



**UNIVERSITY *of* LIMERICK**

**O L L S C O I L L U I M N I G H**

**MSc Occupational Therapy**

OT6054: Occupational Therapy Project 4

Title: An exploration of the experiences of powerchair football athletes in Ireland

Module Co-ordinator: Dr. Katie Robinson

Thesis Supervisor: Dr. Rosie Gowran

14000733

Year 2, Semester 4

Word Count: 4500

April 11<sup>th</sup>, 2016

## **Abstract**

This article explores the experiences of people with severe physical disabilities who participate in Powerchair Football in Ireland. Qualitative methods that included participant observation and semi-structured interviews were used to study the life experiences and personal meaning of occupations of four individuals from the Irish national team. Expressed throughout the interviews were myriad benefits that included building self-confidence in their abilities as an athlete, increasing self-efficacy in their everyday occupations, making new friendships from all over the world and being a part of a supportive community that advocates for power wheelchair users. Participants also reported facing financial and time-commitment challenges in equal measure, as well as a lack of resources for assistive technology in the Powerchair Football community. Three major themes emerged from the findings: 1) "Powerchair Football as a Competitive Occupation", with sub-themes, Opportunity for Competitive Sport, Travel: Friend and Foe, and Normalising Life, 2) Assistive Technology to Enable Daily Occupations", with sub-themes Different Needs: Different Chairs, and Money, Money, Money and Services, and 3) "Powerchair Football for Mental Health," with the sub-themes, Self-Growth, and Social Growth. It was clear that the athletes highly valued Powerchair Football as a source of occupational engagement in their life to promote feelings of competence, enhance social relationships and encourage overall well-being. Understanding the experiences of these athletes helps identify the importance of physical activity and team sport, especially in the lives of individuals who live with the highest levels of physical impairment.

## **Introduction**

Occupations can be seen as individually crafted and uniquely felt experiences that help construct self identity (Pierce 2001; Watters *et al* 2012). Discovering meaning in occupational engagement provides personal fulfillment, social interaction, mutual support and the ability to contribute to others (Hammell 2014). Participation in recreation and sport is a valuable occupation to promote physical, mental and social health benefits and helps prevent non-communicable diseases such as cardiovascular disease or diabetes (Kopenhagen *et al* 2013; WHO 2015). Alas, the World Health Organization (2015) has found that insufficient amounts of physical activity is one of the ten leading risk factors for death worldwide. Persons with chronic conditions are more likely to partake in sedentary habits due to barriers such as limitations of physical abilities, social isolation and low motivation (Kopenhagen *et al* 2013). This is particularly true for person's who require a wheelchair for mobility (Martin 2013).

Since the 1940s, opportunities for sport to encourage physical activity for persons with disabilities have grown and shown exceedingly positive outcomes, leading to greater independence and increased quality of life (Hutzler and Shemesh 2012; Khan *et al* 2012). For wheelchair athletes, sport participation has been perceived as a source of empowerment; a venue to express control over their life (Hutzler and Shemesh 2012). Sport participation also promotes self-efficacy in the forms of improved self-care, employment and increased opportunities for social connection (Goodwin *et al* 2009).

Currently, there are few studies that focus on the personal meaning and benefits of engagement that wheelchair sports provide to an athlete's life. Garci and Mandich (2005) interviewed elite wheelchair basketball athletes and they found that occupational engagement contributed to the athlete's ability to face challenges, overcome disability and strive to achieve a meaningful goal. Goodwin *et al* (2009) interviewed national level wheelchair rugby athletes, who identified the strong desire for athletes to excel in and advocate for their sport. Litchke *et al* (2009) interviewed wheelchair rugby athletes that expressed the desire to be recognised as competitive athletes and for "people to not pity them" (p. 36). Social connections that were created through sport interaction was a common theme, where athletes described their relationship with teammates as strong friendships or expressed feelings of belonging and a sense of community (Garci and Mandich 2005; Goodwin *et al* 2009).

To date the research focuses on personal meaning in wheelchair sports for athletes with lower body disabilities, however research and sport opportunities are limited for individuals with the highest levels of functional impairments who require power wheelchairs for mobility (Barfield and Malone 2013). Powerchair Football (PCF) was the first competitive team sport designed and developed specifically for power wheelchair users (NDSA 2009). Athletes are often diagnosed with chronic conditions such as cerebral palsy, muscular dystrophy (MD), or other physical disabilities that requires the use of a power wheelchair (NDSA 2009). PCF is a competitive sport developed in the 1970s, and is currently being played in countries such as the United States, Canada, Denmark, England, France, Japan and Ireland (NDSA 2004; 2009). A study by Barfield and Malone (2013) examined the benefits and barriers of 25 PCF athletes through a questionnaire, however little is understood regarding the personal meaning of participation and occupational engagement in PCF. Therefore, the aim of this study is to explore the experiences of PCF athletes in Ireland.

