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Physical Activity Levels among Young Children with ASN/Disability

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CONTENTS

ABSTRACT

The aim of this study was to investigate the opportunities available for participation in physical activity for children with Additional Support Needs and or disabilities in a sample of mainstream primary schools in Glasgow. Despite the voluminous amount of research that has been published in the field of physical activity there remains a paucity of information on activity patterns in exercise for children with Additional Support Needs. The research has been prompted by concerns and anecdotal stories about low levels of participation in physical activity by young children with ASN in a mainstream setting. As part of the Standards Scotland Schools Act 2000 (section 15) schools, across Scotland, will offer mainstream education to all children, including those with physical and educational special needs, other than in exceptionally circumstances. The specific aim of this research was to highlight barriers against children with ASN participating in physical activity sessions to the same extent as their able bodied peers.

Fifty three primary schools in Glasgow were approached to take part in this research. A letter was sent to the Head Teacher along with a sample questionnaire. Thirty one schools agreed to participate but only twenty one returned their questionnaires. One hundred and seventy one questionnaires (answered by the parents) were sent out and forty seven were returned.

The results suggest that the majority of children in this study (74.4%) were not participating in the American College of Sports Medicine recommendation of 60 minutes of physical activity per day. This figure was much lower than the Scottish Heath Survey (2003) where it was reported that 74% of boys and 63% girls did achieve this recommendation. The results also discovered that only 11% of the children in this report attended extra curriculum activities. This compares to a national average of 45% of able bodied children (Sports England 2001). A fair majority (42.6%) of the parents in this study felt that their child's ASN prevented them from taking part in physical activity sessions offered at their school. Various reasons were given for this including transport difficulties and lack of knowledge and understanding about the child's disability.

The findings of this research indicate that children with Additional Support Needs in a primary school setting are not getting the same opportunities to participate in physical activity sessions that are offered at their schools.

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CHAPTER ONE - INTRODUCTION

The purpose of this thesis is to explore the personal experiences of disabled children in physical education and physical activity sessions within a mainstream primary school setting. There has been an increasing focus on the importance of physical activity in young people however alongside this there has been a lack of consideration of how this impacts on children with disabilities. A recent survey by the Scottish Executive on the Evaluation of the Active Primary school Pilot Programme (APSPP) was published in January 2006. In this evaluation an analysis was published on how much physical activity was undertaken by children. However, only one question was asked in respect of disability. This thesis therefore aims to ask more questions relating to disability and to find out if children with ASN/ disability are given the same opportunity to participate in physical activities as other children in mainstream primary schools.

Section One – Establishing the problem

All children whatever their circumstances should be given the opportunity to participate in sport and physical activity. Physical activity is described by Caspersen as 'Any force exerted by skeletal muscles that results in energy expenditure above resting level'. (Caspersen, 1995, p.126) Participating in sport and physical activity provides children with the opportunity to improve health and fitness, boost confidence and self esteem, and teach leadership, teamwork and social skills (WHO, 1995). There is an increasing body of research that suggests that children who are more active are more likely to be become

active adults (Raitakan, 1994) and the promotion of physical activity at earlier life stages (amongst school children) may contribute to stimulating active behaviours which continue into later life (Blair 1988; HEBS 1997; Sportscotland 2004). Coalter (2005) argues that physical activity can assist in the peer integration of young people with disability. Despite this evidence a report from the Scottish Health Survey (1998) demonstrated that most people in Scotland were not active enough to achieve health benefits. The current recommendation for physical activity levels for all young people, including children with a disability, is one hour of moderate activity undertaken on most days of the week (Health Education Authority 1997; ACSM 2001; WHO 2002; PA Task Force 2003). This should include PE, play, sports, exercise, dance, outdoor activities, active travel and support to live actively at home, at school and in the community. The Scottish Health Survey (1998) stated that only about one third of all school-aged children achieved this level.

The Scottish Executive in its White Paper 'Towards a Healthier Scotland' (1999) recognised the need to address this physical inactivity and set up a National Physical Activity Task Force in 2001. The main objectives of this Task Force were to make recommendations on how to increase physical activity and sport in Scotland. They set eleven main key targets which were to be met by 2007. Target one and two were aimed at improving physical activity levels amongst young children. By the end of 2007 it was hoped that 80% of primary school children would be physically active and that progress will be made towards all school children taking part in at least two hours of high quality physical education classes a week.

Inclusion of pupils with Special Educational Needs (SEN) and disabilities in mainstream schooling has become a key government policy and objective (Smith and Thomas, 2006). De Pauw (1995) argues that children with disabilities are now more visible in today's society. This change has occurred because society has become more accustomed to seeing disabled people in public settings. As part of the Standards Scotland School Act 2000 (section 15) schools, across Scotland, will offer mainstream education to all children, including those with physical and educational special needs, other than in exceptional circumstances. The Act states that these exceptional circumstances could be that the mainstream school was not suitable to the ability or aptitude of the child or that the inclusion of the young person would disrupt the learning of other children in the class and lastly that this would result in unreasonable public expenditure. This act is just one of the many acts which have been passed to further encourage the inclusion of children with a disability into mainstream schools. The other acts include The Special Educational Needs and Disability Act 2001, Education (Disability, Strategies and Pupils' Education records (Scotland) Act 2002 and Educational Additional Support for Learning Scotland Act (2004). This last act replaced the term Special Educational Needs (SEN) with Additional Support Needs (ASN). The spectrum of ASN ranges quite dramatically from being long term, profound and complex to those which are short term (see appendix 1). Discrimination or lack of understanding by the general public towards people with a disability has been well documented. The inclusion of children with ASN/disability in a mainstream school will enhance people's awareness of disability and help to break down the attitudinal barriers against people with a disability.

Despite the Scottish Executive investing £40M pounds in this inclusion initiative problems have been highlighted on its success. This includes lack of training for teaching staff, access problems and lack of support staff (Goodwin, 2003). This thesis plans to look at whether children with ASN/disabilities are being included in physical activity sessions offered at their schools and whether they are being given the same opportunity as their peers.

This thesis also aims to investigate whether children with a disability in mainstream primary school are receiving two hours of PE a week and what opportunities they have to participate in physical activity during the school day. Armstrong and Bray (1991) argue that primary schools can provide an ideal setting in which to promote health and fitness for children. This can be achieved through the curriculum either formally, in class time and or informally during the school day, at breakfast clubs, break time, lunch time and after school activities. The Scottish Sports Council (1993) stated that the school plays a vital role in laying the foundations for young peoples' lifetime involvement in sport and recreational physical activity and that the PE curriculum provides an ideal opportunity for helping young people acquire the skills, interests and hobbies that will last a lifetime and provide them with an enjoyable physical activity experience.

A great deal of research has focused on participation levels amongst young children (WHO 1990; 1994; 2000/1; Scottish Health Authority 1998; 2003; Active Primary School Programme 2004; Sportscotland 2005; Scottish Executive 2006) but literature on the field of disabled children's participation in physical activity is scarce. According to a

survey conducted by Sports England in 2001 young people with a disability are less active than other young children. This puts them at higher risk of diseases associated with inactivity, for example obesity, coronary heart disease and type 11diabetes. Block (1999) argues that because disabled children comprise the minority in schools, their specific needs are often not being met. In addition Goodwin and Watkinson (2000) found that students with disabilities were on occasions rejected, neglected or seen as objects of curiosity by their classmates. This thesis aims to investigate if the parents of children with ASN/disabilities in a mainstream primary school setting believe that their children feel included in the physical activity sessions and that they are given the same opportunities as their peers. The investigation will also search relevant literature on this subject and correspond with key experts to gain information which can be used to give a final report.

Section Two – Survey

To answer the main research question 'Are children with a disability given the same opportunity to participate in physical activity as other children in a mainstream primary school setting' a quantitative method of questioning was used with a number of parents of the children in primary schools throughout Glasgow. The researcher felt that the children were too young to answer the questions themselves and that the parents would be more able to fill in the questionnaires. Ethics approval by both Strathclyde University and Glasgow City Council had to be given before any questionnaires could be distributed.

Once ethics permission was received a number of primary schools in Glasgow were contacted to ask if they would participate in the research project. A great number of schools declined this invitation for various reasons, which will be discussed in the methodology chapter. Questionnaires were sent out to the schools that agreed to participate and once they were returned the results were then analysed. The answers to these questions will be reported and discussed later on in this thesis. Comparisons will be made with existing research carried out by the Scottish Executive, Sportscotland and Sports England. A conclusion and any recommendations on how to improve physical activity levels will then be made. Prior to this a literature review on existing, up to date and related subject matter on disability, physical activity and sport was carried out to give the researcher some background into this area. This included a number of studies from Sport England and Sportscotland , international journals which included British Journal of PE, European Journal of Special Ed Needs, Physical Education and Sport Pedagogy, Sport Education and Society, Bulletin of PE, British Journal of Sports Medicine and Medical and Science in Sport and Exercise. Chapters from relevant books relating to disabilities, physical activity and physical education were also reviewed.

To answer the main research question this empirical study will also address the following areas:

1. The personal characteristics of the children involved in the study.
2. How much physical activity time is available during the school week and how much the children participate in it?

3. Investigate if parents feel that their child is given the same opportunities to participate as other children in their class.
4. Investigate if the parents feel that their child is fully or partially included in the sessions that are available.
5. Investigate if the parents feel that their children enjoy the physical activity session offered at their school and if they feel part of the class or are they given something else to do.
6. Ask what activities the children participate in and ones that they would like to participate in.
7. Lastly to investigate if the parents know where to obtain information about activities that are available for their children to take part in outside the school day.

CHAPTER TWO - LITERATURE REVIEW

In recent years there has been an increasing focus on the importance of physical activity in young people; however there has often been a lack of consideration of how this impacts on children with disabilities. The Department for Education and Skills and Department for Culture Media and Sport (2002) stated that 'all children, whatever their circumstances or abilities, should be able to participate in and enjoy physical education and sport' (DfES, 2002, p.1). Additionally, evidence suggests that sport and physical activity can assist in the peer integration of young people with disability. A study by Taub and Greer in 2000, found that physical activity was a 'normalising experience' for children with disabilities (p. 405). They suggested that it aids their 'social identity as children through interaction with, and acceptance by, able bodied children (Taub and Greer, 2000, p. 405). However, evidence from the Scottish Health survey (1998) demonstrated that most people in Scotland were not active enough to gain any health benefits. The survey also stated that one in three primary school-aged girls and one in four primary school aged boys did not participate in the levels of physical activity that are regarded as being the minimum requirement for health benefits. In addition a number of studies have shown that young children with disabilities are on the whole less active than other young people (Sports England 2000, Sportscotland 2001). This puts them at a much higher risk of diseases associated with inactivity earlier in their adult life. The Scottish Executive in its white paper 'Towards a Healthier Scotland (1998) recognised the need to address physical inactivity and set up a Physical Activity Task Force, in 2001, to address this issue. The main objectives of the Task Force were to make recommendations on how to increase physical activity and sport as they argued:

> 'Participation in sport can improve the quality of life of individuals and communities, promote social inclusion, improve health, counter anti social behaviour, raise individual self esteem and confidence and widen horizons'
>
> (Sportscotland, 2003, p.7)

Regular participation in physical activity both within and beyond the school day provides an opportunity for improving health, fitness, boosts confidence and self esteem, teach leadership, teamwork and social skills (World Health Organisation, 1995). It has been demonstrated that these attributes can be transferred to other aspects of life. In children effects are predominately seen in a decrease of risk factors for diseases, avoidance of weight gain, achieving a high bone peak mass and achieving mental well being (Department of Health, 2004). Subsequently it has also been shown that early experiences of physical activity are crucial to encouraging continuing involvement in later life. In particular it has been argued that early school experiences whether positive or negative can have a profound impact on how disabled people feel about themselves and influence expectations about their future role in society. This paper investigates physical activity levels among young children with ASN/ disability to discover whether they are given the same opportunities to participate as other children in a mainstream primary school setting and offer suggestions for future policy.

BACKGROUND

Children with disabilities are now more visible in today's society. Theorists, such as Collins (2003) have argued that for centuries, society preferred disabled members of the community to be kept out of sight and out of mind, mainly in closed institutions. Attitudes based upon psychological fear, superstition and notions of the 'abnormal' or 'feebleminded' have evoked practices which promoted the 'systematic removal of disabled people from the mainstream of economic and social life (Barnes, 1996, p.27). Barnardos (2000) suggests that this has in the past contributed to the exclusion of disabled people from mainstream economic and social activities.

Medical model

At the beginning of the 20th Century disability was often seen as a 'personal tragedy', where the individual was seen as a 'victim and someone who was in need of care and

dependent on another' (Barnes, 1999, p.37). The medical model, as it was known, viewed disability as 'an impairment owned by the individual, resulting in a loss or limitation of function' (Thomas, 2004, p.106). Stone suggests that this model treats people as 'unfortunate, dependents, helpless and pitiable' (Stone, 2001, p.106). This model created a wide barrier between people with and without disability and encouraged people to feel sorry for the person with a disability and to try and fix the condition. The medical model sees disability as an illness and suggests that disabled people need a cure so that they can fit into 'normal society'. This placed an emphasis on the condition rather than the person.

Social Model

In the 1970's an alternative to the medical model was developed by the Union of the Physically Impaired against Segregation (UPIAS). This was called the social model and it changed the understanding of disability. UPIAS (1976) argued that it was not the impairment that was the main cause of problems for disabled people but the way society responded. The social model sees disability as a result of society's failure to adapt to the needs arising from a person's medical condition (Barnardo's, 2000). Oliver (1996) argues that disabled people can be seen as equals who are battling against very unequal odds. The social model of disability takes the focus away from medical impairment and places it firmly on the barriers to social inclusion. Thomas (2004) suggests that the social model sees disability as 'socially constructed', where society is responsible for the disability rather than the disabled person. The problems that disabled people face are not their disabilities but a result of society failing to address their needs, both in the delivery of services and its social organisation. This model also suggests that as well as investing time and effort into medical and psychological efforts, to change the disabled body, more effort should be placed on removing the barriers to disabled people in society. Examples of these barriers are prejudicial attitudes, negative stereotypes, discriminatory employment and an inaccessible physical environment (Thomas, 2004). Oliver (1996) therefore argues that the social model of disability does not deny the problem but locates it squarely on society as a whole. Hughes and Patterson (1997) suggest that disability has

been transformed from an individual or medical problem to a civil rights issue mainly because of a redefinition of social exclusion and discrimination.

INCLUSION

Segregation and lack of everyday interaction with disabled people has been shown by Davis (2001) to be one factor that has helped to perpetuate misunderstanding and discrimination among non-disabled people. Evidence suggests that children with a range of impairments (learning disabilities, behavioural or cognitive difficulties) do better in an inclusive (where their needs are meet) rather than a special needs setting (Barnardo's, 2004). However it has also been argued that their performance may be compromised in school settings which do not value and promote a co-operative learning style (Barnardo's, 2000). The Commission of European Communities (1996) argued that the psycho-social development of a disabled child in an inclusive setting, in comparison to a special school may suffer if insufficient attention is given to their support needs. Therefore whilst allowing disabled and non disabled children to grow up together may help to take away the fear of the unknown and make disability part of the norm, efforts must also be made to avoid 'segregating' disabled children 'within' the school.

History overview of Inclusion

Inclusion of pupils with SEN and disabilities in mainstream schooling has become a key government policy and objective (Smith and Thomas, 2006). In a global context, one of the driving forces in the inclusive educational agenda was the Salamanca Statement on Principles Policy and Practise in Special Needs Education (UNESCO, 1994). This statement recognised 'the necessity and urgency of providing education for children, youth and adults with SEN with the regular education system' (UNESCO, 1994, p. viii). It called upon all governments to 'adopt as a matter of law or policy the ideal of inclusive education, unless there was a compelling reason for doing otherwise' (UNESCO, 1994, p. ix).

The concept of education for all was initially established in Great Britain by the 1970 Handicapped Children Education Act which transferred responsibility for children with 'severe handicaps' from health to The Education Authorities. Children who were perceived to have severe cognitive disabilities were entitled to school based education for the first time. It also included those who had been previously classed as uneducable.

In 1978, Baroness Warnock reviewed educational provision in Great Britain for children and young people with the recommendation that categorisation of handicapped be replaced by Special Education Needs (SEN). The Education (Scotland) Act of 1980 set out the legal definition of SEN:

> 'Children and young persons have Special Education Needs if they have a learning difficulty which calls for provision for Special Educational needs to be made for them'
>
> Moving to Mainstream (2003, p.7)

The 1980 Education Act also introduced a legal document called The Record of Needs (RoN) which set out the nature of a child's Special Education Needs and detailed the provisions required to meet these needs. A Record of Needs will be kept until the child is 18 years old.

<u>Recent Policy Documents on Inclusion</u>

Since 1980 a number of acts have been passed to further encourage the inclusion of children with a disability in mainstream schools. These include The Standards in Scotland's School Act 2000, the Special Educational Needs and Disability Act 2001 and the Education (Disability, Strategies and Pupils' Education Records (Scotland) Act 2002 (Moving to Mainstream, 2003).

As part of the Standards in Scottish School Act 2000(section 15), schools across Scotland must offer mainstream education to all children, including those with physical and educational special needs, other than in exceptional circumstances. Children with special needs should be given the right to be included, alongside their peers, in a mainstream school. This legislation came into force in August 2003. Despite £40M of executive investment being given to this initiative, problems have been highlighted in recent years including lack of training for teaching staff, access problems and lack of support staff. (Goodwin, 2003). This inclusion in the education setting it is argued will enhance people's awareness of disability. Mark Vaughan of the Centre of Studies on Inclusive Education suggests that it is a fundamental human right of people with a disability to be included in mainstream education (Vaughan, 2004).

The 1995 Discrimination Act stated that it was unlawful for services to discriminate against disabled people by treating them less favourably than others. The Special Educational Needs and Disability Act (SENDA) (2001) updated the Disability Discrimination Act of 1995 and applied it to education authorities. The Special Education Needs and Disability Act (2001) stated that it was unlawful to discriminate against pupils on the basis of their disability. This act promoted inclusion and required schools to be more accessible for pupils with disabilities and gave parents 'proper access' to their child's educational records (Moving to Mainstream, 2003). This act strengthens the right of disabled children to a place in mainstream schools and requires schools to make reasonable adjustments to become more accessible and enable disabled children to participate in the curriculum and other aspects of school life.

The Education (Disability Strategies and Pupils' Educational Records)(Scotland) Act 2002 , required educational providers to prepare accessibility strategies by April 2003, in order to improve, over time, access to education for pupils with disabilities.

Impact of Policy Documents on Inclusion

In November 2003, the Scottish Executive Department (SEED) commissioned the Scottish Centre for Research in Education (SCRE) from the University of Glasgow to evaluate the impact of the above acts on all involved parties (pupils, parents, teachers and other professionals). It was believed that, due to the act being brought into place, more children with Special Educational Needs (SEN) would be registered in mainstream schools. According to statistics published by the Scottish Executive 2002, there were approximately 837 pupils (33%) with SEN in Glasgow mainstream schools. Studies have also found that boys are far more likely than girls to have special needs (Docking, 1990).

Some policy makers have suggested that there were 'strong educational as well as social and moral grounds for educating children with special educational needs or with disabilities, with their peers' (Department for Education and Employment, 1997:23). Inclusive education, it is argued, benefits all pupils, not just the ones with special needs. There is strong evidence to suggest that children without special needs can become more aware of the needs of others when they are taught in an inclusive setting (Giangreco et al, 1995). Robertson (2000) argues that all pupils can gain from the 'enhanced pedagogic experience' and that teachers learn from delivering an inclusive curriculum (Robertson, 2000, p.47). Other researchers argue that because disabled children comprise a minority in schools their specific needs are often not being met Block (1999). Goodwin and Watkinson (2001) agree with this theory and they suggest that students with physical disabilities, in schools, were on occasion rejected, neglected or seen as objects of curiosity by their classmates.

