

# Children with intellectual disabilities and the effects of physical activities



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The research area will focus on the effects physical activities can have in the lives of children with intellectual disabilities (ID). In this research there will be a detailed account of the terms intellectual disabilities, social interaction and physical activities. This research aims to find the effects physical activities can have on such things as health and in particular the social interaction that occurs due to clubs and groups catered for the disabled. The researcher will be looking closely into the effects having a disabled child can have on parents and sibling and how social gatherings in the form of physical activities can help support families. The author will also look into the accessibility and availability of such social gatherings in the Castlebar, Co. Mayo area.

### **1. 1. 1 A little bit of history.**

People with intellectual disabilities exist in all societies and have been recorded throughout history. The earliest record is possibly the Papyrus of Thebes (1552 BC) cited in Bray A. (2003). They have had various names and titles some were very offending while others believed them to be angels and incapable of sin, Bray A (2003). There is actually very little evidence of the type of life people with intellectual disabilities lived in regards to how their families and the general population treated them. The name or title give can have an effect on how society perceives them. Many people still associate intellectual disabilities with mental illnesses this is not the case. An intellectual disability is not a disease it is a permanent condition that can't be cured it can however be improved with the proper help and facilities.

Ireland's special needs education system has gone through three stages these are " the era of neglect and denial, the era of the special schools and <https://assignbuster.com/children-with-intellectual-disabilities-and-the-effects-of-physical-activities/>

the era of intergration or inclusion” Swan (2000) cited in Flood, 2010. It wasn't until 1831 that it was compulsory that children go to school. The government did not however think the education of children with special needs was important they felt that their needs were merely medical. From 1919 to the early 1990's special needs education was run by religious orders. It wasn't until these religious orders started to rapidly decline that the state took over. At this time there was also an increase in awareness. It was also found that Irish special needs facilities were way behind any other nation these caused big change in the government's policy and new pieces of legislation were introduced. Today there is a total of 107 special schools in Ireland. It was in the mid 1980s that people started to lobby for children with special needs to be integrated into mainstream schools. Over two thousand children were being educated in mainstream schools by 1993.

There will always be changing thoughts on intellectual disabilities and the definitions and terms used as the times change and technology improves that is why it is important to continue reading and informing oneself on these topics, if you are interested in working in this area.

## **1. 2 Justification**

Many parents can feel isolated and uninformed when they have a child with a disability. I feel that a social group for the whole family can play a vital part in helping families cope and expand their social networks and get a chance to meet other parents in the same situation.

I believe that organised social settings are just as important for the family as they are for the disabled child. I feel it is important that siblings are involved in such groups and I wish to look into this further.

“ In Ireland, close to 10% of the population have a disability or long-lasting health problem and more than 60% of these have more than one disability.”  
(NDA website)

This is a very high statistic and autism is on the rise in Ireland,

” \_\_\_\_\_“

I feel that this is a very underdeveloped area in the Irish education system and in outdoor education organization. I think it deserves to be researched properly and developed in a way that can be beneficial to people with physical and mental disabilities as well as their families and carers. I hope that if I were to show the benefits physical activity had on people with intellectual disabilities and how participating in these sport can help social interaction. I could use that information later on to help run and improve such courses.

As families play such a vital part in the lives of people with disabilities I feel that this is worthy of research. In Castlebar, there are many courses run for people with disabilities but there is not a very high attendance rate in many of the courses. I hope to look at this in more detail and investigate the accessibility of these courses.

## **Accessibility**

Outdoor education

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“ Ability is of little account without opportunity”

Napoleon Bonaparte

## **Physical activity for people with intellectual disabilities in Ireland**

Get Ireland Active -The National Guidelines on Physical Activity for Ireland

This is a booklet that can be easily downloaded or read on <http://www.getirelandactive.ie/>. On this sight there is a clear layout

## **Chapter 2: Literature Review**

### **2. 1 Introduction**

In this Literature review the author will review articles and case studies and compare them in the hope of gaining a greater knowledge of the meaning of Intellectual disabilities and the effect's having a disabled child can have on a family.