## **Method**

### *Design*

In order to explore the experiences of PCF athletes in Ireland, broad qualitative methods were utilised, as it is considered one of the best research approaches for studying life experience (Depoy and Gitlin 1994; Garci and Mandich 2005). A critical theory paradigm framed the thought process of this study to understand that there is no single reality in human experiences, but multiple realities that are shaped by social, political, cultural, gender and economic factors of the participants (Kincheloe and McLaren 2002). An organisational ethnographic perspective was used to inform the broad qualitative approach to provide a fuller, more grounded and practice-based understanding of PCF in Ireland (Davies 2008; Gobo 2008). This process involved direct contact with people in the community, however it was common practice to enter the field for short periods of time and move out again (Eberle and Maider 2011).

### *Recruitment*

This study was first discussed with the Association of Irish Powerchair Football (AIPF 2014). Consent was given to have coaches and athletes approached by the primary author/interviewer. The primary author was invited to a 2-hour observation training session, where 15 athletes were addressed as a group. Purposive sampling was used where inclusion criteria to participate in the study included: to be a PCF athlete in Ireland, be over 13 years of age, have experience competing in at least one PCF match, and volunteer to be interviewed. The primary author provided verbal explanation and written information as to the purpose of the study, the requirements of participants including time commitments, confidentiality, potential risks and ethical considerations, and the voluntary nature of participation. Five participants volunteered to be interviewed with informed consent. The primary author was invited to a weekend training session where times for interviews and further observation sessions were scheduled. Ethics approval was obtained for this study from the University of Limerick.

### *Data Collection: Participant Observation*

Participant observation data stemmed from 12 hours of observation that spanned over 3 days, observing 25 athletes during club and national team training, both on and off the court. Observations were made for the researcher to gain a deeper understanding of the PCF community in Ireland, and to confirm topics discussed during the interviews, such as the logistics of the sport.

### *Data Collection: Participant Interviews*

Five interviews were conducted, however due to technical difficulties with audio equipment and time constraints, four interviews were used for this study. Two males and two females were recruited, who all were diagnosed with a form of MD in early childhood. All participants were members of the national Ireland PCF team. Specified diagnosis will not be disclosed and pseudonyms will be used to protect the anonymity of the participants.

Demographics of participants can be found in Table 1.

*Table 1: Demographics of Participants*

<b>Athlete Pseudonym</b>	<b>Gender</b>	<b>Age</b>	<b>Disability</b>	<b>Number of Years playing Powerchair Football</b>
Nora	Female	20	Muscular Dystrophy	13
Abby	Female	18	Muscular Dystrophy	4
Conor	Male	23	Muscular Dystrophy	13
Sean	Male	19	Muscular Dystrophy	3

The interviews were audio taped and ranged from 20 minutes to 45 minutes in length. Athletes were given the choice of the interview being conducted in a semi-private area of a gym, or a quiet area of a coffee shop after observation sessions. The semi-structure interview schedule was derived from influences of Kronenburg *et al* (2005) political reasoning tool and Capra (2003) reflective consciousness. The first half of the interview consisted of demographic questions and asked the athletes about their current daily occupations, the type and use of their assistive technology (AT), and how they first got involved in PCF. The second half of the interview considered the experiences of the athlete, indicating for example their interests and motives, issues which motivate and frustrate them, and what changes if any would they like to see in the future.

### *Data Analysis*

The interview data was transcribed and coded for meaningful themes using a six phase thematic analysis approach set out by Braun and Clark (2006) which is described in Table 2. NVivo and mind maps were used to ensure rigour in the analysis process (Bazley and Jackson 2013). The primary author practiced trustworthiness by documenting detailed field notes, observation notes and practiced reflexivity through a reflective diary to add validity and reliability to the research process (Finlay and Gough 2008; O'Reilly 2009; Ybema *et al* 2009).

*Table 2: Phases of Thematic Analysis*

<i>Phase</i>	<i>Description of Process</i>
1. Familiarising yourself with your data	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas
2. Generating initial codes	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code
3. Searching for themes	Collating codes into potential themes, gathering all data relevant to each potential theme
4. Reviewing themes	Checking if the themes work in relation to the coded extracts (level 1) and the entire data set (level 2), generating a thematic 'map' of the analysis
5. Defining and naming themes	Ongoing analysis to refined the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme
6. Producing the report	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back to the analysis to the research questions and literature, producing a scholarly report of the analysis.

(Braun and Clark 2006, p. 87)

## Findings

### *Participant Observation*

PCF is a sport played by two teams that maneuver the ball over the goal line of the opposing team, using special foot guards attached to powered wheelchairs (FIPFA 2010). Table 3 outlines a sample of key rules and regulations.