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Although, progress has been made in making inclusion a reality, confusion and uncertainty still surround this concept. Inclusion gradually evolved as an alternative to integration where children with SEN were expected to fit into existing systems. Inclusion requires schools to think about and remove 'environmental structural and attitudinal barriers which underpinned exclusive practice' (Hamill et al, 2005, p.10). An inclusive school is one that should adapt to meet the needs of all children. Boyd's (2006) review

of inclusion describes an inclusive school as 'one that is community based, barrier-free and promotes collaboration and equality' (Boyd, 2006, p.1). All children have a fundamental right to inclusive education, which is now supported by legislation.

Benefits of Inclusion

The benefits of inclusive education, for children and young people with a disability, have been well researched and documented (Hunt and Geotz 1997) Alongside the academic benefits research has also pointed out that children with disabilities benefited significantly from inclusive experiences that fostered the development of friendships, enhanced self respect and provided peer models (Downing 1997). Inclusion with non-disabled peers has been shown to result in increased awareness and responsiveness, increased skill acquisition, gains in communication skills, development of friendships and an enhanced of belonging (Fisher and Meyer, 2002). Disabled children are first and foremost children who will benefit from the same experiences that are desirable for all children. It is argued that non disabled children can develop respect for others who have 'diverse characteristics and unique abilities' (Renzaglie et al, 2003, p.3). They can increase their understanding of other children's needs and become more comfortable around people with disabilities. More importantly inclusion can help children make friends with people who are different from themselves and help them to value human differences. This in turn prepares them for living and working in a 'pluralistic society' (Alper and Ryndak, 1992, p. 4).

Inclusion in Education

While inclusion has become the focus of many research projects, there is a visible gap in research on the inclusion of pupils with SEN and disabilities in physical education (Smith and Thomas, 2005). A report from Disability Scotland states that 'Inclusion' in physical activity and sport for people with a disability is being driven vigorously within education but there are still numerous examples of pupils being excluded from PE lessons. This has been blamed on lack of understanding of disability and lack of training on how to include

people with a disability into lessons. (Disability officer, SDS, 2005) This thesis seeks to explore whether this practice of exclusion is widespread in the mainstream setting.

Teacher Training on Inclusion

Inclusive schooling has created a need for, not only experienced teachers but also trainee teachers to reflect on how they feel about people with a disability. A study by Brownlee and Carrington in 2000 found that teachers wanted more practical experiences and knowledge about including people with a disability into mainstream classes. Many trainee teachers do not feel adequately prepared for teaching in an inclusive setting. According to Booth et al (2003) a great number of trainee teachers enter into the teaching profession with little knowledge and understanding of 'inclusive values' and what these values mean for teaching and learning in schools (Booth, 2003).

Research demonstrates that teachers' attitudes towards the inclusion of children with SEN can have a considerable impact on their educational experiences (Norwich, 1994). Many teachers are apprehensive of inclusion in physical education for lots of reasons. Some of these reasons being the 'victimization' of children with disabilities and the effect of the lesson on the non-disabled child (Smith, 2004). Smith feels that teachers are caught in a 'double bind' in an inclusive lesson because they are trying to do what is best for all the children. In a study by Smith (2004) on including pupils with SEN into secondary school PE, it was found that many teachers lacked confidence in including children with a disability into their class. This was attributed to a lack of training and expertise in working with children with a disability. Some researchers argue that female teachers are inclined to demonstrate a more positive attitude towards the inclusion of children with disabilities (Kuester, 2000), although other studies have questioned this theory (Duchanne and French, 1998). A report by Robertson (2000) stated that trainee teachers received very little hands on experience in University courses. Vickerman (2002) presents a similar picture when she questions whether trainee teachers were adequately equipped with the necessary skills and resources to meet the needs of pupils with disability. Hamill (2005) presents a similar point of view when he argues that

teachers in schools feel challenged by inclusion. He concludes that teachers feel that they have had limited training and that staffing and resources are lacking which would make available 'adequate support to ensure that all pupils had the best learning experiences' (Hamill, 2005, p.31). Clark et al (2005) agree with this analogy stating that 'teachers feel that they had not received training at initial teacher education level to cope with such a wide range of pupils needs (Clark et al, 2004, p.31).

A report by Sports Review in September 2005 called 'Raising the Bar' recommended that the training of teachers needs to be reviewed to ensure that 'equality' is a key element in all parts of their work. This should then demonstrate that they are able to confidently meet the full requirements of the National Curriculum and the SEN and Disability Act 2001.

Inclusion in Physical Education

Ideas of inclusion are based primarily around the level of participation a child with disabilities can achieve and whether this would be detrimental to the rest of the group or beneficial for the child. Teachers of PE face a huge challenge when including pupils with a disability into their sessions. Robertson (2000) suggested that inclusion is seen 'as a journey' (by PE teachers) which could be achieved if appropriate support, resources and training were developed more extensively.

A PE teacher has to look at a range of issues beyond the context of a normal classroom setting. These include the use of specialist areas and equipment, organisation of pupils, grouping pupils into ability groups and the general nature of the activity. Having a child or children with a disability in this classroom setting can make the challenge even harder (DfES, 2004). It has been suggested that children with emotional and behavioural difficulties (EBD) are the most difficult to include in a PE lesson (Clough and Lindsay, 1991). There is also grave concern that including pupils with EBD into a class may have detrimental effects on the educational attainments of other children with SEN (Diamond, 1994).

It has been argued by various studies that certain physical activities have more 'mainstreaming potential' than others (Meek, 1991) He suggested that swimming, gymnastics, dance and outdoor pursuits were easier to incorporate different ability levels whereas activities with an element of team play were more problematic. Smith also argued in his study that there were more children with SEN being educated in PE lessons than 5 years ago. In fact they were given 'equal opportunity to participate in PE' (Smith, 2004) but they were not experiencing the same range of type of activities. It was discussed that many SEN pupils were being excluded from team sports and athletics. Vickerman, Hayes and Whetherly (2003) suggest that to facilitate inclusion of pupils with special educational needs a more flexible teaching approach is needed. This could be achieved by moving away from the 'traditional outcome of PE (learning to move) in which skills are taught and learned, to a wider experience of PE (moving to learn)' which could involve 'opportunities to plan for social inclusion of pupils across a diverse continuum of learning need' (Vickerman, Hayes and Whetherly, 2003, p.54).

Teachers have now to face a more diverse student population and face more complex teaching and social situations. Various studies show that teachers perceive inclusion as a source of difficulties and frustrations, anticipate negative results of inclusion on regular students and complain about additional workload and lack of professional help (Scruggs and Mastropieri, 1996). Folsom-meet et al (2002) argues that PE teachers fear disruption in class and they feel that working with special needs pupils takes up too much time and places an unfair burden on them. They also feel that they are not sufficiently prepared to teach inclusive classes. In a study of 46 PE teachers in Israel (Talmor et al, 2005) it was reported that while teachers mostly supported inclusion they felt that students with special needs and regular students were both held back and did not develop physically as they should due to class interruptions and time allocation problems. Further research is needed on the quality of training that PE teachers receive on inclusion during initial teacher training to find out if they are adequately trained to be able to cope with children with ASN/disability in a mainstream classroom setting.

Additional Support Needs

One other development which has had an impact on inclusion has been changes in legislation and terminology. In 2004 the Education Additional Support for Learning Scotland Act was passed. This act replaced the term SEN with Additional Support Needs (ASN). It aimed to modernise and strengthen the system for supporting children's learning by introducing Co-ordinated Support Plans (CSP). The term ASN has a far broader definition than SEN.

> 'Pupils have ASN when they are experiencing barriers to their learning achievements and full participation in life of the school'
>
> HMI Inspector of Education (2004, p.1)

The Spectrum of ASN ranges quite dramatically from being long term, profound and complex to those which are short term. A child with ASN may require assistance for a variety of reasons (being bullied, a death in the family, being chronically ill, having parents who abuse drugs to name but a few reasons) as well as those who have behavioural or learning difficulties, physical, sensory or intellectual disabilities. (See appendix 1). A new Co-ordinated Support Plan (CSP) will be drawn up for such children. The CSP will replace the Record of Needs and its aim is;

> 'To plan long term and strategically for the achievement of learning outcomes and to foster co-ordination across the ranges of services (multi agencies and multi disciplinary) required to achieve this'
>
> Moving to Mainstream (2003, p.7)

A child qualifies for additional support by virtue of having additional support needs (ASN). 'Pupils have ASN when they experience barriers to their learning achievements

and full participation in life of the school' (HMI, 2004, p.1). The new legislation was intended to embrace all children experiencing difficulties in learning, including children with social, emotional and behaviour difficulties (SEBD). Riddell (2002) argues that there is considerable variation in the proportion of children identified as having ASN in Scotland. She suggests that this might be because some authorities are identifying more children with ASN that others. She also suggests that this could mean that there are some children who, because their ASN has not been identified, are falling through the net and therefore struggling through school without the help that they need.

Disability Statistics

It is estimated that there are approximately 650 million people worldwide living with a disability. The General Household Survey estimated the number of disabled children under 16 in Britain in 2002 to be 770.000 out of a population of 11.8 million children. By 2020 the total number of children is estimated to drop to 10.8 million but it is predicted that the proportion who are disabled will have increased (Institute for Public Policy research 2007). According to statistics from the Scottish Executive (2006) there were 390,260 pupils in 2,194 primary schools, 315,840 in 385 secondary schools and 7,140 pupils in 190 special schools in Scotland. In mainstream schools there were 27,540 pupils with a RoN and/or IEP. This represents 3.9 per cent of all mainstream pupils. This shows a nine per cent increase from 2004. Eighty-three per cent of these pupils spent all of their time in mainstream classes. Overall 70% of pupils with RoN and or IEP were boys.

Barriers to Inclusion

Discrimination or lack of understanding by the general public towards people with a disability can be a significant barrier to inclusion. The nature of an individual's disability should not prevent children with a disability participating in physical activity and sport although it may need certain adaptations to suit. More research is needed to determine how much physical activity is available to children with disabilities and the barriers

against them taking part. This in turn would then raise knowledge and awareness about how much physical activity they actually participate in. This knowledge could then be used to ensure that equal opportunity is available to all.

Attitudinal Barriers

The above figures reveals that there are a great number of people with a disability in the world, yet society as a whole still does not understand disability. This attitude 'is based mainly on ignorance and ignorance breeds prejudice' (Oliver, 1996, p.2). In the past people with a disability were stigmatised or institutionalised and often segregated from the population. This has led sociologist, such as Barnes, to argue that 'to be a disabled person in modern Britain means to be discriminated against' (Barnes, 1999, p.1).

To overcome this attitude society has to become more aware of disabled people and what they can do. Although there has been a change in attitudes it still has not reached the point where there is equality of opportunity for all. Disabled people achieve the same benefits as able-bodied people when they participate in physical activity and sport, in terms of social contact, health and fun, so it is important they are given the same opportunity to access these benefits.

Physical Barriers

As well as attitudinal barriers people with a disability have to overcome physical accessibility. 'Barrier Free' access is a phrase which described a process in which people with a disability are allowed equal access to various ranges of facilities. The Disability Discrimination Act in 1995 went a long way to make this happen. The act stated that 'people will have to remove physical obstructions or provide other ways of letting disabled people use their services '(Disability Act, 1995). This act, if implemented fully, should allow easier access into facilities. It is hoped this will remove one of the major barriers which, in the past, has discouraged disabled people accessing physical activity and sport. Ramps, handrails on both sides, revolving doors, tactile signs, low reception

areas, disabled toilets, showers, low lockers, lifts and generally more space in the corridors are some of the ways in which facilities could be changed to accommodate disabled people.

Transport and Finance

Another barrier that has to be overcome is transport. Public transport is virtually inaccessible for people in a wheelchair, as not everyone drives a car. Some disabled people have to rely on friends or family to transport them to the venue of their activity, which is not always convenient. This barrier could be tied in with finance. If people with a disability cannot travel on public transport and family and friends are not available then they may have to hire a taxi, which can be expensive. A great number of disabled people are unemployed and find it difficult to finance the extras that are needed to participate fully in sport, 'There is little dispute that disabled people are more likely to be out of work that their able-bodied contemporaries' (Barnes, 1996, p.63).

Equipment

The basic equipment for carrying out every day living is supplied by the Department of Employment, but adapted equipment has to be bought or obtained through sponsorship or a charity. If this specialised equipment is not used by the person they could be disadvantaged in their sport, for example a specially designed wheelchair could enhance an athlete's performance in his chosen sport because it would be easier to manoeuvre as it is lighter.

Awareness

Awareness of what can be done and what is available is another barrier that has to be overcome. With the decrease in working hours and the increase in leisure hours recreational activities are an important factor in life and it is important that people with a

disability are given the opportunity to participate in the activities of their choice (Barnes, 1996).

For too long, people with a disability have been denied access to facilities and various sports due to lack of awareness. Too often people look at the disability of the person rather the ability. The Discrimination Act of 1995 stated that it was illegal to offer a disabled person an inferior service. Sport and physical activity should be made available to all. Sport can be an equalizer in society so it is very important for people with a disability to be given equal access.

Inclusion and Sport

Movement towards inclusion and acceptance into the world of sport is happening and attitudes are changing, although very slowly. Previously people were unsure and unaware of what people with a disability could and could not do. Often they believed that people with a disability were unable to take part in sport and physical activity as they were too frail or too weak (De Pauw, 1993). There was often a focus on the diagnosed impairment and a belief in the stereotypes which went along with disability. For example there was the belief that people with a learning disability would not understand what was being asked of them, or that people with a physical disability would not be physically able to take part. It followed therefore that assumptions were made about the capabilities of disabled people based on the labels they were given (De Pauw, 1993).

These beliefs are now changing and people with a disability are slowly being accepted into the 'sporting society' as well as society in general (De Pauw, 1993). Ability is being looked at rather than disability. Although this acceptance is varied disability sport is still seen as inferior. Public acclaim for disabled sports performers is still somewhat limited. Media coverage is mediocre. Prominent role models for disability sport are very limited. Rewards and public recognition is not given the same 'clout' as mainstream sport (De Pauw, 1993). Segregated events and competitions are not given the same coverage. For example the last Paralympics in Athens, Greece, in 2004 were given 30 minutes TV

coverage a night. The Olympics was given far greater coverage although UK's Paralympic team won a far greater number of medals than the mainstream team. Disabled athletes have been used in commercials since the 1980's and this has helped make disability sport more viable in society, but it still has a long way to go (De Pauw, 1993).

In 1987 Winnick developed an inclusive continuum for sports participation which illustrated the levels of inclusion for people with a disability to take part in sport. This continuum included five levels. Level 1, total inclusion, illustrates the athlete training, competing and socialising with his competitors. In order for this to work, sport for people with a disability has to be seen as being competitive and not just at participation level. The emphasis here is on sport by ability and not disability. Level 2, regular sport with accommodation has been suggested to be a sport where adaptations to the rules are allowed for the disabled athlete. This should ensure fair competition. Level 3 is parallel sport. This is where disabled athletes compete in the same event but in their own section, for example a wheelchair race incorporated into a road race. The disabled athlete competes against other disabled athletes but they are included in the main race, given the same treatment, hospitality and gain the same social benefits as able-bodied athletes. Parallel sport is going a long way towards inclusion in sport and there is a great camaraderie in there events where everyone mixed together. Level 4 is where disabled and non disabled athletes compete together in an adapted sports event. This could be when athletes form a team in order to compete in a competition, for example a wheelchair basketball game, or seated volleyball. Level 5, adapted sports segregation, is when disabled athletes compete in a competition for a specific disability, for example goal ball which is a game for people with a visual impairment. Winnick also discussed how some disabled athletes could be at different levels for different purposes, for example an athlete could train at level 1 (regular sport) but compete at level 3 (parallel sport) and level 5 (adapted sport segregation). These levels of integration depend on the level of ability of the athlete, type of sport available and the choice of the individual.

Segregated sport

A great number of disabled athletes prefer to compete in segregated sport where they are competing against other people with a disability. An example of this would be the Paralympic Games where only individuals with a disability can take part. These games are the most important sporting event for people with disabilities. Athletes must achieve success at national and British level events and obtain qualifying standards before they are allowed to take part. The emphasis is on individual ability rather than disability. The Paralympic Games takes place two weeks after the Olympics and the athletes live in the same accommodation and compete in the same venues as their able-bodied colleagues. The inaugural Paralympics were staged in 1960 in Rome and over 400 athletes from 23 countries competed. Today the summer and winter Olympics together included over 5000 athletes representing 120 countries in summer events and 36 in winter. The modern Olympics now include two Paralympic events in their programme (1,500m wheelchair race for men and the 800m wheelchair race for women).

This inclusion has helped to widen the awareness of the general public to the ability of some of the disabled athletes and changed people's perception on disability sport. Disability sport is becoming more acceptable in society. For the first time ever the London 2012 Olympic and Paralympic Games are being planned and designed together from the start with events being held alongside each other, at the same venues. The Chairman of the London 2012 Organizing Committee, Sebastian Coe stated that 'We want to set new standards on and off the track, and be a catalyst for continued change for public attitudes towards disability. We will provide a compact and inclusive Paralympic Games' (International Paralympian Committee (IPC), 2007, p.3). Mick Brace, President of the British Paralympic Association, suggest that the integrative approach that the London 2012 Olympics is adopting will 'leave a sporting legacy for Britain's disabled people'(IPC, 2007, p3) and that after the games are finished there will be increased opportunities for every disabled person in the country to participate in sport.

An independent sports review carried out in 2005 reported that the identification and recruitment of young people with a disability into sport is an issue in Scotland. It suggested that the mainstreaming of young disabled pupils has made identification difficult. It argues that elite athletes don't just pop up, that they need nurturing through expert coaching. It also argues that more grass root programmes, which provide opportunity for athletes with a disability, are needed in order to ensure that future paralympians are identified. Children with a disability, who attend mainstream schools, have to be given the opportunity to participate in after school activities so that their talents can be identified. The Independent Sport Review (2005) argues that if future athletes are not identified then the paralympic team for London 2012 may be in doubt.

Other examples of segregated sports are the Special Olympics, for people with learning disability, and the World games for the deaf.

WHAT IS PHYSICAL ACTIVITY?

Howley et al (1986), suggest that regular physical activity is an important component of a healthy lifestyle. Caspersen describes physical activity as 'Any force exerted by skeletal muscles that results in energy expenditure above resting level' (Caspersen et al, 1985, p.126). This can be further defined as all movements in everyday life which includes recreational activities, active living, work, exercise, play, dance and sporting activities (WHO, 1997).

Benefits of physical activity

Howley (1996) suggests that the reason physical activity is such an important ingredient in life is because it increases energy and promotes physical, mental and psychological well being as well as helping to prevent and delay premature development of major health problems. According to a statement from the World Health Organisation physical

inactivity is estimated to cause 1.9million deaths per year globally and is one of the ten leading causes of death in developed countries (WHO, 2002).

Habitual physical activity benefits the heart by a range of mechanisms (Ashton, 1993). These include increased cardiovascular efficiency, raised levels of high density lipo protein cholesterol, reduction in blood pressure, prevention against thrombosis, management of obesity and reduction in stress levels. Joints, muscles, ligaments and joints also benefit from physical activity as it leads to articular cartilage thickening, strengthening of the joint/tendon link and an increase in synovial fluid that project joints (Royal College of Physicians, 1991).

A report by the Surgeon General Physical Activity and Health in 1996 stated that physical activity does not need to be strenuous to achieve health benefits. People who are habitually sedentary can improve their health, fitness and well being by becoming even moderately active (ACSM, 2000).