### **2. 2 Intellectual disabilities**

Intellectual disabilities, is not a term that can be easily explained. The use of and IQ test is usually how intellectual disability is accessed. The average IQ is 100, there are three levels of disability these are:

Mild IQ 52-67: Slow to develop but can be educated with proper training and go on to live a normal, independent life.

Moderate IQ 36-51: They will be able to contribute to family life and a variety of activities. With the proper facilities they can learn to care of themselves.

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They will need lifetime support in planning and organising their lives and social activities.

Sever IQ 20-35: It is likely that they will have little or no speech. They will need lifetime care in communicating and taking care of themselves.

Communication can be hard. The use of pictures and photographs may be needed to communicate. They can also have some physical impairment.

(Latto, 1981)

This is only a rough guide to intellectual disabilities many other factors can affect how a person will live their life factors such as proper education and health services. If a person with intellectual disabilities has a physical disability also this can hinder their learning and may lead to them needing additional external assistance.

Two disabilities this author will be looking at are Autism and Downs Syndrome. This part of the study will look at the different definitions of special needs.

As cited in Rosenthal-Malek (1997). " People with autism are often characterized by their self-stimulatory behaviours such as body rocking, spinning, hand flapping, head-nodding, object-tapping, gazing at lights and mouthing" (Lovaas et al. 1987, Sugai et al. 1986)

This study Jonathan M. Harris et al. (2008) attempts to investigate the relationship between cognitive performance and three major theories that try to explain the traits associated with autism these are, theory of weak central coherence and executive function. " Autism is a neurodevelopmental <https://assignbuster.com/children-with-intellectual-disabilities-and-the-effects-of-physical-activities/>

disorder characterized by impairments in social interaction, social communication and by a restricted, repetitive range of interests and behaviours." The theory of weak central coherence (Firth 2003) cited Harris et al. (2006), this theory suggest that autistic people are more inclined to work better with separate units as opposed to larger units they are found to see an image embedded in a more complex pattern faster than people with a strong central coherence. The second, theory of mind (Baron-Cohen et al. 1985) cited Harris et al. (2006); this is the ability to work out from evidence rather than direct statement the mental states of others. Finally executive function theory (Hughes et al. 1994) cited Harris et al. (2006); this is basically the ability to multitask.

The study suggests that there may be more reliable results if further research was to be done on the individual traits of autism. The article also suggests that the relationship between Theory of mind and executive performance may be more related to features of ASD than the individual traits.

### **2. 2. 1 What this means for the family**

" We always have to focus on the disabled child. No one asks us how this is for us and how we can survive as a couple"

Cited in Hareide ( )

Many families find it difficult to come to terms with having a disabled child it can be a shock and sometimes it can be unexpected. Even families who know there might be something wrong with the child before its born can find

it very difficult to understand and cope with everything when the child is born.

In this part of the study the author intends to look into the effects having a disabled child can have on a family as a whole, the strains it can have on a partnership and the effects it can have on siblings. It is thought that there are more negative effects than positive ones. The author will look into both sides of this argument through previous studies and compare them to give the reader a greater knowledge of this area.

In the first study Hareide looks into how the couple's relationship can be affected and how it is important for them to have time to themselves.

Hareide was at a talk on the cooperation between parents and professional helpers it was afterwards when she was telling some parents that she was an outreach worker for couples that she was asked to run a couples workshop in the upcoming year. She feels that the most important factor to good parenting is how the parents work as a couple. From this impulsive question three projects came about. A research project, six one-week courses and the national initiative: a three year project.