*Table 3: Sample Rules from Powerchair Football: Laws of the Game*

<i>Law</i>	<i>Explanation</i>
1) The field of play	<ul style="list-style-type: none"> <li>• Size of field is the same as a standard size basketball court</li> <li>• Surface must be hard, smooth and level for movement of powerchairs</li> <li>• Boundaries, goal area, and penalty marks must be clearly outlined</li> <li>• See <i>Figure 1</i> for visual representation</li> </ul>
2) The number of players	<ul style="list-style-type: none"> <li>• Four players on the court at a time, one of whom is a goal keeper</li> <li>• Up to 4 substitute players unless otherwise agreed</li> </ul>
3) The players equipment	<ul style="list-style-type: none"> <li>• Jersey or shirt (teams wear the same colour)</li> <li>• A powered wheelchair</li> <li>• Lap seatbelt</li> <li>• Foot guard</li> <li>• Clear and visible number</li> <li>• See <i>Figure 2</i> for visual representation</li> </ul>
4) Duration of the match	<ul style="list-style-type: none"> <li>• Two equal periods of 20 minutes unless otherwise agreed</li> </ul>
5) Method of scoring	<ul style="list-style-type: none"> <li>• Goal is scored when the whole ball passes over the goal line</li> <li>• See <i>Figure 3</i> for visual representation</li> </ul>

(FIPFA 2010)

Figure 1: Field of Play  
(FIPFA 2010)

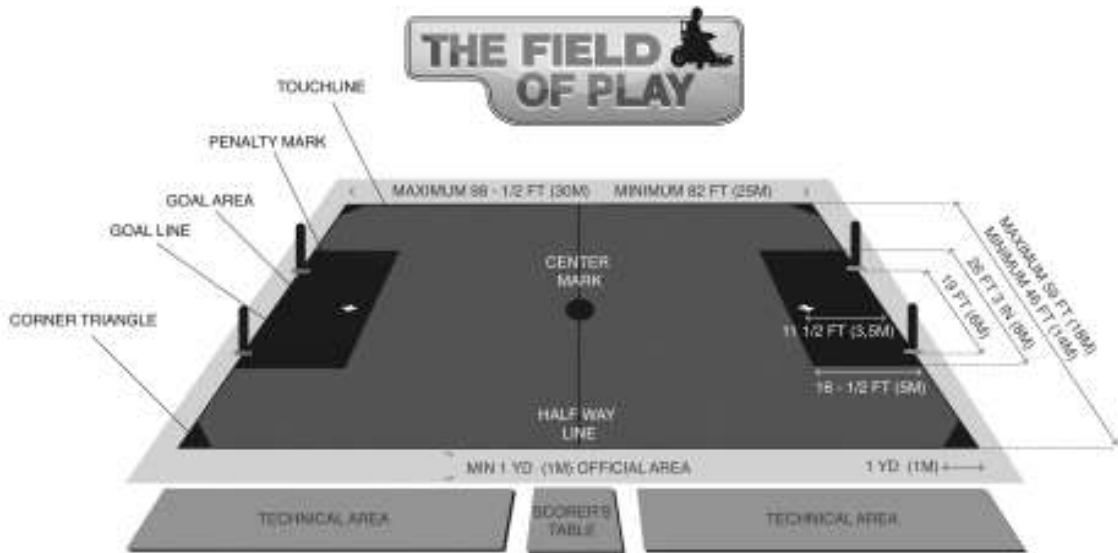
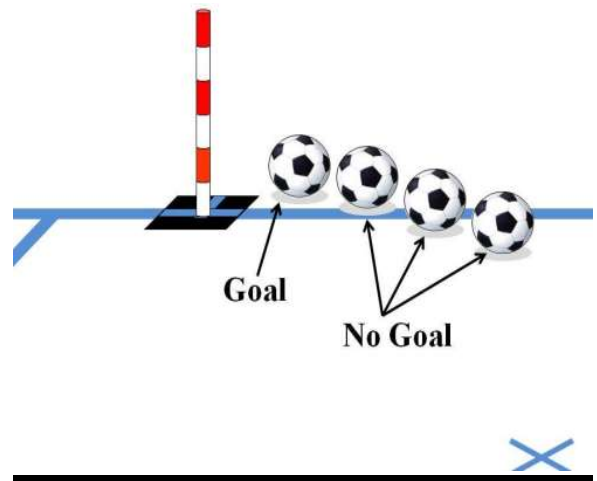


Figure 2: Powerchair and Ball for PCF



Figure 3: Method of Scoring  
(FIPFA 2010)





An excerpt from the author's observation notes:

*"The gym is loud where some players are ready and wheeling around to get used to the environment, while others are transferring to their sport chairs with the help of coaches, parents or personal assistants. Putting their guards on their chairs, it takes about 30 minutes to set up for training. Players start hitting the ball to one another, and its amazing how fast the chairs can spin! It's evident the more experienced players are more aggressive going after the ball and have more accuracy when playing, but they are great at trying to encourage the new players to keep trying."*

### *Participant Interviews*

Three themes emerged from the interviews that were titled: 'Powerchair Football as a Competitive Occupation', 'Assistive Technology to Enable Daily Occupation', and 'Powerchair Football for Mental Health.'