Epidemiological studies have shown that low levels of habitual physical activity are associated with marked increased all-cause mortality rates (Blair et al, 1988). This is supported by experimental studies, which show that exercise training improves coronary heart disease risk and other health related factors. These include blood lipids profile (Wood et al, 1991), resting blood pressure in border hypertension (Duncan et al, 1985), body composition (Bouchard et al, 1993), glucose tolerance and insulin insensitivity (Ivy, 1987), bone density (Dalsky et al, 1984), immune function (Nehlsen-Cannarella et al, 1991) and psychological function (Pate et al, 1995).

Hockey (1996) suggests that a person who does not exercise regularly may lack sufficient energy to perform simple everyday tasks such as sitting, standing and walking. With regular exercise the body functions move more efficiently with less effort. The heart becomes stronger and more efficient; more blood is pumped each time it contracts, taking more oxygen around the body. This means that the body does not have to work as hard during rest or sub maximal work. There is a decrease in the body fat percentage, muscles

become stronger and more efficient, blood vessels increase in numbers and size and they are more elastic and less likely to clog.

A range of studies has shown that if physical activity can be maintained the usual age related deterioration can be largely offset (Blair et al, 1988). Regular physical activity may also contribute to better balance, co-ordination and agility, which in turn may help prevent fall in the elderly (Surgeon General, 1996). Research has shown that the likelihood of maintaining a physically active lifestyle throughout adulthood is greatly enhanced if habits of regular exercise are established in early life (Blair et al, 1988). Riddoch (1995) argues that although the evidence is weak 'the conceptual, biological and behavioural plausibility that physical activity is a healthful pursuit for children is high' (Riddoch, 1995, p.39).

Benefits of physical activity for children

According to a report by the Department of Health in 2004, called At Least Five Times a Week, children obtain numerous benefits from taking part in physical activity. These benefits include healthy growth and development of the musculoskeletal and cardio respiratory system, the maintenance of energy balance (which helps to maintain a health weight) avoidance of risk factors such as hypertension and abnormal lipid profile and high cholesterol and the opportunity for social interaction achievement and mental well being (Department of Health, 2004, p.22). Current evidence suggests that physical activity can provide a positive impact on the mental health of young people by improving their self esteem and confidence (Fox 2000). Mutrie (1998) backs up this theory by stating that physical activity is important for a child's psychological well being.
Medical research shows that being active in childhood has a great impact on adult health. Riddoch et al (1991) argues that, inactivity in childhood will lead to inactivity in adulthood and subsequently elevate risks of adult disease. Morris (1998) agrees with this theory and suggests that because children are doing less exercise they are more likely to be at a higher risk of serious disease and a shortened life expectancy.

Benefits of physical activity for children with a disability

The use of physical activity and sport to aid the quality of life for people with a disability has become more widely recognised over the years. Lewis (1995) stated that 'Sport is the medium through which we can help people with a 'mental handicap' to improve their health, enjoy their leisure, develop their skills, achieve success and express themselves more fully' (Gates, 1999, p.236). This statement emphasises the fact that physical activity and sport are an essential and vital part of a child's life if they are to reach their full potential. The child can be encouraged to mix socially, make friends, share experiences with each other and that can enhance their communication. Sport and physical activity can be used as a medium for learning. A report by the House of Commons (2004) stated that 'Not only is physical activity crucial to children's health it also directly benefits academic performance' (House of Commons 2004 paragraph 54). Regular participation in physical activity, both within and beyond the school day provides the opportunity of improving health, fitness, boost confidence and self esteem, teach leadership, teamwork and social skills (World Health Organisation 1995). It has been demonstrated that these attributes can be transferred to other aspects of life (Sportscotland, 2003). Early experiences of physical activity are crucial to encourage continual involvement in physical activity. Additionally early school experiences, whether positive or negative can have a profound impact on how disabled people feel about themselves and influence expectations about their future role in society. Evidence suggests that sport and physical activity can assist in the peer integration of young people with disability (Coalter, 2003).

A study by Taub and Greer (2000) found that physical activity was a 'normalising experience' for children with physical disabilities. They also argue that physical activity provides 'legitimacy' to the disabled child's social identity and enhances their social skills and social network with their peers (Taub and Greer, 2000, p. 405).

Barriers to participation in physical activity for children with a disability

Lack of understanding by the general population towards children with ASN and or disability can be a major barrier towards these children taking part in physical activity session. A child has a better chance of being socially accepted if he or she is included in the normal day to day activities of their class (Schnorr, 1990). All children and young people, including those with ASN/disability, should have the opportunity to be physically active through school activities and they should be encouraged to take part in physical activity throughout the school day. The Department of Education and skills (DfES) has set out the Government vision for children with SEN and disabilities in their strategy paper called 'Removing Barriers to Achievement (2004). This paper highlights the importance of all teachers having the skills and confidence to help children with SEN reaching their full potential.

In Scotland the Scottish Executive published a report from the Review Group on PE (2004) where it said that 'All schools should be working towards meeting the recommendation of the PA strategy and the Sport 21 strategy of providing two hours of quality PE for each child per week' (p24/25). This report stated that the people who were responsible for taking forward the above recommendations 'should take account of the need to ensure that disabled pupils have access to appropriate experiences of quality PE whether they are in pre-school, primary, secondary or special schools'(p24/25). To include all children into a PE sessions successfully will require the teacher to be aware of differences and alternative teaching approaches rather than an expectation that all children will fit into the session (Kelly et al, 2006). This will require schools to look at different resources that can be used to find new ways to meet diverse learning needs in a class. This could include using support staff to help deliver the session; in-service training for teachers on how to successfully include all children into their sessions and purchasing adapted equipment which could be used universally in the class. This will go a long way to help to make sure that all children are given the opportunity to take part in the sessions offered at their schools and not let them feel different because the teachers gives them something else to do or 'sit them on the side' and ignore them. Lewis (1992)

argues that the obvious starting point for inclusive physical education pedagogy is that of differentiation. In addition Vickerman (2000) suggests that teachers should adjust their teaching in order to accommodate the needs of the child rather than the child's ASN/disability being seen as a barrier to participation.

Negative attitudes to physical activity gained as a youngster may persist into adulthood and may affect people's willingness to take part later in life (Health Education Authority, 1992). Research has shown that the likelihood of maintaining a physical active lifestyle throughout adulthood is greatly enhanced if habits of regular exercise are established in early life (Blair el al 1988). Early experiences are vital to encourage continuing involvement in physical activity, but these experiences are often not available to people with a disability (Kirk 2005). Different studies have suggested that young people with a disability have been seriously disadvantaged in their experiences of physical education and physical activity due to the attitudes of society and only being able to do activities if 'able' and 'normal'. (Fitzgerald 2003)

Many research projects and initiatives have focused on participation levels among young children but very few on children with a disability. They have failed to take account of negative attitudes and behaviour of the general public towards people with a disability, which can contribute significantly to the low levels of participation (Sports England 2001). People with disabilities are less likely to engage in regular moderate physical activity than people without disabilities, yet they have similar needs to promote their health and prevent unnecessary disease (Centre for Disease Control and Prevention (CDC), 2000). A numbers of studies show that children and young people with a disability are overall less active than other young people (Sports England 2001; Sportscotland 2001; Penny and Evan 1999) and this puts them at a higher risk of disease associated with inactivity earlier in their adult life. Also they are less likely to have developed the necessary foundations for activity in later life (Sports England 2001).

The Scottish Executive has made a commitment to using schools to promote physical activity for children (Scotsman ,January 2006). This research project proposes to

investigate how much physical activity is available for children with ASN/disability in mainstream primary school setting.

Obesity and Physical Activity

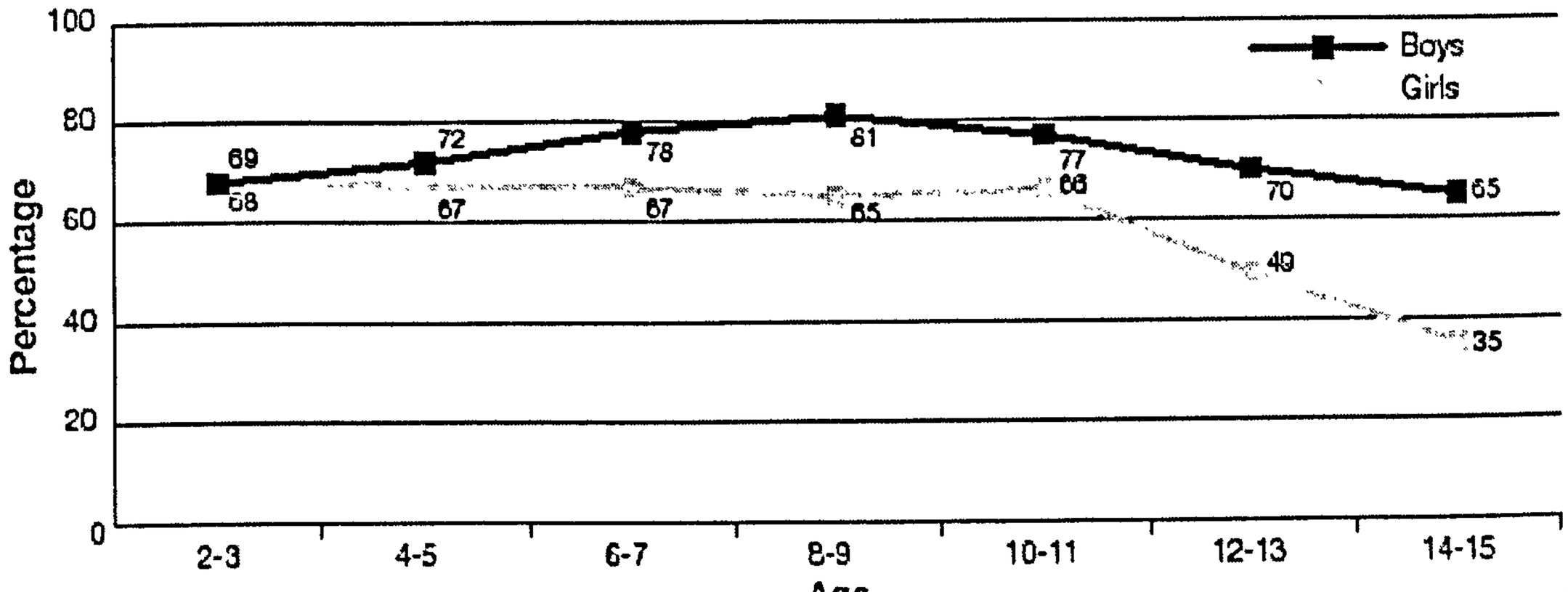
Twisk (2001) indicates that less active children are more likely to have excess fat. Obesity in children has increased dramatically in recent years (Reilly 2004). Obesity is caused by an 'imbalance between energy expenditure and energy intake' (Department of Health 2004, p.18). It has been identified as a major health problem by the World Health Organisation (WHO). Obesity contributes to several hypo kinetic diseases, including arthritis, Coronary Heart Disease (CHD), diabetes, hypertension and psychosocial problems (Bar – Or, 1994). A report by the Department of Health shows that 1 in 3 UK children are overweight or obese. Research has also shown that adults who are overweight as children are more likely to suffer premature death and reduced quality of life (HEBS 1997). The increase in obesity levels among children has been linked to a more sedentary lifestyle as well as a poor diet. A report from Department of Health called At Least Five time a week (2004), stated that 'Children who are obese are more likely to have certain cardiovascular risk factors, a higher incident of premature atherosclerosis and insulin resistance (a precursor of type 2 diabetes)' (p32). This report also suggested that children who are obese 'have lower levels of physical fitness' (p32). Many researchers (Boreham et al 2001; Gutin 1999; Goran 2001; and Twisk 2001) agree that children who are less active are more likely to have excess fat.

An increasing number of children are now leading an inactive life, preferring to watch TV or play computer games (Active Schools, 2008). In addition to this more children are being driven to school instead of walking or cycling (National Heart Forum, 2004). Dietz (1984) argues that children who spend 'more time involved in sedentary pursuits, such as watching television, are more likely to have excess fat' (Department of Health, 2004 p.32). Physical activity has a key role to play in helping people manage their weight. Regular physical activity and sport can help to control obesity by helping to prevent weight gain.

Levels of physical activity in young children

There is strong evidence regarding an increased prevalence of obesity and inactivity in today's young people. In 1997, the Health Education Authority recommended that all children aged 5-18 years of age should participate in physical activity, of at least moderate intensity, for one hour a day. This hour could be made up from a variety of activities, including organised sport, play, walking or cycling to school, physical education or planned exercise. At least twice a week activity should be included to improve bone health (activities that produce high physical stresses on the bones), muscle strength and flexibility. A Scottish Health Survey in 1998 demonstrated that most people in Scotland were not active enough to gain health benefits. A report on children's physical activity levels (see chart below) showed that one in three primary school aged girls and one in four primary aged boys were not achieving the minimum level of physical activity as recommended above.

Percentage of children and young people reaching the recommended level of physical activity



Source: Scottish Health Survey, 1998

(Let's make Scotland more active, p.39)

Further a survey undertaken by the Scottish Executive, The Scottish Health Survey, in 2003 showed a slight increase in the proportion of children who did at least 60 minutes of

physical activity on 7 days a week from 72% in 1998 to 74% for boys and 59% in 1998 to 63% for girls (see appendix 2). These figures show a small increase in physical activity levels among children aged 2-15 years of age, with boys showing a 2% increase and girls a slightly larger increase of 4%. These figures still fall short of the Scottish Executive's long term target for 80% of all children to participate in physical activity for 60 minutes or more on 7 days a week.

Key drivers for physical activity in Scotland

The promotion of physical activity remains high on the health policy in the United Kingdom. Recent major strategies in Scotland have focused on raising levels of participation and sport.

Sportscotland – Sport 21

Sportscotland's national strategy for sport, 'Sport 21' aims to ensure that the opportunity to participate in physical activity and sport is made available to everyone in Scotland. (Sportscotland, 2003). These aims are reflected in three visions, which form the basis of 'Sport 21'. These set out a course for sport in Scotland well into the 21st Century. These visions are;

- A country where sport is more widely available to all
- A country where sporting talent is recognised and nurtured
- A country achieving and sustaining world class performances in sport.

(Sport 21, 1998, p.7)

Research by Sport 21 in1998 indicated that there was a need to increase the number of people participating in sport and physical activity, especially those with a disability. Sportscotland's target for 2003 was to aim to increase the range and frequency of

participation amongst young people in Scotland. This target was designed to include children with a disability. As previously stated research has shown that if the habit of regular exercise is established early in life there is a good chance that it could be carried into adulthood (Allied Dunbar, 1992). However, often the sporting environment is designed for able bodied people. If children with a disability are to take part in sport and physical activity, numerous hurdles have to be overcome. De Pauw and Gavron (1995) have argued that 'throughout the history of sport individuals with disabilities have experienced exclusion and disenfranchisement' (De Pauw and Gavron, 1995, p.8). This manifests itself in lack of participation or low levels of activity for people with a disability. However, while research and many initiatives have focused on participation levels amongst young children (for example PASS 2003/4 and the Scottish Executive 2006), very few have looked at children with a disability.

Sportscotland –Physical Activity Task Force

A National Physical Activity Task Force was set up by the Scottish Executive in June 2001 to promote an initiative called 'Let's make Scotland more active'. The Executive in its White Paper 'Towards a healthier Scotland', recommends that this Task Force be set up to try to change and monitor physical activity levels amongst the Scottish population. The targets set are to be met by 2022.

The objective of the task force is to consider and make recommendations on a strategy for increasing physical activity in Scotland. The aim is to raise physical activity levels in all age groups in Scotland and it is hoped that by 2020, 60% of adults in Scotland will take part in sport at least once a week. Eleven key targets are being aimed for by 2007 to widen opportunities to participate in physical activity. (See appendix 3). The first four targets are aimed at pushing forward the widening opportunity for a country where sport and physical activity is more widely available to all (Sportscotland, 2002). Target 1 and 2 recognised the need to establish and maintain healthy, active lifestyles from early in life. Research indicates that this will not only contribute to the health of the young but it will also shape their involvement in physical activity (including sport) later in life (Sport 21).

Scottish Executive Task Force – Target 1

The main aim of Target 1 is to get 80% of primary school children physically active by 2007. This target will be measured by monitoring children's activity to ascertain if they reach the recommended level of daily exercise that young people need to provide direct health benefits. The level recommended by the Department of Health (2004) is for children and young people to be active for at least one hour each day. This activity should be of moderate intensity, which could include such things as brisk walking, steady cycling, swimming, most sports, dance and playing outdoors or in the home (BHF, 2002). Children and young people who are inactive should aim to be moderately active for at least half an hour each day. Twice a week they should participate in strength and weight bearing activities which will help to improve bone health, muscle strength and flexibility (Health Education board 1998; Department of Health 2004).

In order for Target 1 to be achieved, more opportunities will have to be made available for children to participate in sport and physical activity. Various partners will be involved in the delivery of this target to include Health boards, National Governing Bodies, New Opportunities Fund, Scottish Executive, sports clubs, university education departments, youth sport trusts, local authorities, primary schools, Sportscotland, more physical education teachers, more PE time, safer routes to school and access to facilities (Sportscotland, 2002).

Sportscotland – Active Schools.

Active schools are one of the main drivers of the Scottish Government's attempt to get Scotland more active. This idea was outlined in the National Physical Activity Strategy, Lets make Scotland more active (Sportscotland, 2003). The main aim of the Active schools is to 'offer all children and young people the opportunities and motivation to adopt and achieve a healthier lifestyle, now and into adulthood' (Active Schools, 2008, p. 2).

Sportscotland was responsible for the introduction of the Active Primary School Pilot programme, in August 2000, which built on the success of the former Active Primary School Co-ordinator Programme. The pilot was carried out across 21 local authorities in Scotland and involved 290 primary schools. 'Active Schools' was introduced by the Scottish Executive to assist school children in getting more active. The Active School title is a name given to all schools in Scotland that provide pupils with opportunities to get active out with the school timetable. Active schools provide opportunities for children to get active to the extent that it makes a positive contribution to their health (Sportscotland 2006). The goal is to create an environment in which children can participate in activities before, during and after school and to open up a wide based community involvement.

Glasgow Active Schools Programme

Glasgow Active Schools is a partnership driven initiative between Sportscotland, Glasgow City Council's Education Department, Cultural Leisure Services Department and Greater Glasgow NHS. (Active Glasgow, 2007). The Glasgow Active School team consists of:

> 29 Active School Secondary Coordinators
> 29 Active School Primary Coordinators
> 2 Active School Special Educational Need Coordinators
> Active School Management team.
>
> (Active Glasgow, 2007, p.1)

The Glasgow Active Schools team delivers a range of physical activity initiatives in the school and community settings throughout Glasgow. One of the main objectives of the team is to;

> 'To increase physical activity levels among school aged children

in general with a focus on girls, women, young people from ethnic minority backgrounds, young people with physical and learning disabilities and young people in areas of socio-economic disadvantages.'

(Glasgow Active Schools, 2007, p.1)

Each Active School coordinator is responsible for a cluster of schools. The two SEN coordinators are responsible for special schools in Glasgow, and have no input in mainstream schools. It is argued that children with disabilities in mainstream schools are missing out on the opportunities to take part in disability sport as they are unaware about what is available to them and where to assess opportunities.

Evaluation of Active School Pilot Programme (2004)

In 2004 an evaluation of the Active Primary School Pilot programme was carried out by Sportscotland. It was reported that the Active Primary School programme was having an impact on children's physical activity levels and because of this the Scottish Executive awarded the programme £24M to be used over the next three years to expand the programme into more schools in Scotland. It was also reported that 'children with physical and sensory disabilities in mainstream environments were likely to be excluded from sport and other physical activity' (Sportscotland 2004, p.12). The target for 2007 was to increase the Active School co-ordinator's team so that more children could be encouraged into participating in physical activity before, during and after school. The network of Active School Managers, was to be increased to 32 (from 11), 260 Active School Co-ordinators (primary) employed (increased from 62) and 370 Active School Co-ordinators (secondary) (increased from 350) working across all 32 Scottish Local authorities (Sportscotland (2007). These 660 'plus energetic professionals will adopt a co-ordinated, planned approach working within 260 clusters of schools' (Sportscotland, 2004, p.3) to deliver a programme that will increase levels of activity, including sports

participation among school children. These programmes are being integrated into a comprehensive whole school approach to physical activity, which is part of the new initiative of making every school a Health Promoting Schools (Scottish Executive, 2007).