The research project consisted of nineteen families. This project was set up to take a closer look at married couple's relationships. The parents of seventeen children were interviewed; four of the couples were divorced. They used both a qualitative and narrative approach. They looked at such things as how having a disabled child affected their live, the life of their other children, and their relationship with professionals and how their marital life was affected by it here is the breakdown of their observations.

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The professionals: most of the families felt helpless in the hospital, they felt that there was no one there to talk to them. Some of the families came home with what they thought was a healthy baby, these couples found the uncertainty extremely hard. One couple however had a more positive story they were however one of the younger couples. This showed that maybe the hospitals are starting to improve slowly in the way they treat families with a new born. The main difficulty was being able to handle their own reactions and be there for their spouse also. One thing that was common in both the divorced couples was that the father was not doing enough in helping with the daily care.

Where to live: many parents commented on how different areas offered different support. This fact had influenced where some parents wanted to live. Many parents talked about how they felt they needed to be ahead of the professionals always when it came to things like moving from kindergarden to elementary school. Many of these transitions were very hard for the parents especially things like the day their child moved away from home, they found it very hard to let go.

Daily life: it is noted in earlier studies that the woman were the main care giver and the men were the wage earner. This studies shows that this is not the case anymore except for the oldest generation. Although the household chores and child care was equally shared the mothers were always thinking ahead and worried more. In the report it was found that parents who had a strong relationship led an easier and less stressful daily life.

Family and friends: many of the couples found that their friends were either close or distant when they were told about the child. Many parents found a dramatic reduction in their circle of friends. They found this challenging. Almost all the parents that were in this study worked outside the home and they felt this was very important and had a very positive impact on their life. It was a "normal" place where they could go to be "free" of their hectic lives, cited in (Hareide). The couples also found that social engagement brought the couples closer.

Other children: this study states that it is said that the mother looks after the disabled child while the father looks after the other children. This however is not always the case.

While some of the couples talked about a sense of grief there was also talk of a great joy they felt at some of the little things in their daily life. Some of the couples talked of a deep meaning that behind all that had happened in their life. Others found there was no meaning behind their child's disability and all the positive things their child had given them.

From this study we can gather two things: practical support is necessary to have a somewhat normal life and secondly, the couple's relationship is very important and should be concentrated on more.

In the second study, six one-week courses were run for parents. The course lasted five days and the parents came without their children. There were three parts to the course, psychoeducation, counselling and recreation.

The psychoeducation was a workshop about how important their relationship was on their family as a whole. They talked about what life was like having a disabled child and how that effected the rest of their family. This was a workshop that let parents talk about their worries and meet other parents that were in the same situation as them.

There was a councling servise for all the couples so they could talk to a profesional about anything that might have derive form the workshop or previouise problems.

The recreation also played a vitle part in the coures the workshops didn't start till late so it gave the parents time to relax and sleep. They were incuraged to take walkes in the woods around them.

Althouh this course was a little exclusive and didn't cather to the needs of working couples there was extremly high praise given to the course.

Ministry of Children and Family Affairs in Norway made this a three year national initiative project. It sets out to cater for a greater range of people. One day courses and weekend courses are ran. It is aimed at " enhancing communication, strenghtning relationships and preventing divorce in families with disabled children" (Hareide) the feedback is very positive. More than nine hundred profecionals have taken part in build-up courses. In a two day confrence in 2003, 240 people took part. Due to the large mida cover this course has received the general public have become more aware of these issues.

All this came from within eight years of that first all important conversation. One thing can be said from this article “ listen to the parents and let their voice be heard and let them have a say on what should be done” (Hareide) This is a crucial if we are to open peoples eyes to the needs of families and work on inclusion in our everyday lives.

In this next study (Davison & Dosser, April 1982) talk about how a special support system set up to facilitate families who have a developmentally disabled child can benefit them. The transition to parenthood is normally a relatively short period whereas becoming a parent to a developmentally disabled child can be sudden and it takes a lot longer to become accustomed to this new life.