#### **Theme 1: Powerchair Football as a Competitive Occupation**

##### *Opportunity for Competitive Sport*

All of the athletes clearly expressed that one of the primary interests in participating in PCF is being provided a sport to play for persons with severe physical limitations that is competitive in nature. Some of the athletes were able to play sport as a child, however some had never had the opportunity previous to their involvement in PCF.

*Sean: "I think it's pretty good cause I get to play sport, and I never got to play sport beforehand."*

*Conor: "As I was growing up, I would have played a lot of football and sports...once the chair came around, there was ahm, less, less sports you could play, less opportunities. And as the powerchair came into use, that was less and less again"*

The athletes voiced their love for competition, and the pride they felt representing their country in international tournaments, recalling past experiences such as placing 4<sup>th</sup> in the European Cup in 2015 to qualify for the upcoming World Cup. Athletes expressed that their desire to compete and win motivates training sessions to improve upon their skill and develop as an athlete.

*Nora: "Ya, we actually just lost out on 3rd place...to Belgium so, that was quite disappointin... Ya to compete like within the top 3 in the world. It was really really good."*

#### *Travel: Friend and Foe*

Athletes emphasised that the commitment to travel within Ireland was perceived as a challenge. Due to the limited number of players in Ireland, many members must drive at least 1-2 hours each direction to club, national training sessions or weekend matches.

*Abby: Umm, the biggest challenge is probably the getting to matches, getting to training...you kind of suffer when you don't come prepared...anywhere there are matches kind of an hour to an hour and a half away."*

However, athletes expressed excitement when discussing the opportunities to travel internationally for tournaments, not only for competition, but to experience new places and meet people from all over the world.

*Nora: "I have friends in France, in England...it's great to kind of meet new people, make new friends. Like they're people who are kind of in a similar situation to yourself. Ahm, cause they're also wheelchair users."*

#### *Normalising Life*

For many of the members, participating in competitive sport was an experience they could share with able-bodied friends, experiencing the same occupations such as going to training, playing matches, or having difficulties with referees.

*Conor: "To be able to play games and competitions and win competitions. You know, it's the same way you see all of your other friends go off to sports training and playing games... It normalises life. Which is great. Cause at times, it can seem very un-normal."*

Playing PCF with other athletes who shared similar levels of disability also helped athletes accept their own disability. Athletes reported that when they are competing against other players, the disability doesn't matter, it was about the skill on the court.

*Nora: "It's like any other sport in terms of that. You're goin out and you're trying to win every game ...a lot of disability sports tend to be kind of, oh everyone will have a go, and play for*

*fun...but when you're playin like, competitively... everyone wants to win... your disability is taken out of the picture. It's about who's the best player."*

## **Theme 2: Assistive Technology to Enable Daily Occupation**

### *Different Needs: Different Chairs*

Athletes discussed the importance of the different features of their chairs to complete different tasks in their lives. Members talked about their everyday chair to perform activities of daily living (ADL's) such as going to school, cooking, or going out with friends. To carry out these tasks, wheelchairs required supports such as specially designed seating, tilt in space and lights on the chair. When discussing their sport chair, the needs were quite different as the sport calls for a faster speed on the court, lap belts, and a sturdier frame. Unfortunately, members found that their sport chair did not meet their individual needs in terms of postural support or comfort.

*In regards to his PCF chair:*

*Conor: "The seating isn't specially designed. It's traditional seating... the old seating system that I used to use. So, it's not 100% what I need... I wouldn't say it's as comfortable a chair, umm, but it does, it does what I need it to."*

### *Money, Money, Money, and Services*

Lack of funding was a topic of frustration for members interviewed. For new players wanting to join the sport, it was expected to buy a basic sport chair for at least 3,000 €. In terms of international competition, a new powerchair specifically made for PCF titled the "Strikeforce," would cost approximately 10,000€ per chair, but would place Ireland on par with international teams who have invested in this chair. Unfortunately, PCF is not recognised as a paralympic sport, and participation in sport is not recognised as a necessity by health system services in Ireland, so there are few funding supports for specialised sport AT. Athletes report that the AIPF carries out most of its own fundraising for AT.

*Nora: "In terms of raising that kind of money for 8 players, that's 80 thousand...it's a lot of money and we, like we don't get a huge amount of support. We're not recognised as a paralympic sport. So we don't get any funding from the Irish sports council... so it's ahm, it's literally, we just have to try and fundraise it yourself."*

Inadequate services for malfunctioning AT was another challenge expressed by athletes. Previous to an interview, an athlete's rear wheel fell off during training and because it was a weekend day, no services were available to fix the wheel. Therefore, the athlete missed out on the day of training with the international team. This was one of many incidents reported from athletes concerning malfunctions with AT.