Evaluation of the Active School Network 2004 – 2007

Sportscotland commissioned a consortium of researchers in 2004, led by Loughborough University (The Loughborough Partnership), to investigate and evaluate the Active School Network over a three year period from 2004 – 2007. This evaluation found evidence that the primary school provision of the Active schools was well established and it was stated that 'there seems little doubt that Active schools has come to be regarded as an important stable part of school life' (Active Schools, 2008, p.17). However concern was raised that there was a decrease in participation levels from year 2 of the programme to year 3 in the case study areas.

A survey of 1,549 primary school pupils was carried out to investigate activity patterns and levels including involvement in extra curricular sport. A summary of primary participation is given below:

	Year 1	Year 2	Year 3
Average time spent active (minutes per day)	93	118	121
% achieving national physical activity recommendations	56	73	67
% boys achieving national physical activity recommendations	57	74	63
% girls achieving national physical activity recommendations	52	71	72
% attending lunch/break clubs	23	25	30
% attending after school clubs	53	60	46

Active Schools (2008, p.32)

The table above shows that there was a slight decrease from year 2 to year 3 of children who achieved the recommended 60 minutes of activity per day. Only 67% of the children in the case study, as compared to 73% in year 2, achieved 60 minutes of activity per day. These figures are still a long way from the Physical Activity Task Force Strategy (Target 1, 2007) of 80% of children achieving 60 minutes of physical activity each day.

The table above also indicates a slight decrease in primary school pupils participating in after school clubs from 60% in year 2 to 46% in year 3. There could be lots of reasons for this. Sportscotland states that 'participation rates are clearly dependent on opportunities' (Active schools, 2008, p.36). There is no doubt that the Active Schools Network is now well established but it still has a long way to go to achieve its target of encouraging all children to participate in 60 minutes of physical activity each day.

<u>Increasing participation levels in all young children</u>

In addressing the problem of helping all children to achieve the recommended 60minutes of physical activity each day Sportscotland has taken steps in the next phrase of their planning process for years 2008-11. One of the key aims is to 'increase participation amongst the 'hard to reach groups' by adopting a targeted approach towards – Children and young people with a disability' (Active schools, 2008, p.12). They are also in partnership with the Youth Sport Trust continuing to 'share best practise in targeting children with additional support needs through our networking days for ASN coordinators' (Active schools, 2008, p.20).

In a recent report from the Department of Health, 'At Least Five Times a Week' (2004), it was suggested that local authorities should consider and implement walking and cycling as a means of travel and recreation. Disabled children, more so than their able bodied peers, are transported by buses or taxis to school, missing out on opportunities to increase physical activity through active commuting. Even activities before and after school can be problematic, as buses have a schedule to follow and taxis can be unreliable

and expensive. If the children want to go to activities after school, there could be problem transporting them home. (Sports England, 2001). In a survey by Sports England (2000) it was found that only 14% of young people with a disability took part in extra curricular activities, compared to 45% of the general population.

A recent survey by the Scottish Executive on the Evaluation of the Active Primary School Pilot Programme (APSPP) was published in January 2006. In this report an analysis was published on how much physical activity was undertaken by children. The evaluation was funded by Sportscotland and was undertaken by a team from the SCRE Centre. However, only one question was asked in respect of disability. 'Does your child have any long-term illness, health problems or disability which limits their daily activity' QA4. This research project aims to ask more questions relating to disability and to find out if children with a disability are given the same opportunity to participate in physical activities as mainstream children.

<u>Scottish Executive Task Force –Target 2</u>

Target 2 of the Scottish Executive Task Force recommends that all school children, including those with a disability, should take part in at least two hours of high quality physical education classes each week:

> 'The physical education curriculum can make a major contribution towards improving the health and wellbeing of young people, support them in making good choices In life and setting in place good habits which they can take with them into adulthood'
>
> (PE Review Group, 2004, p.16)

Physical Education Review Group

In 2004, following on from the Task Force's work, a Physical Education Review Group was established to review the place of physical education in Scottish schools. In their report in June 2004 a number of recommendations were given to help increase participation levels and opportunities within the 3-18 curriculum for quality physical education. These focused on:

1. Increased participation in physical education
2. Improving the choice of activities as part of the curriculum
3. Support for teachers and
4. Improved facilities.

(Sport 21, 2003-2007, p.1)

The Physical Education Review Group recommended, in their report, that schools should be making progress towards all school children taking part in at least 2 hours of quality PE classes a week. It also stated that it was important to ensure that 'disabled pupils have access to an appropriate experience of quality physical education' (PE Review, 2004, p.24). The report also recognises that school is a place where 'equity of access and opportunity to good quality physical activity can be achieved' where there is a 'captive audience' and where opportunities are available to illustrate how children can develop physical skills and learn of the benefits and enjoyments of an active lifestyle. (PE Review, 2004, p.27)

A report published by the Scottish Executive (Schofield, 2006) stated that less than one pupil in ten received the recommended amount of physical education. The report stated that only 5% of children in primary schools received the allocated two hours of PE a week. In Glasgow the average weekly PE time for Primary 4 children was 68 minutes. The Education Minister in 2006, Peter Peacock, stated that schools were a long way off meeting their objective of two hours PE a week. To try and rectify this a 10 point plan

of action was recommended by the Physical Education Review Group (See appendix 4) The action plan included recruiting 400 more qualified physical education teachers, offering a greater choice of activities to appeal to children to try and keep them interested in physical activity and aiming to accommodate, in the curriculum, enough flexibility to allow schools to timetable two hours of P.E. a week. It is hoped that this can be achieved by 2008. The Government is also seeking to recruit more physical education teachers by increasing the number of places on the Fast Track postgraduate training programme and to allow already qualified primary teachers to train to become physical education teachers in primary schools.

In January 2007 two courses were started to offer this training (Denholm, 2006), one at Glasgow University and the other at Edinburgh University. At the time of writing, 230 teachers had signed up for the course at Glasgow University and 130 for Edinburgh University. This recruitment of teachers should provide increased physical education to a large number of children in Scotland. Primary school teachers, attending the post graduate course at Glasgow University, receive one 3 hour session from an external agency and then further discussions on how to include children with a disability in a PE lesson. Post graduate students at other Scottish Universities receive minimal training on how to include children with a disability into a mainstream class and this is of great concern to Disability Scotland (Disability Officer, SDS, personal communication, 2005). In January 2006 the researcher asked Sportscotland a number of questions regarding research into physical activity in young people with a disability. These questions were answered in detail by a National Development Officer for Scottish Disability Sport. One of the questioned asked was 'how much training is given to BEd and Post Graduate PE teachers on disability sport?' It was stated that the officer was 'unaware of the full level of training the students receive... from general discussions with former students it appears to be approximately six hours over the course of the post graduate course' (National Development Officer, SDS, personal communication, 2006). This corresponds with information gathered from a group of probationary teachers, on a CPD course, that they had received minimal training during their post graduate training and that most of the training that they did receive was during CPD courses.

Child and Adolescent Health Research Unit (CAHRU)

CAHRU was established in 2000. This unit plays an important role as the 'International Co-ordinating Centre of the health behaviour in school-aged children (HBSC) World Health Organisation (WHO) Collaborative Cross-national study, which involves 43 countries across Europe and North America' (CAHRU, 2008). Five HBSC survey have been carried out (1986 – Lothian region, 1990 and then four national surveys in 1994, 1998, 2002, 2006). The surveys provide information regarding 'health related behaviour of young people across a wide range of health, education, social and family measures' (CAHRU, 2008, p.1).

CAHRU 2005/2006 survey

This research project will discuss the results from the 2005/2006 survey.
This survey questioned more than 200,000 young people over 43 countries. In Scotland 6,135 young children were involved (3,032 boys and 3,113 girls). They were asked to report on the number of days in the past week that they were physically active for a total of at least 60 minutes each day. It was reported that at 11 years old 25% of girls and 40% of boys meet the Scottish Government guidelines of 60 minutes of moderate to vigorous each day. At 13 years old this decreased to 15% girls and 28% boys and at 15 years old it decreased even more to 9% girls and 21% boys. (CAHRU, 2008). On average it was reported that 23% of young people took part in moderate intensity physical activity for at least 60 minutes (CAHRU, 2008). This is a small increase from the 2002 study where it was reported that only 19% of young children achieved the recommendations. There is obviously a long way to go before the Scottish Government guidelines of 80% of children aged 16 or under achieve 60 minutes of moderate to vigorous physical activity each day (PA Task Force 2003).

Studies looking at physical activity levels in people with a disability

Sport England study 2001

In 2001 Sport England carried out a study to look at sports participation for disabled people. This study was carried out in all parts of England and parts of Scotland. Six hundred questionnaires were sent out to Scotland, but only 213 were returned. The questionnaires asked mainly about involvement in sport and exercise over the previous twelve months, including school holidays. This study was split into two parts. The first part was for adults up to the age of 65 and the second part for children and young people. The questionnaire asked children about the level and types of sports they had participated in, what motivated them to participate in activity and the barriers against participation. The results of this questionnaire were compared to a similar survey carried out in 1999 called 'Young People, a survey of leisure, sport and health' by Sport England. The study in 2001 was designed to 'allow comparisons between disabled young people and those without disabilities' (Sport England, 2001, p.2).

One of the key findings of this report was that young disabled people in special schools were more likely to participate in sport than those who attended mainstream school. This suggested that disabled children in mainstream school were being excluded from some of the sports activities that are undertaken each year by their non-disabled peers. It was also reported that the average number of sports undertaken by children with a disability decreased as the number of disabilities increased. The average number of sports undertaken was 4.4 for young people with 7-9 disabilities and 7.4 for young people with one disability. The study showed that children and young people with a disability were not given the opportunity to participate in PE lessons as much as they would like. It was reported that:

32% spend an average of 30-59 minutes a week on PE

20% 1 hour – 1 hour 59 minutes

15% of primary age children spend less than 30 minutes

38% 30 minutes – 1 hour

This compared to an average of 30% of the overall population

(Sports England, 2001, p.52)

It was also reported that the number of children with a disability taking part in after school activities was 40% compared to 79% of the general population and that 37% of children with a disability take part in lunch time activities compared to 67% of the general population. Participation in physical activities at the weekend was also lower for children with a disability where 3% participated compared to 19% of the general population. These overall figures show that young disabled people are not taking part in as much physical activity as the general population of young people.

It was discussed in the Sport England report (2001) that young people with a disability took part in far less sport and physical activity that their able bodied counterparts for a whole host of reasons. Many barriers have to be overcome to allow participation. The main barriers given were lack of money (37%), child health and or disability (37%), unsuitability of local sports facilities (37%), no provision for people with a disability (32%), transport (32%), and staff not welcoming (21%).

Discrimination and lack of understanding by the general population is one of the main barriers given for the lack of participation. The report also stated that children and young people, with a disability, do participate in physical activity and sport, but their participation levels are much lower that the overall population of young people. It was also reported that the more disabilities the young person has the less likely they are to participate. Children and young people with a disability can be very dependent on other people to help them participate in out of school activities. They have to be transported to the venue, supervised and helped when at the activity and transported back home. This is not different to the general population of young people but more supervision might have to be given. If people are not trained to work with disabled people then they might not feel comfortable themselves or feel able to accommodate the disabled person into the

activity. The facilities or equipment might not be suitable or the teacher/coach might not know how to use it.

Sportscotland study 2001

Another research project carried out in 2001 by Scott Porter, for Sportscotland, looked at the main barriers faced by disabled people with regard to participation in sport. He suggested that the low rates of participation amongst disabled adults and young people were significantly influenced by their experiences of sports participation in their school years. The main barriers to participation were very similar to the study carried out by Sports England in 2001 and included feeling different from the majority of the public, lack of time, transport difficulties, attitude of other, lack of money, lack of facilities, lack of confidence, fear of failure, lack of information and feeling self conscious. (Porter, 2001).

All these barriers can be overcome with training and planning and consideration given to the disabled persons needs. These issues have to be dealt with so that children and young people with a disability are given the same opportunity as the general population of children to participate in physical activity and sport. There are still large gaps in sports provisions for people with a disability and more research is needed to highlight this. This is one of the main reasons for this research topic. French and Swain (2004) suggest that inclusive education is unlikely to succeed unless young disabled people and adults are fully involved in the planning and delivery.

There are very few sports that cannot be adapted to allow all groups of people to participate in and if coaches, teachers and volunteers are made aware of the changes that can be made to these sports then the phrase 'Sport for All' can become closer. Society on the whole is now becoming more aware of people with a disability and attitudes are changing towards inclusion.

CONCLUSION

This literature review has discussed the key studies around physical activity and young children with a disability. Little research has been done on sports participation among young children with a disability in Scotland, especially during the school day. With more children being included in the disability spectrum (ASN) it is even more vital to establish information, issues and barriers surrounding participation and practical guidance on how these may be overcome (Sportscotland, 2000). This research project hopes to address some of these issues.

Physical activity is high on the political agenda is Scotland. Evidence from the Scottish Health Surveys in 1998 and 2003 has demonstrated that most people in Scotland are not active enough for health benefits. In 2001 the Scottish Executive set up the Physical Activity Task Force to address this issue. Research has shown that the likelihood of maintaining a physical activity lifestyle throughout adulthood is greatly enhanced if habits of regular exercise are established in early life (Blair et al, 1988). Early experiences are vital to encourage continuing involvement in physical activity, but these experiences are often not available to people with a disability (Kirk, 2005). Therefore the main aim of the research is to investigate if children with ASN/disability are given the same opportunities to participate in physical activity, in a mainstream primary school setting, as their able bodied peers.

The task of identifying and recruiting new potential athletes with disabilities has been make more difficult following the introduction of mainstreaming for children with disabilities (Raising the Bar, 2005). It has been reported that children with a disability who attend special schools are more likely to participate in sport and exercise than those in mainstream school. If athletes with disabilities have no reference point other that able bodied athletes to compare them selves with then they could potentially be lost from the sport (Brittain, 2004). Tony Blair stated that 'it is in schools where children first get to try sport' (DCMS 2000:2). If children and young people with a disability are not given the opportunity to become involved in sporting activities in and outside of school then the

identification of new talent that might form the basis for the future British Paralympic teams of the future might be in jeopardy.

CHAPTER THREE - METHODOLOGY

A series of studies and initiatives have focused on participation levels among young children but very few on children with Additional Support Needs (ASN) or disabilities (Armstrong and Welsman 1997; Sport England 2001; Vickerman 2002; Smith 2004; Smith and Thomas 2005). The hypothesis for this research is that children with ASN or disability are not given the same opportunity to participate in physical activity as other children in a mainstream primary school setting. The aim of this work, therefore, is to investigate the key issues surrounding the provision of physical activity and physical education, in a mainstream primary school setting, with regard to young children with ASN and or disability. This in turn should help policy makers and practitioners better understand possible contributions that could be made to improve health and physical activity opportunities for young children with ASN and or disabilities.

The methodology employed for this chapter involves three key elements. Firstly a literature search was carried out to indentify resources that could be used to gain information on physical activity and disability. Secondly a questionnaire was designed to gather information on the key issues surrounding physical activity and disability among children with ASN/disability in mainstream primary school children. Discussions with development officers from Disability Scotland, Glasgow City Council and Sportscotland were undertaken to help firm up thoughts and ideas and give input to the type of questions that could be used to design this questionnaire. The questionnaire was then given to the parents of children with ASN/disability in a primary school in the Glasgow area. Once these questionnaires were returned and analysed more questionnaires were distributed to other schools. More schools than anticipated had to be contacted as the return rate for the questionnaires was very poor. Thirdly these questionnaires were then analysed and a report was written.

Literature Searches

In the light of an abundance of literature on disability a decision was make to restrict the scope of research to material dated from 1998 onwards, and refer to any earlier work only if particularly important. Particular attention was given to issues relating to the inclusion of pupils with ASN and or disabilities in a mainstream school setting. Data from several studies (Vickerman 2002: Smith 2004; Hamill, 2005; Clark 2005; Talmor et al 2005) that attend the issues relating to the inclusion of pupils with ASN and or disabilities in mainstream schools was used as secondary sources. A number of studies from Sport England and Sportscotland were also examined to find comparisons that could be made with this research project. Key words that could be used to locate information in the University academic library were indentified. These included PE and disability; Inclusion; disability and sport; medical model of disability; social model of disability; teaching children with disabilities; Additional support needs; SEN; Disability laws; rights of the child; physical activity; early learning experiences; obesity and physical activity,; healthy lifestyles; and PE curriculum. A variety of search engines were used to locate online literature reviews on disability issues. International journals were also searched for additional information on the aforementioned issues. These journals were accessed via ERIC (Educational Resources Information Center). These included the British Journal of PE; European Journal of PE; European Journal of SN Education; European PE Review; PE and Sport Pedagogy; Sport Education and Society; Bulletin of PE; British Journal of Sports Medicine; Medical Science Sport and Exercise; Sports Medicine; Adapted Physical Activity Quarterly. Chapters from relevant books relating to disabilities, inclusion, physical activity, physical education, health and education were also reviewed. A great deal of literature had to be reviewed in order to illicit information for this research project. Some of the literature was used to provide data that could be compared with the results from this research project (Sport England and Sportscotland) other pieces of literature were used to give a contextualizing purpose.

Survey Design

This thesis looks to examine if children with ASN/disabilities, in a mainstream primary school setting, are given the same opportunities, as their peers, to participate in physical activity session. The purpose of this study is to better understand a research problem by using a quantitative (broad numeric trends) research method. A questionnaire (quantitative instrument) was used to measure the relationship between ASN/disability and physical activity, in a mainstream primary school setting. At the same time some of questions were explored further using a qualitative approach. Open ended questions were used to probe or explore some the answers.

A quantitative method of study, according to Gratton (2004) is one that uses numerical measurements and analysis. He states that 'variables are directly measured and easily converted into numerical form, which can then be statistically analysed' (Gratton, 2004, p.21). Creswell (2003) suggests that a 'quantitative approach is one in which the investigator primarily uses post positivist claims for developing knowledge' (p18). This, he further explains, is an approach which used different 'strategies of inquiry such as surveys, and collects data on predetermined instruments that yield statistical data' (p18). A qualitative method of research, according to Gratton, on the other hand, uses non numerical data, such as thoughts, feelings and experiences. Creswell (2003) argues that a qualitative approach 'is one in which the inquirer often makes knowledge claimed based primarily on constructivist perspectives' (Creswell, 2003, p.18). In this research project a mixture of quantitative and qualitative methods were used. Nau (1995) suggest that 'blending qualitative and quantitative methods of research can produce a final product which can highlight the significant contributions of both' (Nau, 1995, p.1.) Jayaratne (1993) agrees with this when he states that 'qualitative data can be used to support and explicate the meaning of quantitative research' (Jayaratne, 1993, p.117). Linking quantitative and qualitative data in this research project can give a bigger picture of some of the issues surrounding physical activity and disability.

In some of the questions used in the questionnaire a 'yes' or 'no' answer was asked for. In order for the researcher to expand on the understanding of the answer given a more detailed response was needed. For example, Question 12 asks 'Overall do you think that your child's Additional Support Needs prevent them from taking part in physical activity in school? Answer yes or no. If the respondents answered yes then they were asked to comment on their answer. This is where the qualitative approach was needed. Open ended questions can be used in this method to elicit 'themes from the data' (Creswell, 2003, p.18). All research methods have limitations. Using open and closed questions in this research project could help to cancel out the biases of both methods used.