Many families find the transition very difficult, there is a higher than average separation and divorce rate among parents of disabled children. Out of 215 families studied only 18% believed that they received enough information after the birth of their child. Most did however say that the medical services were good. (Davison & Dosser, April 1982) One family talked of how while their physicians were friendly they offered no reassurances to them. Most families felt that if they were provided initially with some support a lot of unnecessary anxiety could have been avoided. Abramson, et al. 1977 cited in (Davison & Dosser, April 1982) says that information and support systems should be available immediately after receiving the news of their child's disability. To offer them a chance to work through their feelings and get enough information to make informed decisions and to provide them with what to expect next.

The structure of the parent helpers program: during this program parents get positive information to help them come to terms with their new situation.

This program invites parents who have developmentally disabled children to come and talk to new parents on how they managed to succeed positively in dealing with their life changing situation. These parents are given the name peer-parents. They are trained in the basic elements of counselling.

This program runs from the basic idea that because these peer-parents have gone through the process they will be sincere and understanding. Secondly, peer-parents attend lectures and training on various developmental disabilities. Most importantly, peer-parents have been through this experience and have adjusted to it.

Parents that want to become part of the peer-parent group attend a ten week, 20 hour training course. This course involves lots of role-playing and counselling skills. They play the part of both the helper and the helped this allows them to consider both sides and work through different problems.

They are constantly giving feedback to each other and receiving it from the trainers. There are many different trainers in different professions, such as nurses and special educators.

## **2.3 Benefits of Physical activities on people with Intellectual disabilities**

In an early study Dunlap and Koegel (1980) attempt to find an alternative teaching method in relation to autistic children's general learning. There have been suggestions that introducing stimuli variation can lead to an improvement in autistic children's levels of motivation and general

responses to learning. (Faw & Nunnally 1968; Panyan & Hall 1978; White, 1966; Zeaman, House & Orlando, 1968) cited in Dunlop and Koegel (1980) “ suggests that the introduction of stimulus variation may serve to heighten responsivity to such antecedent stimuli.” This study is designed to test this theory.

The study consists of two methods of teaching. A constant task consists of one continues task throughout the session and a varied task is taught the same as a constant task but has one main objective and is combined with a variety of other tasks.

Overall the results of this study showed that there was generally a clear decline in both children during the constant task and a very positive and considerable rise in correct responses when it came to the varied task.

Although the responses improved during the varied tasks there were also correct responses in the early stages of the constant task. The study also suggests that this could show that the varying task might have been influencing the children’s motivation to respond rather than their ability to learn. The study shows that although it is clear that learning occurs through both techniques. “ It is plausible to speculate that the children may have been “ bored” during the constant task conditions” (Ross, 1977) cited in Dunlop and Koegel (1980).

In this next study twelve years later Weber and Thorpe (1992) attempt to further Dunlap’s (1990) studies by transferring he’s findings to a physical education setting. Weber and Thorpe (1992) used two techniques similar to

that of Dunlap (1980). Constant task Conditions (CT) and Distributed Learning (Task Variation-with-Maintenance-Task) Condition (TV).

The study consisted of 12 autistic males aged 11-15. All students displayed many Self-stimulatory behaviours, all children were nonverbal and all displayed similar psychological behaviours. All sessions were run in a room with three bicycles ergo meters, one mini trampoline and a box with various balls. The teachers provided the participants with “ physical shaping, physical assistance, physical prompting and social reinforcements” (Fait, 1960; French et al. 1982, Sherrill, 1986) cited Weber et al. (1992) until the student responded on their own. Correct responses were always acknowledged and incorrect responses resulted in a plain “ No (child’s name)” cited Weber et al. (1992).

These tasks were “ Overhand throw, kick, vertical jump, slide, continuous bounce and underhand roll.” Weber et al. (1992) the article stated that there was a significant benefit to TV. The study shows that the TV has an overall higher success rate than that of CT. In the high level of skills acquired within the classroom. The study shows that Distributed Learning Condition (TV) can deal more efficiently with short attention span, one of the stronger traits of a person with autism.