*Conor: "it's just the securing a part of your chair...like you need other's to help you do that... you have to call out to the service companies. It's a huge cost for a little call out, and often the changes you want to make to parts of your chair are, you know, don't fall within the standards of health and safety regulations of, of the company so the engineers who are called out won't do it. So you have to get a friend, or a family member has to be...a DIY (Do-It-Yourself) kind of guy, and be able to do it as a result. So...that's a challenge."*

### **Theme 3: Powerchair Football for Mental Health**

#### *Self-Growth*

Athletes expressed that participating in PCF has positively influenced their own self-development in myriad ways that included: as a coping mechanism to deal with challenges in life, as a de-stressor when focusing on school tasks, and building up self confidence in both sport and everyday life.

*Conor: "That positive mental health benefit...You're more positive in other aspects of your life. In terms of, you know, independent living, going to school... looking for jobs. It really, it adds, it builds...of having the best of quality of life as possible. And um, power soccer seems to be one of the foundations for people to do that."*

*Abby: "Before powerchair football if I ...saw them doing something that was going to affect me, I wouldn't say anything, But now, I kind of have to take control sometimes...so now I am more vocal and more confident to say, actually can you leave that light on or, whatever, cause I need it on...I definitely am more confident and will stand up for myself."*

#### *Social Growth*

Athletes reported that PCF also improved their confidence to socialise with others and provided an opportunity to be a part of a community. Members expressed their interest in being apart of a team, whether they win, lose, or face new challenges, they are doing it together. The

overwhelming appreciation for the volunteers and family members' commitment towards the PCF community was also evident.

*Conor: "You have the community, you have friends, and people to talk to...people who are in, are in the same position as you. It's a huge thing for any human being is just to have people who have the same experiences as you to share and establish that. A sense of community, a sense of security."*

The community support was clearly demonstrated both on and off the court, as unfortunately, secondary health problems are a common occurrence in communities of individuals with severe disabilities.

*Conor: "One huge thing that I love is that people with more severe disabilities that um, where some players would have passed away really young, maybe 16, 17, 18. But um, would have had deteriorating health, but I wouldn't notice that when they play power soccer. You can see how power soccer has such a, you know, positive physical, positive impact. On somebody's body, on somebody's health. It's prolonging your life so, um, even if those lives are ending quite prematurely sadly."*

Advocacy for PCF in Ireland was another key topic that was demonstrated as athletes report being a role model to younger players, as well as consistently trying to recruit new players as they continue to develop the program.

*Abby: "When you see a new player come, and they, like we had one girl tell me that I was the reason she played cause there aren't many girls that play in the sport, so when they see girls, they're like oh I want to play with that team cause there's a girl on it."*

## **Discussion**

The purpose of this study was to explore the experiences of PCF athletes in Ireland. A main theme that was expressed was how PCF provided an opportunity for people with severe physical disabilities to engage in competitive sport. Athletes enjoyed that PCF wasn't just for fun, but that there was a competitive goal to win as a driving motivation to compete both within Ireland and internationally, even with financial or travel challenges. Members identified that playing PCF helped normalise their life, as it provided similar experiences to able-bodied friends

who participate in the same occupations of sport. PCF also provided kinship with other people with severe physical disabilities, and therefore supported the athlete's acceptance of their own disability. Unexpectedly in this study, all participants interviewed were diagnosed with a form of MD, which members identified as a unifying experience. A study by Stephens *et al* (2012) found similar results with individuals with spinal cord injuries participating in sport activities, where wheelchair users identified that it was beneficial to share similar experiences with people who had a true understanding of their situation, and that individuals learned from each other not only in sport, but in daily life as well.

The importance of AT used to perform ADL's and participation in sport was vital. Athletes identified the need for different wheelchairs to use for the different areas of their life, in order to be independent and engage in various occupations. The lack of funding and inadequate services for AT was deemed a substantial barrier that impacts the team's ability to compete, or at times participate in PCF. As the costs required for AT comes out of the athlete's own pocket, it's the team members themselves that must continuously fundraise to purchase chairs that do not necessarily provide the support and/or performance that is required to compete. So not only do members have to continuously battle with discomfort and lack of resources, this was a huge deterrence for new wheelchair users participating in the sport. Wheelchair and seating provision is highlighted to be of utmost importance to provide personal mobility, facilitate social inclusion and enable persons to reach their occupational potential (McDonald 2008; Gowran *et al* 2012). However, this does not appear to be translating to AT for sport activities in Ireland. Laferrier *et al* (2012) highlights that as technology continues to advance and as athletes with disabilities continue to narrow the gap in competition, AT selection should be given proper attention to maximise functional capacity, improve performance in sport and prevent injury. Burton *et al* (2010) mirrors this concept by expressing that modern AT should empower and enable users to achieve their true potential, especially in competitive sport where people think more about the things that can be done in a wheelchair and less about the functions that cannot be achieved.

