

The Benefits Experience by Families Participating in the Watersports Inclusion Games

A. Salgado¹, J. Murphy², E. Barrett^{1,3}

1. UCD School of Child and Adolescent Psychiatry, School of Medicine, University College Dublin, Belfield, Dublin 4.
2. Irish sailing.
3. Child and Adolescent Liaison Psychiatry, Children's University Hospital, Temple St, Dublin 1.

Abstract

Aims

The Watersports Inclusion Games (Inclusion Games) is a free event for children and families with disability to participate in water-based activities. Family participation in physical activity can improve mental health and confidence in children with disability. This study aims to gain an insight into the benefits and barriers of participation, perceived by parents and carers.

Methods

After an initial literature review, an online pre-event and post-event survey was constructed via SurveyMonkey. Both surveys were circulated three times to attendees. Statistical and thematic analysis was carried out to compare changes in responses both before and after the event.

Results

49% of participants were primarily hoping to experience a new sport in a controlled environment and meet others with similar challenges. The surveys also highlighted an increase in reported family bonding [$P=0.14$] due to the event. A thematic analysis revealed event organisation and planning is vital for effective participation of children with disability.

Conclusion

Creating an equal opportunity for young people with disabilities and their families to partake in watersports led to increased confidence and a higher likelihood of future participation. Effective organisation and extra help were key enabling factors facilitating these benefits.

Introduction

In Ireland approximately 6.7% of people under 20 years are disabled¹ and families are the main providers of support for these young people². For a young person with a disability or impairment, participating in any physical activity at a level similar to that of a person without disability takes meticulous planning and effort. Aside from societal barriers to accessibility, individual challenges such as physical ability, sensory acuity and social anxiety are all factors which must be considered prior to engaging in physical activities³. However, equal opportunity to partake in physical recreation is a right of every person with disability and is vital for growth and development⁴. We wish to draw clinician awareness to these events and make referrers aware of the ongoing offerings from watersports organisations wishing to support inclusion. We outline positive physical and mental health benefits for such approaches.

The Watersports Inclusion Games is an inclusive community event for children and adolescents with range of sensory, physical, intellectual and learning disabilities, supported by several partner organisations. *“The event showcases the latest on adaptations and innovations for optimised watersports delivery and promotes the benefits to health and wellbeing of accessible inclusive watersports participation”*⁵. The weekend event has occurred annually since 2017 in different counties throughout Ireland and allows children and families to partake in sailing, rowing, canoeing, supping and surfing. Despite the abundant benefits of participating in watersports, it is not a daily reality for families with disabled children often due to barriers in accessibility. Given the limited publications in this area, both in Ireland and internationally, we sought to explore the views of participants regarding barriers and benefits when partaking in watersports and the Inclusion Games in 2019.

2018 HSC guidelines in Northern Ireland highlight that being active for children with disability results in better pain management and greater ability to cope with difficult situations⁶. A 2004 study reported that when families of young people with disabilities participated in outdoor or sports activities together, the young person was better at coping with stress and harboured a better perception of themselves⁷.

Carers are essential for providing opportunities for physical recreation and leisure activities. A study by Kim and Lehto explored the barriers when traveling for young people and families with disability. They reported the most motivating factor for whole family participation in physical leisure activities was the physical competence of the child or young person with disability. Families most often reported that they resorted to sedentary activities, requiring minimal adaptation for their child⁸. When participating in activities such as watersports, the lack of accessibility for disabled children frustrated parents and motivation seemingly lost^{8,9}.

Water and water-based activities have distinct effects on disabled participants which other environments cannot provide. For instance, balancing on uneven surfaces such as sand is congruent with physical therapeutic goals to provide stability for individuals with disability.

Furthermore, the tightness of wetsuits and the movement of the waves are sensory stimuli which cannot be experienced in other settings¹⁰. Alongside physical benefits, water-based activities also provide mental, emotional, and social impetus which children can apply to other aspects of their lives.

Methods

A literature review was carried out and was used to develop a draft questionnaire for carers based on key themes we identified in the literature.

The pre-event survey wanted an insight into what parents and children were hoping to gain from this event as well as the barriers they are currently experiencing when participating in watersports. In collaboration with the community organisers, the key research questions regarding benefits and barriers were utilised to form anonymous pre-event and post-event surveys. This was piloted by the involved team, including the community partner, medical students, and non-medical students.