Methods

When deciding what method was best to use in a survey Creswell (2003) argues that there are three considerations to be made. These are, what the research question is, what the personal experience of the researcher is, and who the audience that the report will be written for will be. Firstly the research question is 'Are children with ASN/disability, in a mainstream primary school setting, given the same opportunities to participate in physical activity as their other classmates'. As the researcher works full time interviewing the children directly was not considered. It was felt that a questionnaire would be the best way to gain answers to the research questions. Gratton (2004) argues that 'questionnaires are generally an appropriate method to collect large amounts of relatively simple data' (p138). He also suggests that the advantages of using questionnaires 'include the accessibility of your sample, reduced bias, anonymity, structured data and allowing time for respondents' (Gratton, 2004, p.138). As the children were deemed to be 'too young' to complete the questionnaires, the question was asked would the teachers, classroom assistants or parents be asked to complete them? It was felt that teachers and classroom assistants would find that helping the children to answer the questionnaire would take up too much classroom time and it could also single out particular children in the class. Finally it was agreed that the questionnaires would be sent home to the parents of the children to be completed. Obviously there would be

problems with this method because the parents would not know if what their children told them was the correct answers and this could affect the validity of the research.

Parents were issued with consent forms and information letters which explained what the research was about and it gave them a number to contact if they did not understand the questions. This was done to help improve validity of the results. Cohen et el (2007) suggests that validity is an important key to effective research. Validity determines whether the research truly measure what it was intended to measure. Additionally Creswell (2003) argues that there are 3 types of validity: content validly (do items measure the content they were intended to measure), concurrent validity (do scores predict a criterion measure – do results correspond with other results) and construct validity (do items measure hypothetical constructs or concepts – whether scores serve a useful purpose and have positive consequences when used. In order to establish optimal validity from this research careful sampling was used to select the client group involved (only children with ASN/disability in a mainstream primary school setting), appropriate instruments were used to answer the questions (questionnaire) and an appropriate statistical method was employed to analyse the results (SPSS 15.0, 2006).

The questionnaire was designed to ask questions that related to the research question. For example Q10 'In the previous school week, which of the activities below did your child do?', 'Give appropriate time per session, How many times per week? Did the child enjoy the sessions?' (See appendix 12). The questionnaire was trying to establish answers for the research questions using questions relating to physical activity available to the children, how much they actually did, how often and did the children enjoy the sessions. Using this content validity (items measure contents they are intended to measure) method helped to establish validity in this research. The results were compared with results from other studies (concurrent validity), although there are methodological differences between all the studies. These being studies from Sport England (2001), Physical Activity in Schoolchildren (PASS) in 2003/04, Scottish Health Study (1998 and 2003), Scottish Executive survey on the provision of physical education (2005) and Sportscotland National Strategy for Sports Targets for 2007. To establish construct

validity, sometimes called face validity, the parents of the children were asked to answer the questions as it was felt that the children were too young to understand and answer accurately. The parents were given the opportunity to ask questions (a phone number was given) about any areas that they were unsure about. A number of queries were addressed during this research.

It is also very important in a piece of research to ensure reliability. Jobbe (2000) defines reliability as 'The extent to which results are consistent over time and an accurate representative of the total population under study' (p1). In order to establish reliability in this research a time frame was set and once this time was exceeded no more questionnaires were sent out to schools. Results were looked at from each school and if there were any inconsistencies then the school was phoned to clarify the situation. For example one child in a school had put down that they did PE five times a week for 30 minutes whereas other children in the same school said that they only did PE twice a week for 3O minutes. The school was phoned and the correct time was given. This new time was then entered into the results (See appendix 13).

The second consideration, according to Creswell (2003), to be taken into consideration when deciding on a research method to be used is to look at the personal experience of the researcher. Having worked with disability groups in the sporting environment for a great number of years the researcher has to be aware of bringing certain biases to the study. Using quantitative methods, predominately, would eliminate this problem. The researcher having had experience of doing research projects before also felt more comfortable using quantitative research methods to display results along with qualitative methods to analysis further some of the answers. The researcher also feels that the audience that this report is being written for (Glasgow City Council Education Department, Disability Scotland and Sportscotland) would rather have visual results that they can find quickly and not have to read through chapter upon chapter of information. Giving a presentation on this thesis would be easier to do using the charts and tables to illustrate and discuss the answers.

Ethical Approval

In all areas of research the importance of ethical consideration cannot be underestimated. 'The confidential and anonymous treatment of participants' data is considered the norm for the conduct of research' (SERA, 2005, p.7). Ethical guidelines, given by SERA (Scottish Education Research Association), states that 'Researchers must recognize the participants' entitlement to privacy and must accord them their rights to confidentiality and anonymity' (SERA, 2005, p.7). As this research project was to be carried out with children in an educational establishment, strict ethical guidelines had to be followed with relation to protecting the '...population and to maintain the integrity of the research' (SERA, 2005, p.1). Using the SERA recommendations the information gathered during this research project was collected in a confidential manner, with participants' names remaining anonymous and questionnaires being stored in a secure place.

Before a questionnaire could be sent out ethics permission had to be obtained from the Department of Sport, Culture and the Arts Ethics Committee Strathclyde University (see appendix 5). This took quite a long time as it was processed during the summer holidays. Ethics permission had also to be obtained from Glasgow City Council (GCC) (see appendix 6). This was received on the condition that the Head Teachers of the schools concerned agreed to take part in this research and that a copy of the final report was sent to GCC. The researcher then approached GCC and asked for the name of schools that had children with ASN attending. This request was denied and the researcher was told that she would have to find the schools herself. This could be because under the Data Protection Act information of this sort could not be made available or it could be that data is not available on children with ASN in mainstream school. To identify schools the researcher had to find the names and addresses of all the schools in Glasgow and select the ones to contact to find out if they would take part in the project. A list of schools was found on the Glasgow City Council web site. Schools were then randomly selected and contacted. In the ethics forms both from Glasgow city council and Strathclyde University it was stated that 10 schools were to be included in the research but due to a lack of

response by the schools themselves 47 schools were eventually contacted in order to generate an appropriate study group.

DATA COLLECTION

Following a period of intensive desk based research, explained in the literature search section of this chapter, a series of informal meetings were set up with a variety of members from the disabled community as well as organisations involved in the provision of sport and physical activity to this section. The people that were contacted to gain information on physical activity and disability were Glasgow development officers on disability, various development officers from Sportscotland, Active School sports co-ordinators. SEN school sports co-ordinators, teachers, PE teachers, classroom assistants, parents of children with ASN and or disabilities and children themselves. This served a variety of purposes. The first was to find out about current levels of provision in the Glasgow area for children with a disability. The second was to discuss barriers faced by people with a disability in accessing sport and physical activity opportunities. The third purpose of this networking was to try and establish some of the problems faced by the providers of these opportunities, and lastly speaking to people who might be useful to this research. These discussions gave background information as well as developing knowledge of the subject matter. This in turn helped the researcher to establish the contents of the questionnaire.

The principal method of data collection, as explained earlier, was the completion of a self administered questionnaire by the parents of children with ASN and or disabilities in a primary mainstream school setting. The reason why parents were asked to fill in the questionnaire was that it was felt that the children would not be able to answer the questions themselves. In 2001 Sport England, in their Disability Survey, (Young People with a Disability and Sport) sent out questionnaires to 5,000 children in England and 600 in Scotland. These questionnaires were addressed to the disabled child but it was expected that many of the children would need assistance completing it. Only 14%

completed the questionnaire without any help. It was reported that 'on the whole it was parents who completed it' (p3). As comparisons were being made between this research study and Sport England study it was felt that the same method of information gathering (parents answering the questions) would be the most appropriate to use. A cross sectional survey design was s used for the questionnaire. The reason that this design was selected was because it is simple to use, comparatively cheap to undertake and easy to administer. It is best suited to studies that are trying to find out about a particular subject area by taking a cross-section of the population. It is also useful to give information about the 'overall picture as it stands at the time of the study' (Kumar 1996, p.81). Babbie (1989) states that this method is 'designed to study some phenomenon by taking a cross-sectional of it at one time' (Babbie 1989, p.89). Due to time restraints and financial considerations this type of study was deemed to be the most suitable as it only involves one contact with the sample group. This method of data collection was best suited to the researcher as the questionnaires could be sent to schools from a geographically dispersed group and not just from one area of Glasgow also as the researcher works full time there were time restrictions to collecting the data. One disadvantage with this type of study design is that because there is only one contact with the study population change to behaviour patterns, if any, cannot be measured. Also once the questionnaires had been returned there was no opportunity to get the respondent to expand or explain any of the answers that had been given.

POPULATION AND SAMPLE

The population selected for this study was parents of children with ASN or disabilities in a primary school setting. The decision for this choice of population was that it was felt that the research had to be narrowed down as they were too many children in Glasgow schools that could be included in the study. Further research would need to be done to cover all ages and types of schools to included Secondary and Special Need establishments. According to statistics published by the Scottish Executive in 2002 there were approximately 837 (33%) pupils with SEN in Glasgow mainstream school. A decision was make to contact approximately 20% of the parents of these pupils so that a

true picture could be given on the research question. Initially 10 schools were to be contacted to find out what kind of response would be given to the research questionnaire.

Booth et al (2001) suggest that the first step towards understanding and encouraging participation in physical activity is to find 'representative data to assess and monitor the population prevalence and distribution of physical activity participation' (Booth et al, 2001, p.2). They also suggest that it is important to find out if there are any differences across the population. Kohl (2000) argued that self report questionnaires are the only practical method of collecting a broad range of data from a large number of children. The method employed in this research involved a variation of self reporting as it was the parents who filled in the answers, with input from their children. The children selected for this report were from mainstream primary schools. They had been diagnosed as having Additional Support Needs (see appendix 1) or disabilities by the school authority.

The researcher found that due to the fact that children with ASN/disability comprise the minority in schools more schools than anticipated had to be contacted. As there are 170 mainstream primary schools in Glasgow this was an enormous task. After contacting a large number of schools (53) in Glasgow a sample group of children was found. Forty seven respondents were eventually recruited for the research from a variety of schools in Glasgow. The table presented illustrates the schools that were contacted, the schools that responded the number of questionnaires that was sent out and the number of questionnaire that were returned. This will give a clearer picture about how hard it was to recruit children for this report.

Table A: Response statistics from schools contacted to participate in research

School	Replied to initial contact (Yes/No	Agreed to participate	Number of questionnaires sent out	Number of questionnaires returned.
1	Yes	Yes	20	7
2	Yes	Yes	8	5
3	Yes	Yes	6	3
4	Yes	Yes	10	4
5	Yes	Yes	6	None
6	Yes	Yes	6	2
7	Yes	Yes	12	None
8	Yes	Yes	4	2
9	Yes	Yes	3	3
10	Yes	Yes	3	None
11	Yes	Yes	6	4
12	Yes	Yes	3	2
13	Yes	Yes	1	1
14	Yes	Yes	6	2
15	Yes	Yes	1	1
16	Yes	Yes	10	None
17	Yes	Yes	3	1
18	Yes	Yes	2	1
19	Yes	Yes	10	None
20	Yes	Yes	2	None
21	Yes	Yes	8	None
22	Yes	Yes	10	None
23	Yes	Yes	6	None
24	Yes	No		
25	Yes	Yes	1	1

26	No			
27	No			
28	No			
29	No			
30	No			
31	No			
32	Yes	No		
33	No			
34	Yes	Yes	6	None
35	Yes	No		
36	Yes	No		
37	No			
38	No			
39	Yes	No		
40	No			
41	Yes	No		
42	No			
43	No			
44	No			
45	Yes	No		
46	Yes	No		
47	No			
48	Through youth club		1	1
49	Through youth club		1	1
50	Through youth club		1	1
51	Through youth club		1	1

52	Through youth club		1	1
53	Through youth club		3	3
			171 questionnaires sent out	47 Questionnaires returned
				27.48%

Total number of schools contacted that agreed to participated in this research	Total number of schools that returned questionnaires
31	21

Saris (1986) suggested that the 'assessment of the habitual physical activity of young children is one of the most difficult tasks in epidemiological research' (Saris, 1986, p.74). He also suggested that the technique used must be socially accepted and easy to administer.

When looking at the findings of this report it is important to remember that the results are only based on a sample and not on the entire population. Forty seven primary schools in Glasgow were contacted to ask if they would participate in this research. Six other children from different schools were recruited through visits to youth clubs. (The researcher would liked to have contacted all schools in Glasgow but this would have been very time consuming and expensive to do). Out of the 53 schools contacted, 31 agreed to participate and were sent letters and questionnaires to be issued to parents. Only 21 schools returned these questionnaires.

As the study was restricted to primary school children with ASN or disabilities the questionnaire was sent to the parents to complete, because it was felt that the children

would be too young or unable to answer the questions asked. The main problem with this was that some of the children might be unable or unwilling to tell their parents what they had actually done in the physical activity sessions. In answering the questions there was considerable demand placed on the child's memory. Sallis (1991) argues that actual behaviour is not directly assessed by self-reports and the data obtained are:

> *Memories of the behaviour of interest that have decayed, been filtered through perception and biases and have been taunted by competing memories, social desirability and misunderstanding of instructions.*
>
> Sallis (1991, p.74)

Baranowski (1984) argues that questionnaire responses depend on the respondent's storage and retrieval of information, about what they did and the reliability of the information will generally decrease with the length of period surveyed. Concern has been expressed over children's self reporting method of physical activity levels (Simon-Morton, Taylor and Huang 1994) as considerable demand is placed on their memory. In young children and those with learning difficulties attempts to analyse physical activity patterns fall to the questioning of parents but such estimates have been found to have poor reliability and validity (Ching 1993). There are considerable demands placed on a person's memory to try and recall what they have done during a particular session. This was shown in the return of the questionnaires for this report as some of the session times had to be clarified with the school because some of the children had over estimated how long their activity sessions lasted. If the children could not remember how long their activity sessions were it is possible that parents would put in their own estimation of time. However, this method was still felt to be the best method to use as the children would not be able to answer the questionnaires themselves. Teachers or support staff would not have the time to answer the questions. Parents asking their children the questions and then filling out the questionnaires for them would, in the researcher's point of view, illicit the best results.

Instrumentation

As explained earlier the main instrument used to obtain information for this report was a mailed questionnaire (see appendix 12). This was chosen because it was easy to administer and relatively cheap to undertake. It also ensured anonymity as no name was put on the questionnaire. The respondents read the questions and interpret what is expected and then write down the answers. The main problem with this type of questionnaire is that there is no one there to explain the questions if the respondent does not understand them, there is no control over who answers them and there is no opportunity for the researcher to ask questions concerning the answers. Parents were issued with an information sheet (see appendix 10) which gave them a contact number if they had any queries. This was used a few times and questions were clarified for parents.

When designing the questionnaire the questions asked had to be valid and useful so that information obtained could be used to answer the research questions. The questionnaire was made up of a range of open and closed questions. Techniques were employed including multiple choice responses, Likert scales (which allows respondent to indicate the extent to which they agree or disagree with a certain statement, in this study 1= always enjoy, 2 = sometimes enjoy, 3= rarely enjoy and 4= never enjoy) and open ended questions to elicit rich textual detail (Bryman 2000). The questionnaire contained sixteen questions, three of which asked for clarification of their yes or no response. In order to analysis the data received from the questionnaires it was decided to use Statistical Packages for the social Sciences (SPSS). The SPSS package according to Sharp (2003) 'is a self-contained collection of programs that can be used by the researcher who wishes to analyse a mass of data arising from surveys or experiments' (p2). SPSS offers a wide variety of programmes for analysing data. Sharp (2003) also argues that the use of a statistical test 'enhances credibility, objectivity and worthiness across the academic community' (p3). From the information gathered a variety of graphs were created to illustrate the results received. These can be displayed in the form of bar charts, pie charts and tables in order to simplify understanding. The open ended questions (qualitative data) were subjected to an inductive qualitative analysis to search for themes. The researcher

marked an interpretation and categorisation of the data collected called coding and drew conclusions. Steps needed to be taken to ensure validity of this data and not allow any bias to be entered into the results. To do this the researcher analysed the information supplied by the participants and coded the results accordingly. As there were only three questions involved in this section general coding was used. The researcher went through the data for the three questions and devised a code (a word or abbreviation sufficiently close to that which it is describing). The data was looked at a number of times to ensure consistency and to help the researcher understand different perspectives held by the respondents.

Pilot Study

A small scale pilot study was used initially in one school to ascertain if the questionnaires would be appropriate for the group selected for the research. This school was chosen as the researcher had worked there in the past and knew the teaching staff. Following a phone call to the school, the researcher made an appointment to meet the deputy head teacher, who was responsible for children with ASN in her school. It was agreed during this meeting that the school would participate in the research and 20 questionnaires were sent to the school. The deputy head teacher selected the children who were to be involved in the research and the questionnaires were handed out to them. Unfortunately only 7 questionnaires were returned, despite a reminder letter sent to them a few weeks later. As all the questions were answered thoroughly it was felt that no modifications were needed and other schools were then contacted and questionnaires were sent out to them.

Main Study

There were three stages to the mailing process. Stage one involved 10 schools. A time scale of one month was given for this stage to establish whether it was realistic to expect the questionnaires to be returned by then. The second stage involved 20 schools to try and illicit a better response. Again one month was given for the questionnaires to be returned.

The third stage involved 17 schools. Reminder letters were sent to the schools to try and gain a better response. The researcher also visited a youth club in Glasgow to try and get more questionnaires completed. The stages are explained in more detail below.

1ST Mailing

Initially 10 schools were randomly selected for this research, but after contacting a number of them it became obvious that some schools were not interested in taking part because of various reasons (see below);

- Too busy to respond, as they did not get back to me after the initial phone call.
- Did not have the time to become involved (schools stated this)
- Did not respond to the letter sent after the initial phone call.
- Did not have any children with ASN in their school (school stated this)
- Were involved in too many other research projects (schools stated this)
- Parents of children with ASN could not speak English (schools stated this)
- Disagreed to take part because they did not want to single out children with ASN or disabilities (schools stated this)

The first point of contact to a school was a phone call from the researcher giving a brief summary of what the research was about and asking for permission to send the head teacher a copy of the questionnaire and accompanying letter for her/him to look at. A returned slip and addressed envelope was enclosed for them to give their response (See appendix 7). If the return slip was not received within a few weeks a follow up phone call was made. Some schools responded to this phone call and agreed to take part in the research but a good number did not. If the school agreed to take part in the research a phone call was then made to them to find out how many questionnaires they wanted. The questionnaires were then sent out to the school with a return date on them. The head teacher contacted parents to ask for their permission to allow their children to take part in this research. A consent form (see appendix 11) was sent to the parents and once this was

returned the questionnaires and information letters were then issued. After the return date had passed a phone call was made to the school to find out if the questionnaires had been returned and a collection time was agreed upon. This proved to be more difficult than previously thought as the majority of schools only got 1 or 2 questionnaires returned and some got none. A reminder letter was sent to the parents, but this still did not initiate a better return. Some schools then lost interest as they had done as much as they could and were too busy to do any more. A second group of schools were then selected for the 2nd Mailing.

2ND Mailing

Another 20 schools were then contacted to ask if they would be interested in becoming involved in the research. A different method of contact was used this time to see if a better response rate could be achieved. An e-mail was sent to the schools giving information about what the research was about. A week later the school was phoned to find out if they would participate in the research. This method flagged up a few problems as some schools said that they had not received the e-mail. Others did not read it because they got too many e-mails a day and they had to prioritise which ones to look at. A questionnaire and the attached information were then sent to the schools with a return slip to say if they would take part in the research project. If they agreed to take part in the research then a phone call was made to find out how many questionnaires they wanted. The response rate was again very disappointing. Another group of school were then selected for the 3rd mailing.

3RD Mailing

Seventeen more schools were then approached using the first method of communication (phone call, sample questionnaire, return slip then parent's questionnaires and information letters). The researcher made one last attempt to get more questionnaires completed by visiting a number of sporting sessions run by Glasgow city council, with the permission of the Disability development officer. Unfortunately most of the children

who attend these sessions attend special needs schools and only a few attend mainstream primary schools. Eight questionnaires were returned from these sessions.