Not being provided the appropriate AT or maintenance services significantly reduces these athlete's ability to participate, and therefore engage in occupation. Occupation is regarded as doing, being, becoming, and belonging, which is of central importance to the experience of well-being (Hammell 2014). Hamell and Iwama (2012) identify that well-being is a human right, and impediments to engage in meaningful occupation, impedes on a person's occupational rights. The right to be provided with the right tools to engage in occupation coincides with the Convention of Rights for Persons with Disabilities (United Nations 2008) which demonstrates the importance of full participation of persons with disabilities and the

equality of opportunity. The Healthy Ireland Strategy (2013) currently has few strategies laid out working with persons with disabilities, and needs to further establish guidelines to better enable all communities in Ireland to engage in physical activity and promote a holistic sense of well-being.

Finally, athletes spoke of how their experiences in PCF had significantly improved the psychosocial aspects of their lives both through self-growth and social growth. All members discussed how PCF improved their self-confidence and self-efficacy in their own abilities, as well as provided an outlet to cope with the frustrations of daily life. In a study by Groff *et al* (2009) it was found that athletes with disabilities saw sport as an outlet for expression, provided information to develop their self perceptions, and afforded them an opportunity to be their 'true selves.' Alongside building self-confidence, the benefits of increasing social interactions was an overwhelmingly positive benefit to playing PCF as athletes got to meet new people, make new friends, and help create a community atmosphere that supports one another and advocates for wheelchair users. These psychosocial benefits fall in line with current literature for people of all capabilities participating in sport. A systematic review of psychosocial health aspects of sport participation for adults included 11 studies and involved 194,842 participants, where evidence was consistent of the various psychological and social health benefits of team sports compared to individual forms of physical activity (Eime *et al* 2013). This was due to the social nature of the participation, improved social interaction, improved self-esteem, and the concept of choice and fun (Eime *et al* 2013). Carin-Levy and Jones (2007) completed a study on the psychosocial aspects of scuba diving for people with physical disabilities. They found the athletes strongly put an emphasis on the social opportunities provided by sport, and how this improved their perception of their overall quality of life. In a study by Barfield and Malone specifically about PCF athletes, it was reported that "sport enhanced personal relationships, social interactions, self-care skills and acceptance of disability" (2013, p. 232), which coincides strongly with the findings of this study. Occupational engagement in general can enhance one's perception of self, promote feelings of competence and well-being, and have the potential for personal and social transformation (Carin-Levy and Jones 2007; Kuo 2011). This reflects the benefits, the challenges and the overall experiences as reported by PCF athletes in Ireland.

### **Limitations**

The findings of this study must be interpreted with caution as a result of the small sample size. This is attributed to the practical time constraints of this study being a requirement of an Occupational Therapy taught Master's program. Due to time constraints and lack of facilities,

interviews with participants were conducted in a semi-private gym, where a quiet, private room would have been more suitable to reduce background distractions. Interviewing athletes at a time that was separate to training sessions may also have been beneficial, as athletes may have been fatigued. Multiple methods of data collection were not used in this study. Having an increased triangulation of methods would have increased credibility and rigour of the study such as member checking, multiple interviews with athletes, and increased hours of participant observation. The sample of participants unexpectedly consisted of individuals with MD in the early adulthood life stage, where participants with other disabilities in various life stages may have highlighted different aspects of their experiences.

### **Implications for Practice**

- The findings of this study indicate that PCF was identified as a meaningful occupation to athletes in Ireland, therefore practitioners should encourage wheelchair users to participate in sport activities to increase self-confidence, improve social connections and increase awareness of PCF in Ireland.
- To improve quality of life for power wheelchairs users, practitioners promoting the Healthy Ireland Strategy 2013, should aid in organising strategies to further line up with the Convention of Rights for Persons with Disabilities (UN 2008) to advocate for equal opportunities.
- Service provision for AT in Ireland should be reviewed to include sport AT and timely outcomes, to improve participation in sport for athletes
- Health professionals should encourage funding opportunities for person's with disabilities to engage in sport and provide the appropriate AT

### **Recommendations for Future Research**

The findings of this study identify that PCF in Ireland has the potential to be a source of occupational engagement for athletes, however should be interpreted with caution until further research with a larger sample size consolidates similar findings. Future research to develop the evidence in this area could also identify:

- The psychosocial health benefits of PCF athletes in Ireland that include the concept of flow (Csikszentmihalyi and Nakamura 1979)
- The physiological effects of PCF on athletes
- The experiences of PCF athletes with a variety of disabilities and ages



- The experiences of PCF community members such as coaches, referees, and parents of athletes