These results have a significant impact on teaching children and adolescents with autism.

Task variation has a better impact then constant task method.

Maintained tasks may help the student to retain the skills learned.

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Tasks being changed every 2-3 min appears to be extremely effective in holding the short attention of a person with autism.

Teaching stations or something similar would more than likely improve learning.

In this study Rosenthal-Malek (1997), attempts to look into the effects of aerobic activities on adolescents with autism. The author felt that there was not sufficient study done on these effects on adolescents with autism. The author also set out to investigate these effects on task performances in a workshop as well as in academic situation's.

The study took place in a public school and a community-based workshop programme with five autistic male adolescents. The author used two different preconditions an aerobic exercise and an academic precondition. The aerobic exercise consisted of a warm-up stretches and some mild jogging. The academic precondition consisted of a mixture of academic subjects taught the same way as a usual class. After every precondition either workshop or an academic condition was run as usual by the teacher. The author instructed the teacher not to attempt to control the children's Self-stimulatory behaviour. The author noted the self-stimulatory behaviours as well as their academic responses.

The results showed that there is a significant decrease in the levels of Self-stimulatory behaviours after the aerobic exercise. The level of correct responses increased dramatically and the number of tasks completed in the workshop also increased, compared to regular academic preconditions.



The author was aware at the start of the study that the physical activities might result in negative effects such as fatigue. The author noted that physical activities do not appear to negatively affect any of the positive traits in this population.

The author also finds that because of the simple nature of these activities the teacher does not need to be extensively trained and it relies on minimum equipment. The article states that there is a lack of research into the long term effects of aerobic activities on adolescents with autism and their behaviours.

The benefit of physical exercise is very clear. Rosenthal-Malek (1997) proves that with a simple 20 min aerobics class the student's self-stimulatory behaviours dramatically decrease and their learning increases. Todd and Reid (2006) also back this. A later study by Chien-Yu Pan (2009) also provides strong evidence towards physical activities and suggests that favourable environments and social interaction has the potential to make subsequent positive behaviours. Jonathan M. Harris et al. (2008) suggest that further research is needed in the traits of autism and how they relate to each other.

There is little evidence to show that Ireland has incorporated any of these findings to their full potential. The author feels that there is a lot more to be done in this area in regards to Ireland.

## **2.3 Health improvements**

Intellectually disabled people have physical injuries and health issues just like anyone else. Many people with ID also have a physical disability. It is <https://assignbuster.com/children-with-intellectual-disabilities-and-the-effects-of-physical-activities/>

very important that before they start exercise that they are physically fit to do so. Many can have poor posture and such people will benefit greatly from exercise, Latto (1981). Special Physical activities that are catered for such disabilities can help build muscles and improve their posture. People with physical disabilities as well as mental disabilities may find it harder to take part in some activities. This is where a good coach comes in to facilitate all members of the team. Sometimes things like running, jumping or hopping might be difficult for a severely disabled person to do. The smallest bit of cardiovascular exercises can be of huge benefit to such a person.

There are many studies done on the benefits of physical activities on the population as a whole, there is however not a great deal known about the benefits on people with intellectual disabilities. This next study by Dan Gordon discusses the benefits of exercise on to a Downs syndrome population.

A recent study showed, Pastore et al (200) cited in Gordon (2006), that out of 42 individuals with Downs 43% were classed as obese and 61% showed low exercise tolerance these are just some of the frightening findings. This paper gives a review of previous articles that discuss different types of exercise. The author gives his opinion and offers recommendations on fitness regimes for people with intellectual disabilities.