The surveys included both closed and open free text questions, to gauge what participants and families valued about this event and conducted a thematic analysis based on this. The post-event survey sought to ascertain if these needs were met and the views of the participants following the event.

SurveyMonkey, an online survey tool with industry standard encryption technology, was used to gather the information before and after the event from the adult carers of the participants in the Inclusion Games. Both surveys were circulated three times to attendees

The quantitative data was then statistically analysed on Excel and SPSS, where chi-square tests were used to determine differences between pre-event and post-event survey responses. A thematic analysis following the Braun and Clarke model was carried out on some qualitative post-event data, by assigning codes to themes and subthemes. This way the answers were categorized and qualitatively explored¹².

Results

There was a reasonably high response rate of participant surveys relative to report rates in similar literature:

Pre-event response rate: 41 responses from 85 links sent out (48%).

Post-event response rate: 65 responses from 85 links sent out (71%).

Carer's reports of disability needs to organisers highlighted a range of mental and physical disabilities experienced by participants. Specific diagnoses include autism spectrum disorder, Down syndrome, cerebral palsy, paraplegia and hydrocephalus.

Table 1: What are you hoping for from this event? [Pre-event] - Responses (n = 41)

New Experience	49%
Confidence	10%
Social interaction	19%
Other	22%

In the post-event survey, the equivalent to the question posed in table 1 asked if participants had achieved what they had hoped for from this event. 100% (all 60 respondents) stated yes.

Table 2: How much of a benefit do you think watersports will have for the participant in relation to the following aspects [pre-event] - Responses (n = 41)

	Boosting confidence	Improving motor skills	Meeting peers / other parents	Enjoying family life at a whole family event	Gaining a new experience / skill
Very beneficial	82.9%	75.6%	68.29%	63.4%	82.9%
Moderately beneficial	14.7%	7.3%	21.95%	17.1%	14.6%
Somewhat beneficial	2.4%	17.1%	9.76%	17.1%	2.5%
Not beneficial	0.0%	0.00%	0.00%	2.4%	0.0%

Table 3: Having participated in this event, how much of a benefit do you think watersports had for the participant in relation to the following aspects [post-event] - Responses (n = 60)

	Boosting confidence	Improving motor skills	Meeting peers / other parents	Enjoying family life at a whole family event	Gaining a new experience / skill
Very beneficial	82.8%	46.3%	64.3%	73.2%	86.0%
Moderately beneficial	13.5%	26.8%	16.7%	12.2%	12.0%
Somewhat beneficial	2.7%	12.3%	16.7%	12.2%	2.0%
Not beneficial	0.0%	14.6%	2.3%	2.4%	0.0%

A thematic analysis was carried out for the post-event survey question – “list some things you enjoyed about the event”. The objective of this question was to appraise what families valued about partaking in the event based on recurring themes. (Table 4)

The 3 themes analysed from the responses included *event*, *personal* and *volunteers*. Event was mentioned 60 times in participant responses, under the subthemes of weather, location, atmosphere, organisation and specific activities. An example of a response referring to this theme includes, “*Very well organised, very easy to register, plenty of volunteers to help you find where you were to go. We got to sail 2 x lovely yachts ... one with our son and another while our son was on a hansa. Lovely relaxing experience.*”

The theme referring to personal aspects of the event was mentioned 33 times. It was categorised by the subthemes of family bonding, personal achievements and the social impact of the event. An example includes, “*Well organised, the fresh air, just being out and about together as a family, trying out new activities, meeting new people, fabulous volunteers*”.

The final theme of volunteers was mentioned 29 times, regarding the helpfulness, friendliness and general appreciation for the volunteers as subthemes. An example includes, “*To be able to get onto any boat without having to worry about how to. “The level of help and the amount of volunteers made this possible. Never once had to worry, just to let them know how they could best help me.*”

Table 4: Thematic analysis - Responses (n=60)

Theme	Sub-theme	Number of mentions
Volunteers (1) 29 mentions	Support / helpfulness (1.1)	(9/29)
	Friendliness (1.2)	(8/29)
	General appreciation (1.3)	(12/29)
Event (2) 63 mentions	Venue / location (2.1)	(8/63)
	Weather (2.2)	(7/63)
	Atmosphere (2.3)	(13/63)
	Organisation (2.4)	(17/63)
	Specific activities (2.5)	(18/63)
Personal and family (3) 33 mentions	Family bonding (3.1)	(11/33)
	Personal achievements or feelings (3.2)	(16/33)
	Social aspect (3.3)	(6/33)