Summary

Out of 170 Primary schools in Glasgow 47 were selected to participate in the survey. In addition a further six schools, which were contacted through youth clubs, were invited to take part, bringing the total to 53. Of the 53 schools contacted 31 in total agreed to participate. However only 21 schools were able to complete and return the forms that were sent to them. Of the 171 questionnaires that were distributed 47 were returned. This equates to a return rate of 27.8% or almost one in three questionnaires successfully returned. Possible reasons for non return of the questionnaires could include perception communication difficulties, an inability to read or understand what was being asked, a lack of interest in the subject of the questionnaire or perhaps phraseology used. Unfortunately due to a policy by Glasgow City Council of not giving out numbers of children with ASN in schools a true picture of the total population and the response rate cannot be given. To elicit a better response a different approach could have been used. If time was not an issue then the researcher could have visited the schools involved in the study and asked teachers, support teachers, and even the children (with guidance) to fill in questionnaires. Being there in person would mean that if there were any queries about the questions asked the researcher would be able to assist the respondent.

Methodology for Data Analysis

All data analysis was conducted using Statistical Package for the social sciences (SPSS) Version 15.0 (2006). Means (average scores), standard deviation (scores deviating from the mean) and frequencies were used to describe participants characteristics and physical activity patterns (see appendix 17) for a copy of the descriptive statistics table).

Sorting Data

The first stage in analysing data is to organise and prepare it for input into the statistical package. This involves sorting and arranging the data into different types depending on the sources of information. This was done using a coding method where the responses where put into common categories and then given a numerical value. For example;

Q2. Is your child a boy or a girl?

Was split into 1 = male and 2 = female.

Open questions, for example;

Q5. What Additional Support Needs does your child have?

Were typed in and then given a numerical value, 1 = Visual, 2 = Asperger's.

Scales were also used for some of the questions, for example:

Q10. Does your child enjoy PE?

1 = always, 2 = sometimes, 3= rarely and 4 = never. The data was read through and any obvious mistakes were rectified. See example below:

Enjoyed PE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	always	22	56.4	56.4	56.4
	sometimes	11	28.2	28.2	84.6
	never	6	15.4	15.4	100.0
	Total	39	100.0	100.0	

Data Entry

Information was entered into the SPSS Data Editor file. Variables were created, for example age, class, ASN, travel etc, to correspond with the questions asked in the research report. The variables were defined in more details by adding numerical value (1 = yes, 2 = No) and then given a label.

Data cleaning and Screening

The first stage in processing the data was to ensure that it was 'clean' (Kumar 1999 page 200). He argues that this makes sure that the data is free from inconsistencies and incompleteness. This process is called editing and it involves looking at the research instrument (questionnaire) to identify and minimise as much as possible any gaps in the information. This could be that a respondent forgot to answer a question, or gave an answer that did not fit in with the rest of the results. In this report some of the children gave inaccurate estimates of physical activity times throughout the school day. One child had answered in her questionnaire that she received 30 minutes of PE five times a week but the rest of the people from her schools said that they did two 60 minute periods of PE a week. The school involved was then phoned and asked how many periods of PE each child received and the child's answer was changed to correspond. There were many other queries that had to be confirmed with schools, seven schools had to be phoned to check the children's answers and every one had to be changed (see appendix 13).

Categorical Data

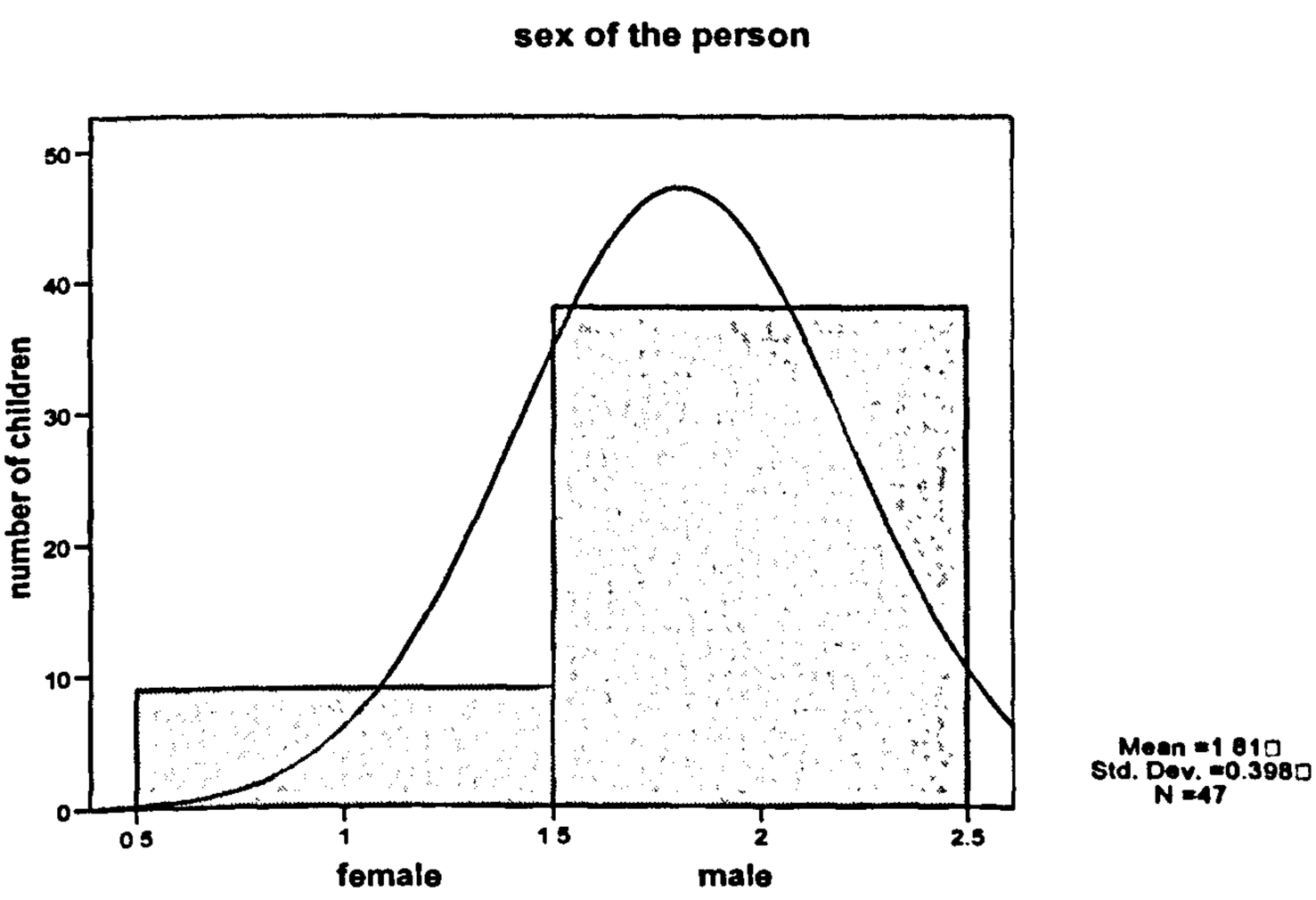
Once the data was cleaned and screened for any suspect answers it was then analysed. Frequency statistics were then run to produce frequency table that displayed number and percentages of cases for each observed variable. (Analysis –Descriptive statistics – frequencies) An example is given below:

Sex of the person

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	female	9	19.1	19.1	19.1
	male	38	80.9	80.9	100.0
	Total	47	100.0	100.0	

The frequency table is displayed in the view window. It revealed that nine of the participants were female (19.1%) and thirty eight were male (80.9%) The valid percentage in the table above is the same as the percent column as there were no missing data for this variable and the cumulative percentage gives a total number.

Charts can also be used to display the above information. The chart below displays the same information as the frequency table but it is easier for the eye to see the information clearer.

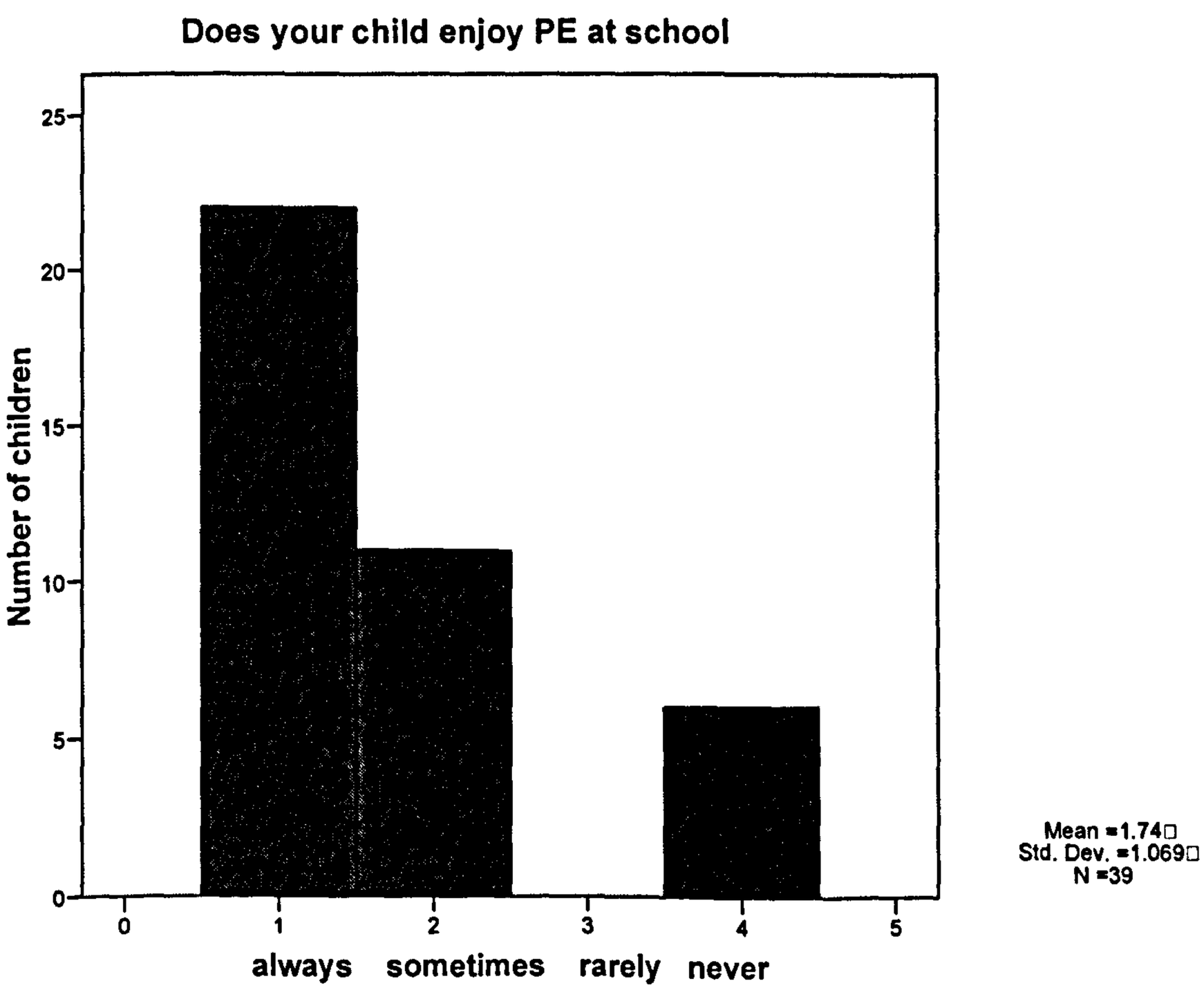


This chart gives a clear picture of the female and male population involved in this study and it also gives the mean, standard deviation and number of children involved. Scale variables were also created using measures of central tendency (mean and median) and

measures of dispersion (standard deviation, minimum and maximum). A chart selection was then chosen to display the information. The researcher felt that using tables and graphs was the best way to present information in a clear and appropriate manner. See the example below:

Enjoyed PE

N	Valid	39
	Missing	0
Mean		1.74
Median		1.00
Std. Deviation		1.069
Skewness		1.363
Std. Error of Skewness		.378
Kurtosis		.576
Std. Error of Kurtosis		.741
Range		3
Minimum		1
Maximum		4



To answer some of the research questions a new variable had to be calculated. These variables gave a clearer picture to the report as they combined information from existing variables. For example the report wanted to discuss how much total physical activity time was available for each child during a school week. To find the answer to this question all the individual times, breakfast time, break time, PE time, lunch time and after school time, were put together to give a breakdown of the total activity time. This gave a total physical activity time that was made available for each individual child. New variables were then displayed in the data editor file and they were then used to answer one of the research question.

All the data was entered into SPSS Version 15. The results and a discussion on these results are given in the next two chapters.

CHAPTER FOUR - RESULTS

BACKGROUND

This chapter will include results from questionnaires sent out to parents of children with ASN/disabilities in a sample of primary schools in Glasgow City Council. The format of this chapter will include a presentation of results, using tables and charts, along with a brief comment. The main emphasis of the results is to look at physical activity levels of young children with ASN/disability in a primary school setting. In additional the results will also look at whether the parents felt that their children were included in the physical activity sessions offered by their school and if their children are given the same opportunity to participate as other mainstream children.

The first set of questions will look at the characteristics of the children involved in this research. Questions will be addressed to age, sex, ASN or disability and methods of transport to school. The next set of questions will analyse physical activity times that were available throughout the school day and see to what extent the parents felt that their children were fully included in these sessions. The chapter will also analyse if the parents felt that the children enjoyed the physical activity sessions available during the school day and if they felt that their child's ASN or disability prevents them from taking part. Finally the last set of questions in this chapter will look at what activities the children had participated in and would like to participate in and if the parents knew where to obtain information about other activities that were available out with the school day.

The data from the questionnaires was entered into the Statistical Package for the Social Sciences 15.0 (SPSS), allowing the responses to be organised, sorted and queried. The closed questions were analysed using simple descriptive statistics and frequency data. Overall 47 questionnaires from primary schools across Glasgow were analysed.

PERSONAL CHARACTERISTICS OF THE CHILDREN INVOLVED IN THE STUDY.

The following questions will look at the personal characteristics of the children involved in this study.

<u>The questions involved in the section are;</u>

Q2. Is your child a boy or girl?

Q3. How old is your child?

Q4. What class is your child in?

Q5. What Additional Support Needs/Disabilities does your child have?

Q6. How does your child travel to and from school?

Q7. Does the method of transport prevent your child from taking part in breakfast or after school clubs?

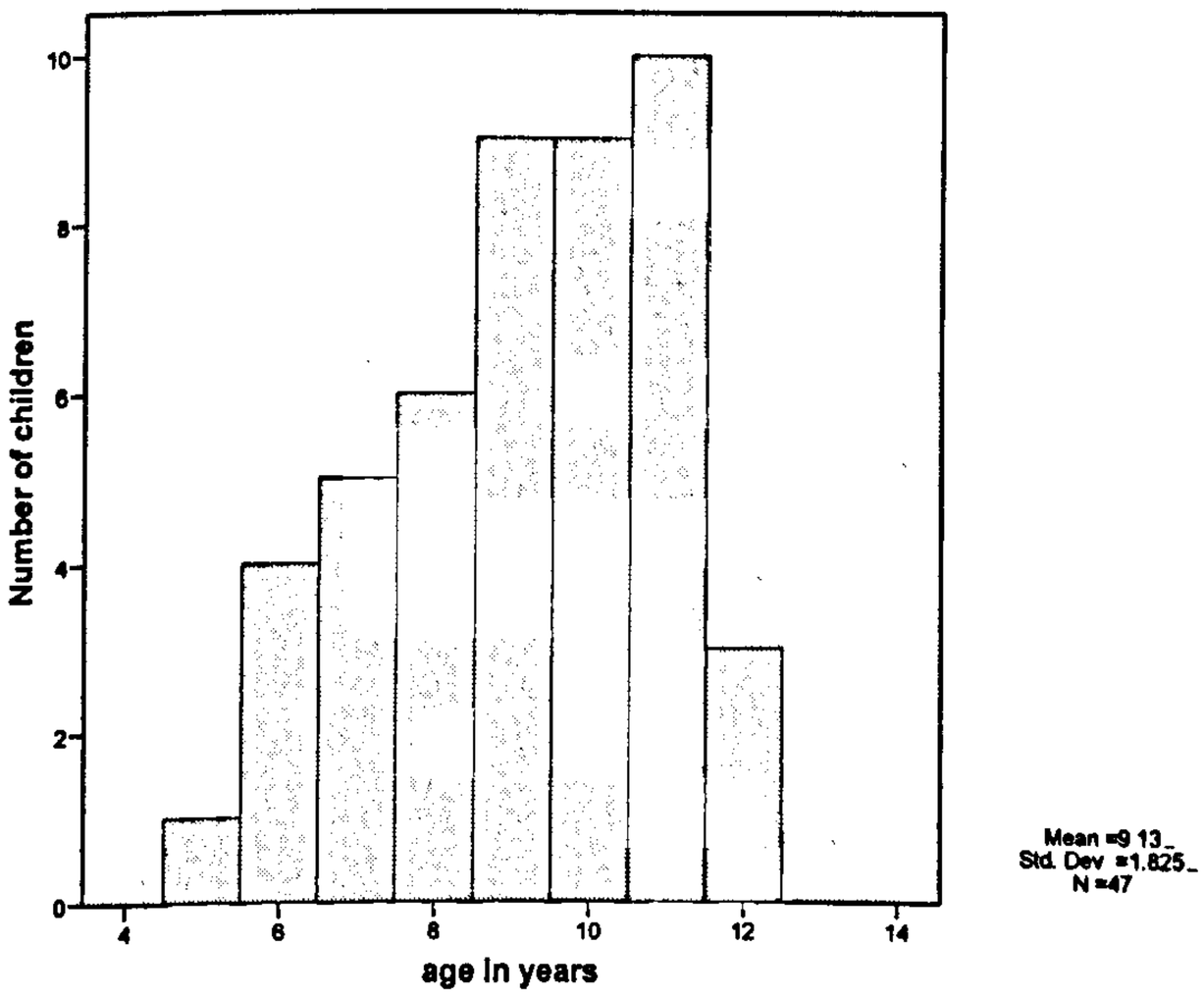
<u>Q2. Is your child a boy or a girl.</u>

Out of 47 respondents 9 were female (19.1%) and 38 were male (80.9%).

<u>Q3. How old is your child?</u>

The age of the children ranged from 5 to 12 years of age, which is reflected in the chart below. The mean age of the children in the sample was 9.13.

Chart 1 – Age of the children



Q4. What class is your child in?

The classes that the children attended varied from school to school but the majority of pupils who took part in this research were in primary 6 (23.4%) and primary 7 (19.1%).

Table 1 – class attending

CLASS CHILD ATTENDS.	Frequency	Percent
pr 1	1	2.1
pr 2	6	12.8
pr 3	7	14.9
pr 4	7	14.9
pr 5	6	12.8
pr 6	11	23.4
pr 7	9	19.1
Total	47	100.0

Q5. What Additional Support Needs (ASN)/Disabilities does your child have?

The parents were asked to indicate what ASN/disability their child had.