## **2. 3 Social interaction**

Many children with ID need to be thought how to play. This plays a vital part in the development of any child. Play eventually leads to sport and this leads to social inclusion. When working with intellectual disabled children play

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needs to be organised so they can learn how toys and games work. This can also be said when they get older and start playing sports and other activities. This next article shows the importance of organised sport and how physical activity can help improve social interaction.

Chien-Yu Pan (2009), attempts to further the study of children with autism by introducing the concept of age and social engagement in relation to physical activity. In this article the author carried out a five day observation on twenty-five school children between the ages of 7 and 12 during their 10-20 min recess and their 40 min physical education class.

The author noted the amount of physical activity the children were involved in and their social engagement throughout the day at school. The results showed that on average the children with ASD had a higher rate of activity and were more social during physical education than recess. The author also finds that according to the results that age has a significant impact on the amount of physical activities the children participative in. The author also feels that there is not sufficient enough research in the connection between age and physical activity and that this study shows that it is a very important factor in why autistic children participate in physical activities.

In this study the author notes that the children with ASD participate more as they aged and their overall social interaction is a lot higher in physical education as they grow older, in elementary school. The author feels that this is because of the more structured and supervised physical education classes. The children were observed in both physical education and recess and they were found to pay more attention, giving feedback and

participating in physical education, unlike the recess results where the children were noted to be spending most of their time not interacting with the other children. Mundy et al. (2007) as cited in Chien-Yu Pan (2008) suggest that favourable environments and social interaction has the potential to make subsequent positive behaviours.

### **2. 3. 4 Mental improvements**

In this next study Todd and Reid (2006) attempt to examine “ the impact of an intervention programme that included edible reinforcements, verbal praise and self-monitoring on sustained physical activity of adolescents and a young adult with autism.” (Todd et al. 2006). The author used three young men. All students attended a Canadian school for individuals with severe disabilities. The school had no physical education class available.

The physical activity programme consisted of two one hour lessons a week either in the park or inside the school, 15 min walk to the park 30 min walking/jogging or snowshoeing then, the 15 min walk back. The author laid out a circuit and the young men followed the circuit any way they pleased in the half hour. For every lap they did they got a smiley sticker to put on their self-monitoring board when they did this they received a sweet. They were also verbally encouraged as they went around.

The study intended to examine these techniques. As the lessons went on the author reduced the number of edible reinforcements. By the end of the lesson the participants stopped receiving edible reinforcements and only got verbally encouraged.

The result of this study show that “ programmes that do not require high skill and can be incorporate individuals of different skill levels are beneficial in educational settings” (Berkeley et al., 2001) cited in Todd and Reid (2006).

The author stated that although the edible reinforcements were gradually wiped out the physical activity increased. The self-monitoring continued throughout the course. The author also feels that further research is needed in the effects of self-monitoring.

## **2. 4 What these benefits mean for the family, Teachers or carers**

## **2. 5 Conclusion**

### **Chapter 3: The Methodology**

#### **Methodology introduction**

The researcher intends to

#### **Possible Group's**

There is a Saturday club that runs every second Saturday in the Hall in St Gerald's College, Castlebar from 11am-12. 15pm. The author intends to attend this club on the 13th of November. The club is for children with disabilities as well their family and friends. It doesn't cost anything. There is a range of different sports including Basketball, football in addition to this general games and fun. During this time the author will talk to parents and children in an informal way to get their feedback on such a club and any other activities they might participant in. This will give the author a base to work from when compiling the questionnaire and interview question.

There is also an Inclusive Gymnastics class for Children that run's in Breaffy school gym on Monday, Wednesday and Thursday from 4. 30-6. 30. As well as this a PE class on Friday morning in St. Anthony's hall from 9. 30-12. The author called Loraine on 10. 11. 10 and discussed the possibility of attending one of these days. The author will attend Breaffy on Wednesday the 17th of November. She proposes to assist the teacher and shadow her work to comply a list of questions and observations to add with her questionnaire that will be used at a later date.

The author also works with two adults with Down's syndrome in the swimming pool