Discussion

This is the first Irish study on the benefits and barriers for younger people with disabilities and their carers engaging in watersports. This pilot study utilised survey methodology to explore the views of the participants in the 2019 Inclusion Games, through pre-event and post-event surveys. We explored the obstacles young people with disability can face when participating in watersports and where the main limitations to participation exists. Given the spartan nature of the literature, this study establishes insight into where difficulties arise for families and the impact the Inclusion Games, even as a brief initiative, can have.

Carers reported that 49% of participants were hoping for a *new experience*. Previous authors highlight that many children with disability and their families may be limited when attempting watersports due to high costs, lack of transportation, difficulty accessing equipment and unavailability of trained personnel¹³. The Inclusion Games were specifically aimed at eliminating these barriers by creating a free event with access to equipment tailored for young people with disabilities, to enable whole family participation. This is an important social, personal and community value.

The other hopes participants had prior to the games included *gaining confidence* and *social interaction*. A 2016 study revealed that a social hurdle for children with disabilities when participating in physical activity was a lack of confidence or sense of frustration. This stemmed from comparison with young people of typical development, especially as the skill gap widened with age¹³.

When considering the benefits of watersports in terms of physical wellbeing, we are aware a brief intervention such as this, has limited long term physical impact. Several studies involving simulated sailing courses and surf therapy accommodated for children with disability, shows that continuous participation in water-based activities have a strong impact on enhancing physical capability and in turn quality of life^{8, 13-16}. This is potentially due to the buoyancy water provides, which can enable children with impaired mobility on land to move with less assistance and more ease. Independent movement in the water such as swimming, surfing, or walking, can provide postural stability and in turn strengthen muscles¹⁴.

Potentially a longer term and consistent water-based intervention will show a beneficial change in motor skills. Longer term initiatives such as Sailability¹⁷ are available to families and anecdotal evidence suggests gaining confidence and exposure to events such as this have led to ongoing collaborative supports from partner organisations working with carers. Events such as the Watersports Inclusion Games may foster such developments.

The comparison between table 2 and table 3 also shows there was a statistically significant increase [$P=.014$] in enjoyment of family life at a whole family event. One parent commented saying: “....*My other son who is 11 and does not have special needs attended too and it worked really well for us as a family.*” Surf therapy studies for children with disability have found that participation of non-disabled siblings as well allows for healthy competition and decreased jealousy between siblings, promoting more bonding¹⁰.

Where families of children with disability are involved, planning and extra help are key enabling factors when taking part in new activities. Without planning, carers report resorting to “easier” activities^{9, 18}. Following the event, carers commented they were able to worry less and leave the event with the information and confidence for future participation¹⁸. Furthermore, providing the opportunity for a new experience can stimulate the child’s interest in different activities, increasing the likelihood of future participation¹⁹. As one parent said: “...that he would get an overall idea of what he could do, rather than just being at home and an experience that he would hopefully take up.”

Creating an equal opportunity for young people with disability and their carers or families to participate led to many reported positives. Exposure to these events lends confidence to participants and this in turn may lead to longer term participation in other sports or an ongoing basis with partner organisations supporting young people with disabilities. The value brought by the Inclusion Games can be amplified by offering frequent, smaller events throughout the year as consistent participation is associated with increased benefits. To facilitate this enablement, we must robustly support funding, expertise and awareness for inclusive watersports in Ireland. There are undoubted physical and mental health benefits for young people and families.

Declaration of Conflicts of Interest:

The authors declare that there are no conflicts of interest regarding this article.