Table 2 – ASN/disability child has

CHILD ADDITIONAL SUPPORT NEED/DISABILITY		Frequency	Percent
	ASPERGER'S	6	12.8
	AUTISM	9	19.1
	DOWNS SYNDROME	1	2.1
	CEREBRAL PALSY	2	4.3
	DIABETES MELLITHS	1	2.1
	DYSPRAXIA	1	2.1
	DYSLEXIA	5	10.6
	CYSTIC FIBROSIS	1	2.1
	FULL TIME SEN	8	17.0
	CLASSROOM ASSISTANT	3	6.4
	NEUROFIBROMATOSIS	2	4.3
	ADHD	1	2.1
	TOURETTES	1	2.1
	HEMIPLEGIA	1	2.1
	PHYSICAL DISABILITY	3	6.4
	SPEECH AND LANGUAGE	1	2.1
	Total	46	97.9
Missing	System	1	2.1
Total		47	100.0

Parents in this study were asked what ASNor disability their child had. A wide variety of disabilities were given as the frequency analysis indicates. The highest percentage of children in this survey reported to have Autism (19.1%). Another 6 (12.8%) were said to have Asperger's syndrome, which is another form of Autism. In this report, of the 9 children reported to have Autism, only 2 of these were girls and of the 6 children reported having Aspergers only 1 was a girl. This indicates that the majority of children in this research project were on the Autistic Spectrum (31.9%). Eight children (17%) were reported to need a full time SEN assistant and five children (10.6%) were stated to have dyslexia. One parent did not specify what ASN/disability their child had.

Q7. Do any other children in the family have ASN/disability?

The parents were asked if any other children in the family had ASN/disability. Nine said that they had (19.1%) and 38 said they had not (80.9%).

Table 3 – Other children in the family with ASN

Other children in the family with ASN		Frequency	Percent
Valid	yes	9	19.1
	no	38	80.9
	Total	47	100.0

Q8. How does your child travel to and from school

Table 4 – method of travelling to school

Method of travelling to school.	Frequency	Percent
walk	18	38.3
walk + car	9	19.1
walk +bus	3	6.4
walk + car+ bus	1	2.1
walk + car + taxi	1	2.1
car	8	17.0
Taxi	3	6.4
Total	47	100.0

Parents in this study were asked what method of transport their children used to travel to school. Eighteen (38.3%) of the children said that they walked to school. The second most common method of travelling to school was walking and taking a lift in a car, with 9 children opting for this method (19.1%). Eight children travelled to school by car

(17%). Varies other methods were used, which are illustrated in the table above. The least used method was car plus walk plus bus with only 1 child using this method.

Q9. Does the method of transport to and from school prevent the children taking part in breakfast and after school clubs?

Table 5 - Transport prevent children taking part in activity

Transport prevent activity		Frequency	Percent
	yes	9	19.1
	no	37	78.7
	Total	46	97.9
Missing	System	1	2.1
Total		47	100.0

The parents were asked if they felt that the method of transport to and from school prevented their children from taking part in breakfast or after school clubs. Nine of the respondents said yes (19.1%) and 37 said no (78.7%). One parent did not respond. Of the 9 parents who said yes the majority stated that their children could not attend these sessions because they travelled to school by school bus and the timetable of the bus company was not flexible in their finishing times. One parent stated that 'the school bus brings him straight home (the child) after school so he can't go to any after school clubs'. If children cannot attend after school sessions due to the above transport difficulties then they are not being given the same opportunity to participate in physical activity sessions as other children in the schools. The next section will investigate what sessions are available to the children and whether the children attend them.

THE TOTAL AMOUNT OF PHYSICAL ACTIVITY TIME THAT IS AVAILABLE DURING THE SCHOOL WEEK.

This section of the chapter will analysis the amount of physical activity that is available during a typical school week and to question if the parents feel that their children enjoy and feel fully included in these sessions. It will also investigate the opportunities that are available and if the children participate in them.

The questions involved in this section include:

Q10 How much PA is available throughout the school week?

Q10 How many times do they participate per week?

Q10 Does your child enjoy these sessions?

Q11 Do you feel that your child is fully or partially included in these sessions?

Q11 Do you feel that your child is part of the class?

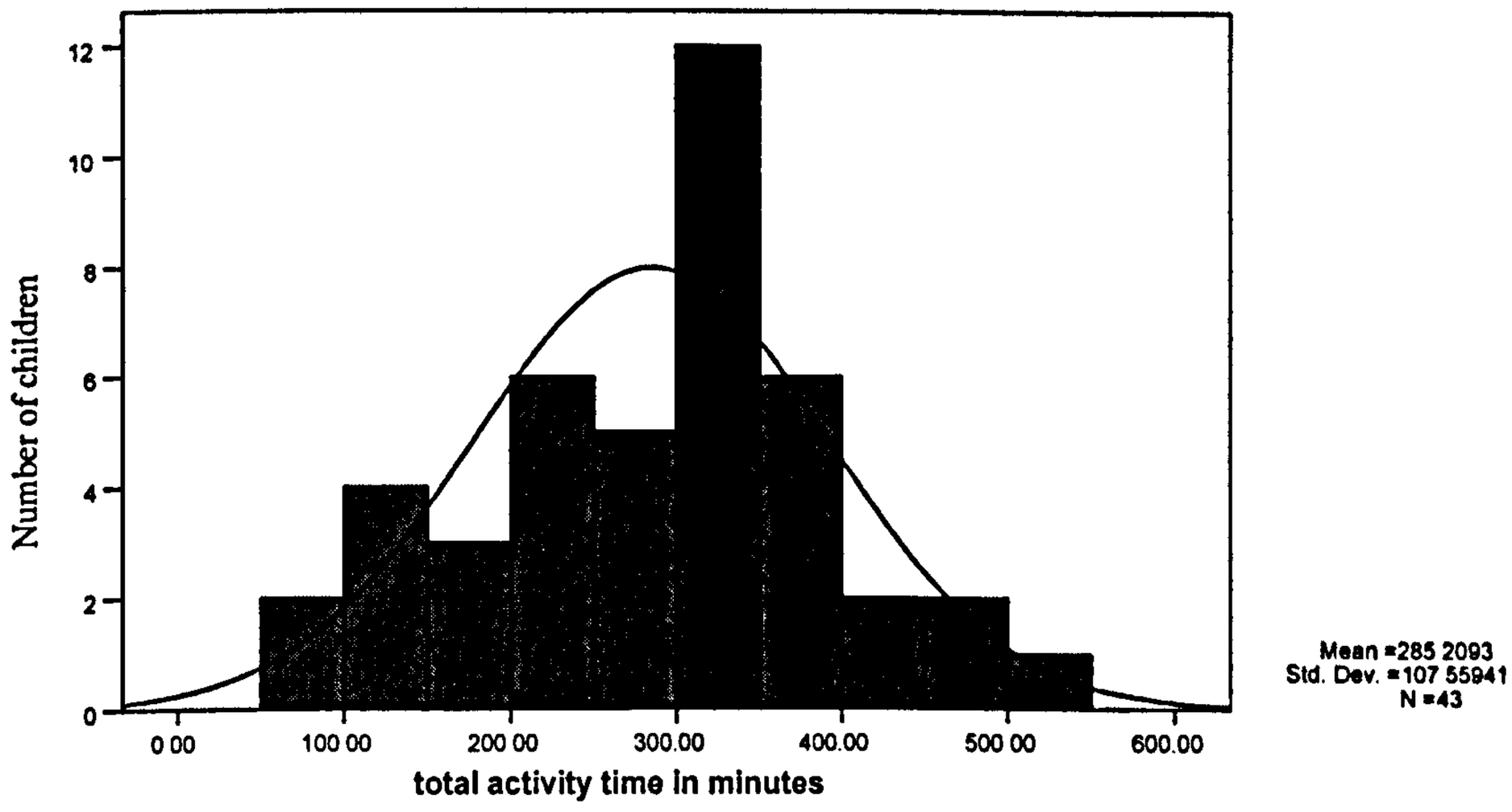
Q11 Do you feel that your child is given the same opportunity to take part in the PA sessions offered at their school?

Q11 Is your child allowed to join in, told to sit out, given something else to do or given different equipment, from the rest of the children, during the PA sessions offered at their school?

Physical activities encompass a broad spectrum from small activities like walking, to more physically challenging activities. It is an integral part of life and most people, at sometime in their life, will take part in some form of physical activity. This can be in various forms like PE at school, taking part in rugby, cycling, walking, dancing, swimming, football or more challenging activities like climbing a mountain or skiing. Most people take the opportunity to participate for granted but for some primary school children with ASN/disability in a mainstream primary school setting taking part in physical activity could be a very big challenge.

Q10. How much PA is available for children in a typical school week?

Chart 2 – Total physical activity time in a school week.



The questionnaire asked the parents how much physical activity was available for their child to participate in, during the school day. This included activities at breakfast clubs, break time, PE, lunch time and after school activities offered at their school. The parents were also asked how long these sessions were and how many times a week they were held. Only 43 respondents answered these questions. From the frequency analysis it is apparent that there is a significant difference in the physical activity that is made available to the children in this study. The range of activity time available went from 60 minute to 515 minutes per school week. The mean time made available was 285 minutes per school week. The difference between the lowest and highest time reported is very wide spread, with the standard deviation being 107 minutes (how the results deviate from the mean). Eleven children achieved a figure of 360 minutes or more of available physical activity time per school week, which is more than 60 minutes a day, but 32 did

not. Only 8 males (21%) and 3 females (33%) were reported as taking part in 60 minutes, or more, of physical activity per school day.

To analyse further the question of whether children with ASN/disability are given the same opportunity, as other children in a mainstream setting, to participate in physical activity the researcher decided to explore the answers from the questionnaire on PE lessons.

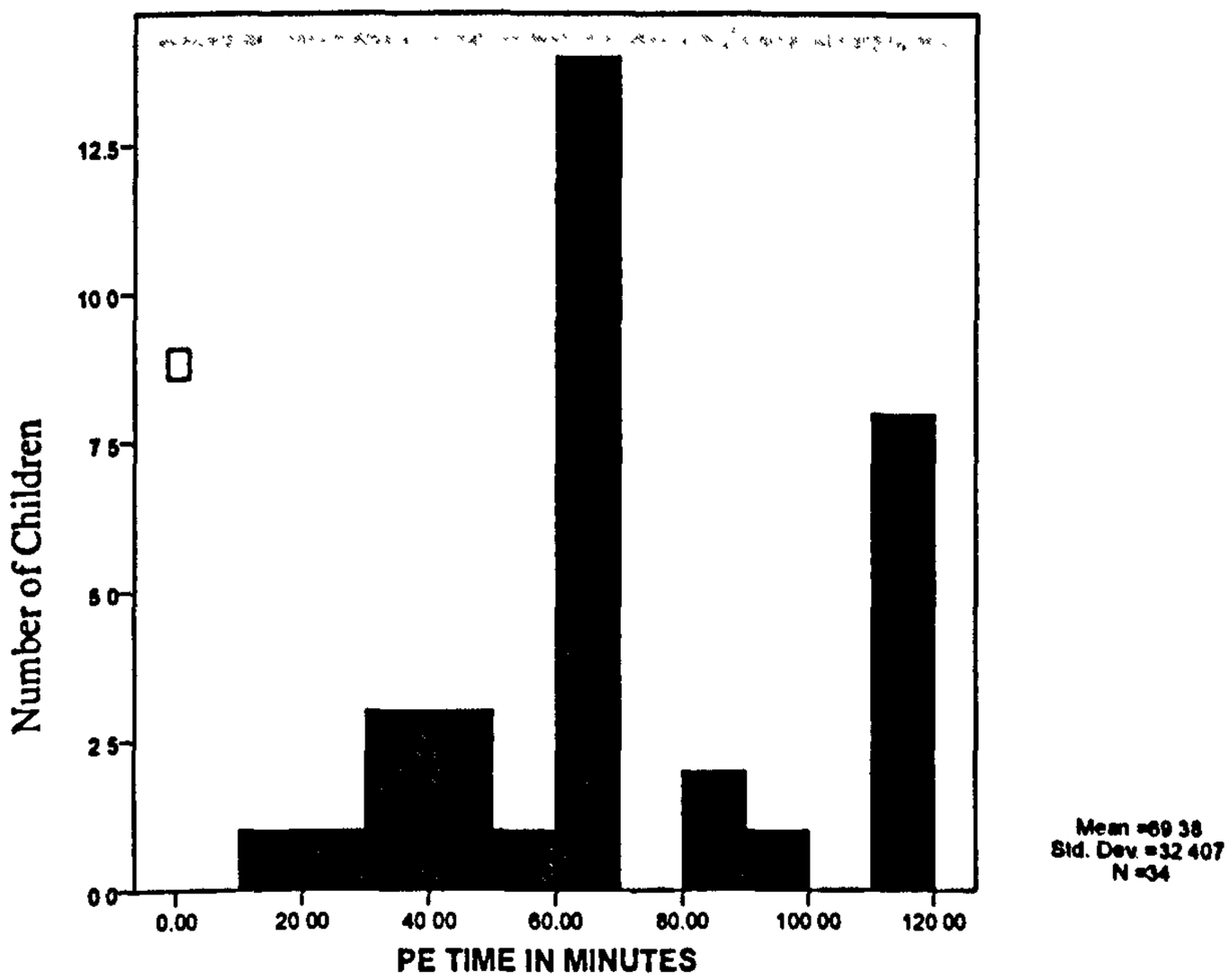
Q10. How much Physical Education time is made available to the children during the school week?

Table 6 - Total physical education times provided during a school week.

Minutes		Frequency	Percent
	15.00	1	2.1
	25.00	1	2.1
	30.00	3	6.4
	40.00	3	6.4
	59.00	1	2.1
	60.00	14	29.8
	80.00	2	4.3
	90.00	1	2.1
	120.00	8	17.0
	Total	34	72.3
Missing	System	13	27.7
Total		47	100.0

These results can be seen clearer in the chart below.

Chart 3 – Total PE time during a school week.



For this study, parents were asked how many times a week their children received PE and how long each session was. Only 34 (72.3%) respondents answered the question. As the frequency analysis indicates only 8 (17%) of the children were reported to achieve the recommendation of 2 hours of PE per week, 14 (29.8%) were reported receiving 60 minutes of PE per week. Thirteen of the respondents gave no response to the question. One child only achieved 15 minutes of PE a week. Approximately 73% (25) of the respondents reported that their child received 60 minutes or more of PE per school week which is in agreement with the Glasgow City Council report of an average time of 68 minutes.

Q10. Does your child enjoy the physical activity sessions offered at their school?

The parents were asked if their child enjoyed the physical activity sessions that they did at their school.

Table 7 – child enjoyed physical activity session available at their school

Activity session	NUMBER OF CHILDREN RESPONDING	ALWAYS 1	SOMETIMES 2	RARELY 3	NEVER 4	MEAN
Breakfast time	6	2 (33%)	2 (33%)	1(16.7%)	1 (16.7%)	2.17
Break time	36	23(60.5%	12(31.6%)	1(2.6%)	0	1.39
PE time	39	22(56.4)	11(28.2%)	0	6(15.4%)	1.74
Lunch time	40	24(60%)	13(32.5%)	1(2.5%)	2(5.0%)	1.53
After school	5	3(60%)	1(20%)	0	1(20%)	

The table above indicates that the majority of children enjoyed each of the physical activity sessions (PA) offered at their school. At Break time 23 (60.5%) were reported to say that they always enjoyed PA, 12 (31.6%) that they sometimes enjoyed PA and only 1 (2.6%) that they rarely enjoyed PA with no children reporting never to enjoy it. During PE time 22 (56.4%) children were reported always to enjoy PE, 11 (28.2%) to sometimes enjoy PE and 6 (15.4%) to never enjoy PE.

During lunch time 24(60%) children were reported to say that they always enjoyed physical activity, 13 (32.5%) that they sometimes enjoyed it and 1(2.5%) and 2(5.0%) that they rarely or never enjoyed PA.

Extra curricular activity, activity which is offered outside the normal school day, but is organised by the school, was very poorly attended. Only 6 children (12.8%) attended breakfast time activity and 5 (10.6%) attended after school activity. Various reasons for the children in this study not attending breakfast and after school activities were given. One parent stated that 'there was not enough patience and understanding given to their child and that resulted in him sitting out sometimes or not enjoying the activity'. Other

parents stated that their child could not attend the extra curriculum sessions as they had problems with transport.

Only 6 children attended breakfast time activity. Two children (33%) were said to always enjoy it, 2 (33%) to sometimes enjoy it, 1 (16%) to rarely enjoy it and 1(16%) to never enjoying it. Only 5 children were reported attending after school activities where 3 (60%) reported always enjoying it, 1 sometimes and 1 never.

The next section will look at whether parents felt that their child was given the same opportunities, as other children, to participate in physical activity session offered at their school.

INVESTIGATE IF PARENTS FEEL THAT THEIR CHILD IS GIVEN THE SAME OPPORTUNITIES TO PARTICIPATE AS OTHER CHILDREN IN THEIR CLASS

<u>The question involved in this section is;</u>

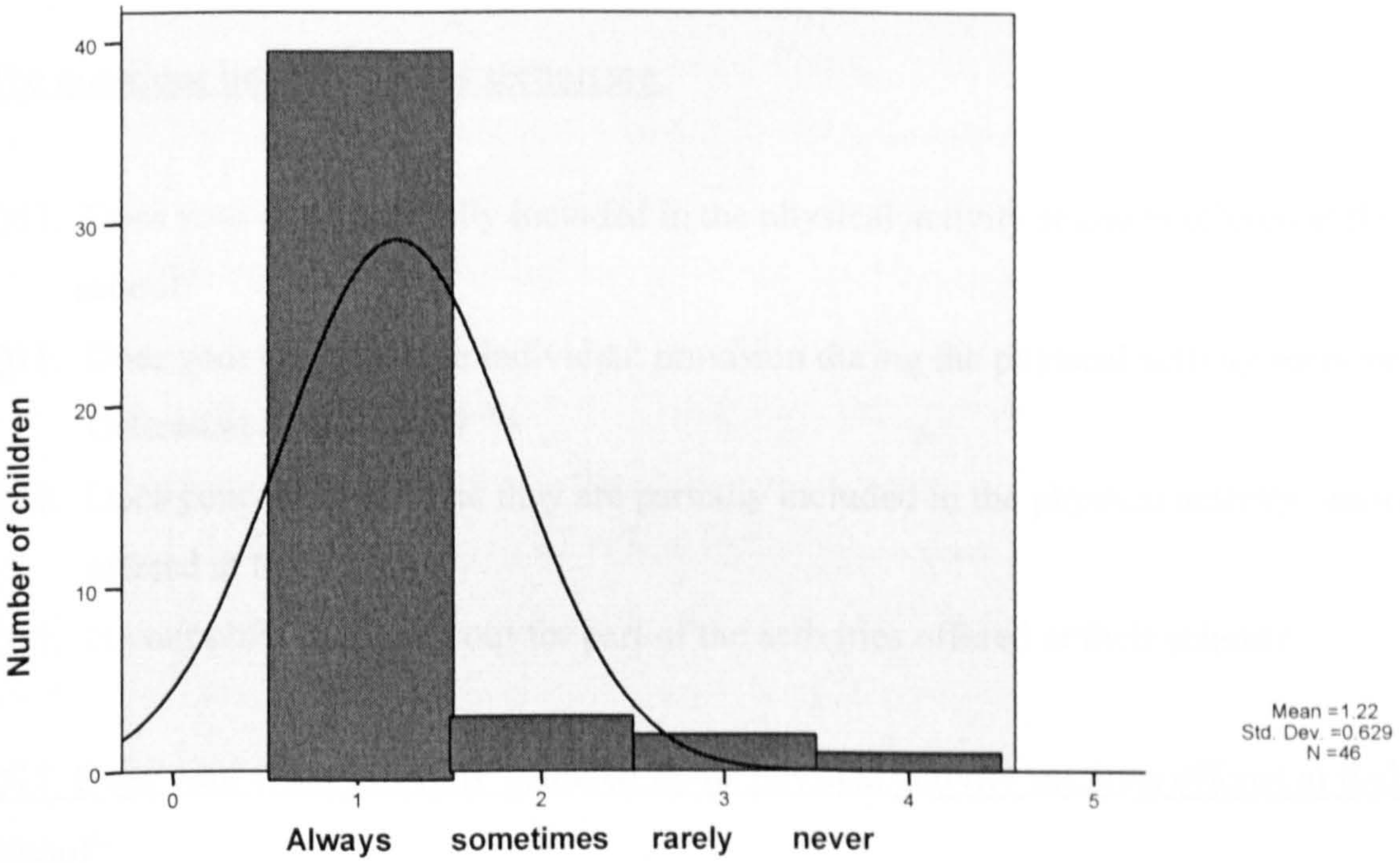
Q11. Is your child given the same opportunity, as other children without ASN/disability, to take part in the physical activity sessions offered at their school?

