Imms, Reilly, Carlin, & Dodd, 2009; King et al., 2007), information about satisfaction is important to support educational professionals in fitting the intervention to include activities and goals that are relevant and motivating for the child.

Despite some previous studies have reported gender as an influent factor on participation patterns of children (Law et al., 2006; McMullan, Chin, Froude, & Imms, 2012), our findings are in accordance with data suggesting that its overall impact upon activity participation is minimal (Engel-Yeger, Jarus, & Law, 2007; Goltz & Brown, 2014; Jarus, Anaby, Bart, Engel-Yeger, & Law, 2010).

A statistically significant difference was only found for children with disabilities, with females reflecting to participate in a higher number of home-based activities than males. The absence of differences in almost subscales suggest that the participation pattern of girls and boys is more similar than different. This applies both to children with and without disabilities. On the one hand, this absence of differences can partially be explained by the nature of school-based activities included in the Participation Questionnaire. The measure used in this study include general and neutral activities – such as “playing games with relatives” or “going for a walk or a hike at school”, i.e., that are not clearly identified with common gender stereotyped activities (e.g., dancing, taking art lessons). On the other hand, as suggested

by other international studies (Brown, O'Keefe, & Stagnitti, 2011; Jarus et al., 2010), gender-related expectations and stereotypes of activity participation are becoming more convergent.

In the present study, we report to children's age by analyzing their educational level. Findings indicate a similar participation pattern in school-based activities of children with and without disabilities when analysis focus on educational level groups. Results found statistically significant differences in different subscales. Younger children participate in more activities and more frequently, but those activities occur in more constrained spaces in schools (e.g., inside classroom rather than in the playground). With increasing age, children participate in a lower number of activities and the social dimension of activities decreased. This pattern is somehow keeping with trends that show a decline in overall participation as children grow (Mahoney, Larson, & Eccles, 2005), but contradicts studies that report increasing emphasis on social activities (Law et al., 2006). One explanation can be related to the extent of curricular programs and the concern with schools rankings which places all attention on achieving better academic outcomes, ascribing less attention to the social dimension of schooling.

The Participation Questionnaire used in this study allowed for exploratory analysis to begin understanding participation of Portuguese children in leisure activities.

The findings of this study highlight that children and youth with and without disabilities present differences in their participation pattern in leisure activities, especially in school-based activities. The distinction of the participation pattern relies on/upon the frequency, level of engagement and place where school-based activities occur. Children with disabilities participate more frequently in these activities and they still do so in solitary and constrained spaces in schools comparing to children without disabilities. By exploring different dimensions of participation, this study contributed to the effort of broadening the knowledge about the participation pattern of children with and without disabilities, as well as, providing information about the state of inclusive education practices and areas of need for fostering its implementation.

Limitations of the study

An important aspect to consider with the study is that the Participation Questionnaire used has not been thoroughly tested for its psychometric properties. Future studies should purposively examine in-depth the psychometric properties of this measure for more robust analysis of children participation. Moreover, future studies could focus comprehensively on home-based and community-based participation in addition to school-based participation. Variables of Social Engagement, Location and Satisfaction should also be included for understanding the participation pattern of children with and without disabilities.

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