Corresponding Author:

Dr Elizabeth Barrett

University College Dublin

E-Mail: elizabeth.barrett@ucd.ie

References:

1. Disability - CSO - Central Statistics Office [Internet]. Cso.ie. 2020 [cited 6 July 2020]. Available from: <https://www.cso.ie/en/releasesandpublications/ep/p-cp9hdc/p8hdc/p9d/>
2. Chadwick D, Mannan H, Garcia Iriarte E, McConkey R, O'Brien P, Finlay F et al. Family Voices: Life for Family Carers of People with Intellectual Disabilities in Ireland. *Journal of Applied Research in Intellectual Disabilities* [Internet]. 2012 [cited 29 July 2019];26(2):119-132. Available from: <https://onlinelibrary.wiley.com/doi/abs/10.1111/jar.12003>
3. Healy S, Msetfi R, Gallagher S. ‘Happy and a bit Nervous’: the experiences of children with autism in physical education. *British Journal of Learning Disabilities* [Internet]. 2013 [cited 20 June 2019];41(3):222-228. Available from: <https://onlinelibrary.wiley.com/doi/abs/10.1111/bld.12053>
4. Browne M, Millar M. A rights-based conceptual framework for the social inclusion of children and young persons with an intellectual disability. *Disability & Society* [Internet]. 2016;31(8):1064-1080. Available from: <https://www.tandfonline.com/doi/abs/10.1080/09687599.2016.1232190>

5. Watersports Inclusion Games [Internet]. Sailing.ie. 2019 [cited 5 August 2019]. Available from: <https://www.sailing.ie/Events/Watersports-Inclusion-Games>
6. Active fun for everyone [Internet]. Publichealth.hscni.net. 2018 [cited 26 July 2019]. Available from: https://www.publichealth.hscni.net/sites/default/files/Children%20Phys%20Act%20Disabilities%20A5%20Leaflet%2002_18_FINAL.pdf
7. Mactavish J, Schleien S. Re-injecting spontaneity and balance in family life: parents' perspectives on recreation in families that include children with developmental disability. *Journal of Intellectual Disability Research*. 2004;48(2):123-141.
8. Kim S, Lehto X. Travel by families with children possessing disabilities: Motives and activities. *Tourism Management* [Internet]. 2013 [cited 10 June 2019];37:13-24. Available from: <https://www.sciencedirect.com/science/article/pii/S0261517712002464>
9. Hayes S, Watson S. The Impact of Parenting Stress: A Meta-analysis of Studies Comparing the Experience of Parenting Stress in Parents of Children With and Without Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders* [Internet]. 2012 [cited 1 August 2019];43(3):629-642. Available from: <https://link.springer.com/article/10.1007%2Fs10803-012-1604-y>
10. Moore A, Clapham E, Deeney T. Parents' Perspectives on Surf Therapy for Children with Disabilities. *International Journal of Disability, Development and Education*. 2017;65(3):304-317.
11. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative Research in Psychology*. 2006;3(2):77-101
12. Menear K. Parents' perceptions of health and physical activity needs of children with Down syndrome. *Down Syndrome Research and Practice*. 2007;12(1):60-68.
13. Shields N, Synnot A. Perceived barriers and facilitators to participation in physical activity for children with disability: a qualitative study. *BMC Pediatrics*. 2016;16(1).
14. Clapham E, Armitano C, Lamont L, Audette J. The Ocean as a Unique Therapeutic Environment: Developing a Surfing Program. *Journal of Physical Education, Recreation & Dance*. 2014;85(4):8-14.
15. Aprile I, Iacovelli C, Iuvone L, Imbimbo I, Cruciani A, Pecchioli C et al. Use of a Virtual-Technological Sailing Program to Prepare Children With Disabilities for a Real Sailing Course. *Journal of Child Neurology*. 2016;31(8):1074-1080.
16. Recio A, Becker D, Morgan M, Saunders N, Schramm L, McDonald J. Use of a Virtual Reality Physical Ride-On Sailing Simulator as a Rehabilitation Tool for Recreational Sports and Community Reintegration. *American Journal of Physical Medicine & Rehabilitation*. 2013;92(12):1104-1109.
17. Ireland. (2016). Retrieved 6 September 2020, from <https://www.sailability.org/?p=42>
18. Mactavish J, Schleien S. Re-injecting spontaneity and balance in family life: parents' perspectives on recreation in families that include children with developmental disability. *Journal of Intellectual Disability Research*. 2004;48(2):123-141.
19. Bult M, Verschuren O, Jongmans M, Lindeman E, Ketelaar M. What influences participation in leisure activities of children and youth with physical disabilities? A systematic review. *Research in Developmental Disabilities*. 2011;32(5):1521-1529.