### **Conclusion**

This study explored the experiences of four PCF athletes in Ireland. The findings highlight that people with the highest levels of physical disability benefit from team sport both individually and socially from a psychosocial perspective. Athletes found that PCF provided an opportunity to engage in competitive occupations, which was not previously available for members with congenital chronic conditions such as muscular dystrophy. Participation in the meaningful occupation of PCF promoted self-efficacy in athletes that affected all areas of life, encouraged the development of new social relationships and provided a coping mechanism to overcome the challenges of disability. However, the appropriate types of assistive technology and associated services are vital to enable participation in meaningful occupations, such as sport to enhance quality of life. Understanding the experiences of PCF athletes in Ireland identifies the importance of advocating for occupational rights, especially in the lives of individuals with the highest levels of impairment who have limited opportunities. It is through their experiences that we can learn to implement strategies to encourage occupational engagement, and provide equal opportunities for all individuals to achieve a personal and communal sense of health and well-being.

## References

- Association of Irish Powerchair Football (2014) *Association of irish powerchair football* (online), available: <http://www.fai.ie/domestic/football-for-all/association-of-irish-powerchair-football> (accessed 10 March 2015).
- Barfield, J., and Malone, L. (2013) 'Perceived exercise benefits and barriers among power wheelchair players' *JRRD*, 50(2), 231-238. (accessed 15 Feb 2015).
- Bazeley, P., and Jackson, K. (Eds.). (2013). *Qualitative data analysis with NVivo*. Sage Publications Limited.
- Braun, V., and Clarke, V. (2006) 'Using thematic analysis in psychology', *Qualitative research in psychology*, 3(2), 77-101. (accessed 2 Mar 2015).
- Burton, M., Fuss, F. and Subic, A. (2010) 'Sports wheelchair technologies,' *Sports Technology*, 3(3), pp.154-167. (accessed 8 March 2016).
- Capra, F. (2003) *The Hidden Connection: A Science for Sustainable Living*, London: Harper Collins Publishers Ltd.
- Carin-Levy, G. and Jones, D. (2007) 'Psychosocial aspects of scuba diving for people with physical disabilities: An occupational science perspective,' *Canadian Journal of Occupational Therapy*, 74(1), pp.6-14. (accessed 8 March 2016).
- Csikszentmihalyi, M. and Nakamura, J., (1979) 'The concept of flow,' *Play and learning*, pp.257-274. (accessed 6 April 2016)
- Davies, C. (2008). *Reflexive ethnography: A guide to researching selves and others*. Routledge.
- Depoy, E., and Gitlin, L (1994). *Introduction to research: Multiple strategies for health and human services*. St Louis: Mosby.
- Eberle, T., and Maeder, C. (2011) 'Organizational ethnography', *Qualitative research*, 53-73. (accessed 2 Mar 2015).
- Eime, R., Young, J., Harvey, J., Charity, M., and Payne, W.R. (2013) 'A systematic review of the psychological and social benefits of participation in sport for adults: informing development of a conceptual model of health through sport,' *International Journal of Behavioural Nutrition and Physical Activity*, 10(135), 1-14. (accessed on 10 March 2016).

Federation Internationale de Powerchair Football Association (2010). *Powerchair football: Laws of the game*. Available at <http://fipfa.fr/wp-content/uploads/sites/3/2011/01/FIPFA-Laws-of-the-Game-Approved-December-2010.pdf> (accessed 6 April 2016).

Finlay, L. and Gough, B. eds., 2008. *Reflexivity: A practical guide for researchers in health and social sciences*. John Wiley & Sons.

Galvaan, R. (2012) 'Occupational choice: The significance of socio-economic and political factors,' *Occupational science: Society, inclusion, participation*, pp.152-162.

Garci, T., and Mandich, A. (2005) 'Going for gold: Understanding occupational engagement in elite-level wheelchair basketball athletes', *Journal of Occupational Science*, 12, 170-175.  
doi:10.1080/14427591.2005.9686560

Gobo, G. (2008). *Doing ethnography*. Sage.

Goodwin, D., Johnston, K., Gustafson, P., Elliott, M., Thurmeier, R., and Kuttai, H. (2009) 'It's okay to be a quad: Wheelchair rugby players' sense of community,' *Adapted physical activity quarterly*, 26(2), 102-117. (accessed 15 Feb 2015)

Gowran, R., McCabe, M., Murphy, N., Murray, E., and McGarry, A. (2012) 'Research article: Wheelchair and seating provision: Exploring users' perspectives,' *The Irish Journal of Occupational Therapy*. 39 (2), 3-14.

Griffiths, S., Caron, C., Desrosiers, J., and Thibeault, R. (2007) 'Defining spirituality and giving meaning to occupation: The perspective of community-dwelling older adults with autonomy loss,' *Canadian Journal of Occupational Therapy*, 74, 78-85. doi:10.2182/cjot.06.0016.

Groff, D., Lundberg, N., and Zabriskie, R. (2009) 'Influence of adapted sport on quality of life: Perceptions of athletes with cerebral palsy,' *Disability and Rehabilitation*, 31(4), pp.318-326. (accessed 20 March 2016).

Hamell, K. (2014) 'Belonging, occupation and human well-being: An exploration', *Canadian Journal of Occupational Therapy*, 81(1), 39-50. DOI: 10.1177/0008417413520489

Hammell, K. and Iwama, M. (2012) 'Well-being and occupational rights: An imperative for critical occupational therapy,' *Scandinavian journal of occupational therapy*, 19(5), pp.385-394.

Hutzler, Y and Shemesh, R. (2012) 'Self-efficacy, task and ego orientation, and family support in wheelchair and able bodied basketball players' *Therapeutic Recreation Journal*. 46, 2, 73-90.

Ireland Department of Health (2013). *Healthy Ireland Strategy*. Available at <http://health.gov.ie/healthy-ireland/> (accessed 15 Feb 2015).

Khan, K., Thompson, A., Blair, S., Sallis, J., Powell, K., Bull, F., and Bauman, A. (2012) 'Sport and exercise as contributors to the health of nations,' *The Lancet*, 380(9836), pp.59-64. (accessed 8 March 2016).

Kincheloe, J., and McLaren, P. (2002) 'Rethinking critical theory and qualitative research', *Ethnography and schools: Qualitative approaches to the study of education*, 87-138. (accessed 2 Mar 2015).

Kopenhagen, C., De Groot, S., Post, W., Hoekstra, T., van Asbeck, W., Bongers, H., and van der Woude, L. (2013) 'Patterns of changes in wheelchair exercise capacity after spinal cord injury', *Archives of physical medicine and rehabilitation*, 94(7), 1260-1267. (accessed 3 Mar 2015).

Kronenberg, F., Algado, S., Pollard, N., Werner, D. and Sinclair, K. (2005). *Occupational therapy without borders: Learning from the spirit of survivors* (pp. 58-86). Edinburgh: Elsevier/Churchill Livingstone.

Kuo, A. (2011) 'A transactional view: Occupation as a means to create experiences that matter', *Journal of Occupational Science*, 18, 131-138. doi:10.1080/14427591.2011.575759. (accessed 20 Feb 2015).

Laferrier, J., Rice, I., Pearlman, J., Sporer, M., Cooper, R., Liu, T. and Cooper, R. (2012) 'Technology to improve sports performance in wheelchair sports,' *Sports Technology*, 5(1-2), pp.4-19. (accessed 8 March 2016).

Litchke, L., Hodges, J., Schmidt, E., Lloyd, L., Payne, and E., Russian, C. (2012) 'Personal Meaning of Wheelchair Rugby Participation by Five Male Athletes', *Therapeutic Recreation Journal*; 46(1), 26-41. (accessed 12 Feb 2015).

Martin, J. (2013) 'Benefits and barriers to physical activity for individuals with disabilities: a social-relational model of disability perspective,' *Disability and Rehabilitation*, 35:24, 2030-2037, DOI: 10.3109/09638288.2013.802377. (accessed 8 March 2016).

McDonald, R. (2008) 'Attitude is everything,' *Australian Occupational Therapy Journal*, 55, 77-78.

National Disability Sport Alliance (2004) 'Power soccer joins national disability sports alliance roster'. *Palaestra*, 20 (2): 11-12. (accessed 15 Feb 2015).

National Disability Sports Alliance (2009). 'Power soccer—start a team now', *Palaestra*. 24(3):17.

(accessed 15 Feb 2015).

O'Reilly, K. (2008). *Key concepts in ethnography*. Sage.

Pierce, D. (2001) 'Untangling occupation and activity', *American Journal of Occupational Therapy*, 55, 138-146. doi:10.5014/ajot.55. 2.138. (accessed 15 Feb 2015).

Stephens, C., Niel. R., and Smith, P. (2012) 'The perceived benefits and barriers of sport in spinal cord injured individuals: a qualitative study,' *Disability and Rehabilitation*, 34:24, 2061-2070, DOI: 10.3109/09638288.2012.669020. (accessed 8 March 2016).

United Nations. (2008) *Convention on the rights of persons with disabilities and optional protocol*. Available at <http://www.un.org/disabilities/documents/convention/convoptprot-e.pdf> (accessed 6 April 2016).

Watters, A., Pearce, C., Backman, C.,and Suto, M. (2012) 'Occupational Engagement and Meaning: The Experience of Ikebana Practice', *Journal of Occupational Science*, iFirst article, 1-16. DOI:10.1080/14427591.2012.709954. (accessed 5 Mar 2015).

World Health Organization. (2015) *Physical activity fact sheet*. Available at <http://www.who.int/mediacentre/factsheets/fs385/en/>. (accessed 6 April 2016).

Ybema, S., Yanov, D., Wels, H. and Kamsteeg, F. (2009). *Organizational Ethnography: Studying the Complexities of Everyday Life*. London: Sage.