Table 8 – child given same opportunity to take part in PA sessions as other children in the school

Activity session	NUMBER OF CHILDREN RESPONDING	ALWAYS 1	SOMETIMES 2	RARELY 3	NEVER 4	MEAN
Breakfast time	15	9(19.1)	4(8.5%)	2(4.3%)	0	1.53
Break time	43	27(57.4%)	14(29.8%)	2(4.3%)	0	1.42
PE time	46	40(85.1%)	3(6.4%)	2(4.3%)	1(2.1%	1.22
Lunch time	45	31(66.0%)	10(21.3%)	0	4(8.5%	1.49
After school	21	14(29.8%)	2(4.3%)	3(6.4%)	2(4.3%	1.67

The majority of parents felt that their children were given the same opportunity as other children to take part in physical activity session offered at their schools. During PE sessions 40 (85.1%) of parents said that their child was always given the same opportunity, 3 (6.4%) were sometimes, 2 (4.3%) rarely and only 1 parent stating that their child was never given the same opportunity. This is illustrated in chart 4 below. The majority of parent felt that their children were given the same opportunity as other children in their schools. If schools are offering children with a disability the same opportunities, to participate in physical activity as other children, then they are showing evidence of inclusion which will counteract discrimination and an appreciation of diversity of individuals and groups within society.

Chart 4 – Given the same opportunity during PE.



Looking at the results from other physical activity sessions throughout the school day the majority of parents again felt that their children were given the same opportunity. During lunch time 31(66%) felt their children were given the same opportunity, 10(21.3 %) sometimes, and 4(8.5%) felt that their children were never given the same opportunity. Fifteen and 21 parents, respectively, responded to the question of whether they felt that their children were given the same opportunity as other children to participate in breakfast and after school activities. The majority of parents felt that their children were given the same opportunity with 9 (19%) and 14 (29.8%), respectively, answering that they felt their children were always given the same opportunity, 4 (8.5%) and 2 (4.3%) sometimes, 2 (4.3%) and 3(6.4%) rarely and only 2 (4.3%) never. These figures corresponded to the PE results as displayed above.

The next section of this chapter will investigate if parent feel that their children are included in the physical activity sessions offered at their school.

INVESTIGATE IF PARENTS FEEL THAT THEIR CHILD IS FULLY OR PARTIALLY INCLUDED IN THE SESSIONS THAT ARE AVAILABLE.

<u>The questions involved in this section are;</u>

Q11. Does your child feel fully included in the physical activity sessions offered at their school?

Q11. Does your child receive individual provision during the physical activity sessions Offered at their school?

Q11. Does your child feel that they are partially included in the physical activity sessions offered at their school?

Q11. Is your child told to sit out for part of the activities offered at their school?

<u>Q11. Does your child feel fully included in the physical activity sessions offered at their school?</u>

Table 9 – Child feel fully included in all PA sessions offered at their school

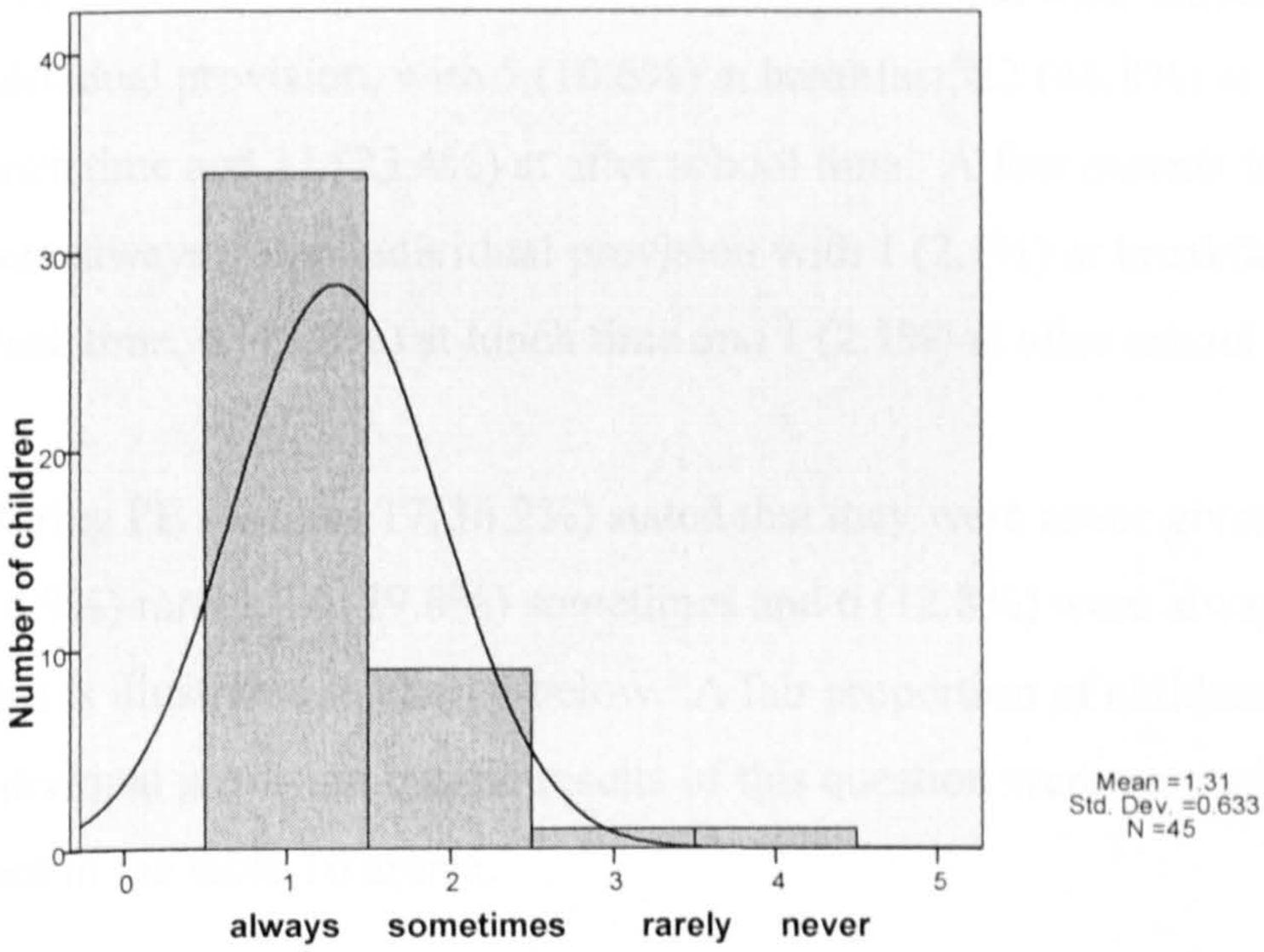
Activity session	NUMBER OF CHILDREN RESPONDING	ALWAYS 1	SOMETIMES 2	RARELY 3	NEVER 4	MEAN
Breakfast time	15	8(17.0%)	4(8.5%)	2(4.3%)	1(2.1%)	1.75
Break time	44	23(48.9%	13(27.7%)	4(8.55)	4(8.55)	1.75
PE time	45	34(72.3%	9(19.1%)	1(2.1%)	1(2.1%)	1.31
Lunch time	44	29(61.7%	11(23.4%)	0	4(8.5%)	1.52
After school	21	13(27.7%	5(10.6%)	2(4.3%)	1(2.1%	1.57

In this study the majority of parents felt that their children were fully included in the physical activity sessions offered at their schools. To be fully included the child would have to be allowed to do exactly the same activities as other children in the class and not feel as if they are being singled out at any time. During breakfast club, 8(17.0%), break time 23(48.9%), PE 34 (72.3%), lunch time 29(61.7%) and after school 13(27.7%) the parents stated that their children were always fully included in the sessions. In contrast to these results a fair proportion of the parents stated that their children were only sometimes fully included and a minority stated that their children were never fully included. Looking at the results for lunch and play times it is obvious that not all parents believe that their children are fully included in the informal playground activities. At break time only 23(48.9%) parents felt that their children were always included, 13(27.7%) sometimes, 4(8.5%) rarely and 4(8.5%) never. During lunch time 29(61.7%) felt that they were always included, which was slightly more than at break time, 11(23.4%) felt their children were sometimes included and 4(8.5%) felt that their children were never included.

From these results it is evident that the parents felt that their children were in the majority included in activities which were formally organized and supervised by staff at the schools involved in this study. However, some parents felt that their children were not fully included in informal play activities with other children in the schools. Questions need to be asked as to why parents feel that their children are not included fully in playground activities.

Looking at the PE sessions in particular the majority of parents, 34 (72.3%) felt that their children were fully included, 9(19.1%) stated that their children only felt included sometimes, 1(2.1%) parent felt that their child was rarely included and one parent felt that their child was never fully included. The results for the PE sessions as illustrated in the chart below.

Chart 5 – Fully included in all activities during PE



Q11. Does your child receive individual provision during the physical activity sessions offered at their schools?

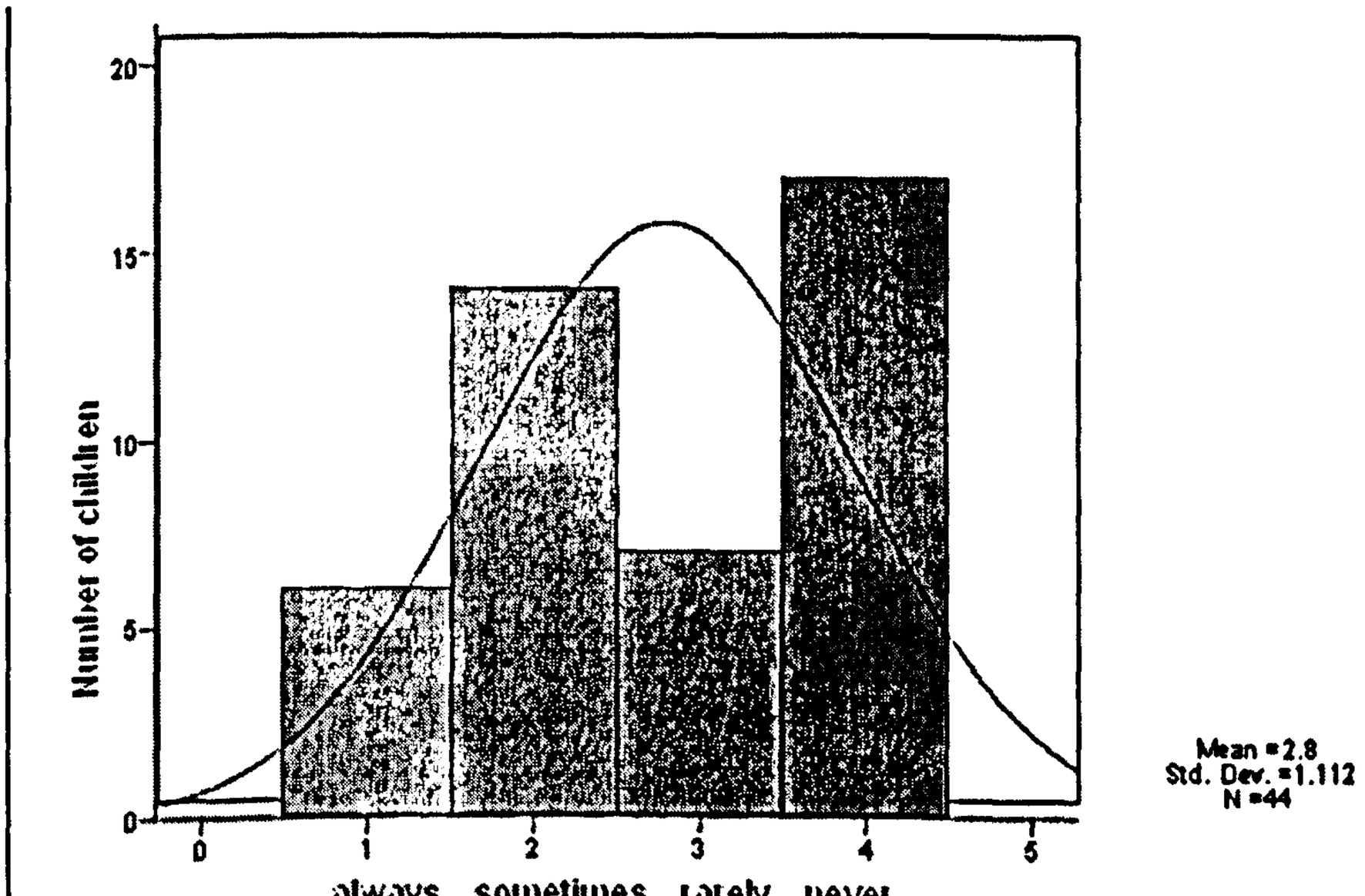
Table 10 – Receive individual provision during PA sessions offered at their school

Activity session	NUMBER OF CHILDREN RESPONDING	ALWAYS 1	SOMETIMES 2	RARELY 3	NEVER 4	MEAN
Breakfast time	15	1(2.1%)	5(10.6%)	4(8.5%)	5(10.6%	2.87
Break time	43	5(10.6%	8(17%)	8(17%)	22(46.8%	3.09
PE time	44	6(12.8%	14(29.8%)	7(14.9%	17(36.2%	2.80
Lunch time	43	6(12.8%	9(19.1%)	4(8.5%)	24(51.1%	3.07
After school	21	1(2.1%)	4(8.5%)	5(10.6%	11(23.4%	3.24

Parents were asked if their child received individual provision during physical activity sessions at their schools. Individual provision could be described as individual attention or instruction. A fair majority of the parents felt that their children never received individual provision, with 5 (10.6%) at breakfast, 22 (46.8%) at break time, 24 (51.1%) at lunch time and 11 (23.4%) at after school time. A few parents felt that their children were always given individual provision with 1 (2.1%) at breakfast time, 5 (10.6%) at break time, 6 (12.8%) at lunch time and 1 (2.1%) at after school time.

During PE sessions 17(36.2%) stated that they were never given individual provision, 7 (14.9%) rarely, 14 (29.8%) sometimes and 6 (12.8%) were always given this provision. This is illustrated in chart 6 below. A fair proportion of children were always given individual provision but the results of this question were very widely spread, as can be seen in the table 10 above.

Chart 6 – Receive individual provision during PE



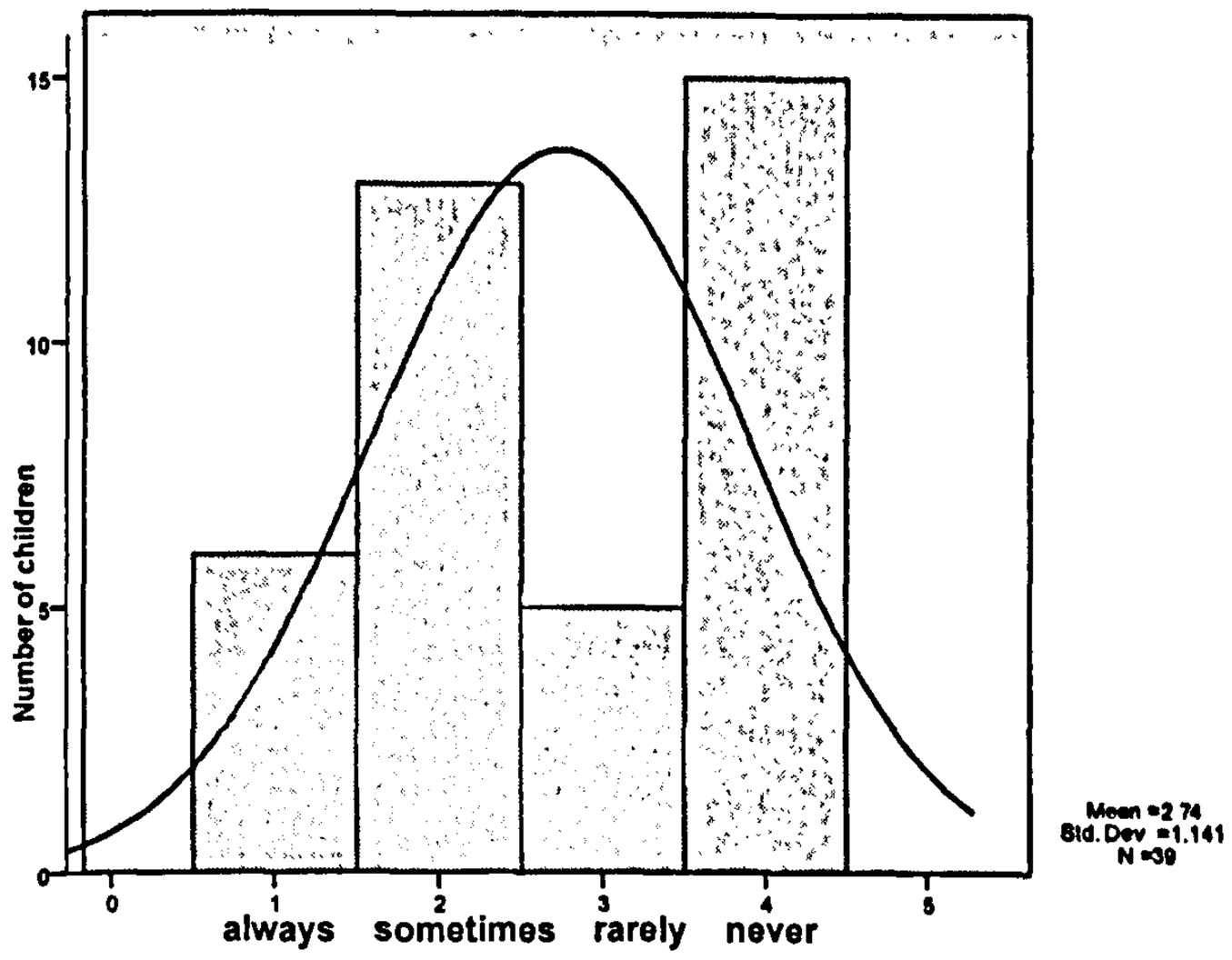
Q11. Does your child feel that they are partially included in the physical activity sessions offered at their school?

Table 11 –Partially included during PA sessions

Activity session	NUMBER OF CHILDREN RESPONDING	ALWAYS 1	SOMETIMES 2	RARELY 3	NEVER 4	MEAN
Breakfast time	15	2(4.3%)	5(10.6%)	2(4.3%)	6(12.8%	2.8
Break time	42	4(8.5%)	15(31.9%)	11(23.4%	12(25.5%	2.74
PE time	39	6(12.8%	13(27.7%)	5(10.6%)	15(31.9%	2.74
Lunch time	42	6(12.8%	16(34.0%)	5(10.6%)	15(31.9%	2.69
After school	21	1(2.1%)	5(10.6%)	4(8.5%)	11(23.4%	3.19

Parents were asked if they felt that their children were partially included in the physical activity sessions offered at their school. Partially included, could be described as only being included for part of the session or only participating in a small part of the activity. The response to the above question was very varied. The majority of parents felt that their children were included in the physical activity sessions offered at their schools with only 6 (12.8%) at breakfast club, 12(25.5%) at break time, 15(31.9%) during PE, 15(31.9%) at lunch time and 11(23.4%) at after school club stating that they were never partially included. During PE 6(12.8%) felt that they were always partially included, 13(27.7%) sometimes, 5(10.6%) rarely and 15(31.9%) never. The results for PE are illustrated in chart 7 below.

Chart 7 – Partially included during PE



Q11. Is your child told to sit out for part of the activities offered at their school?

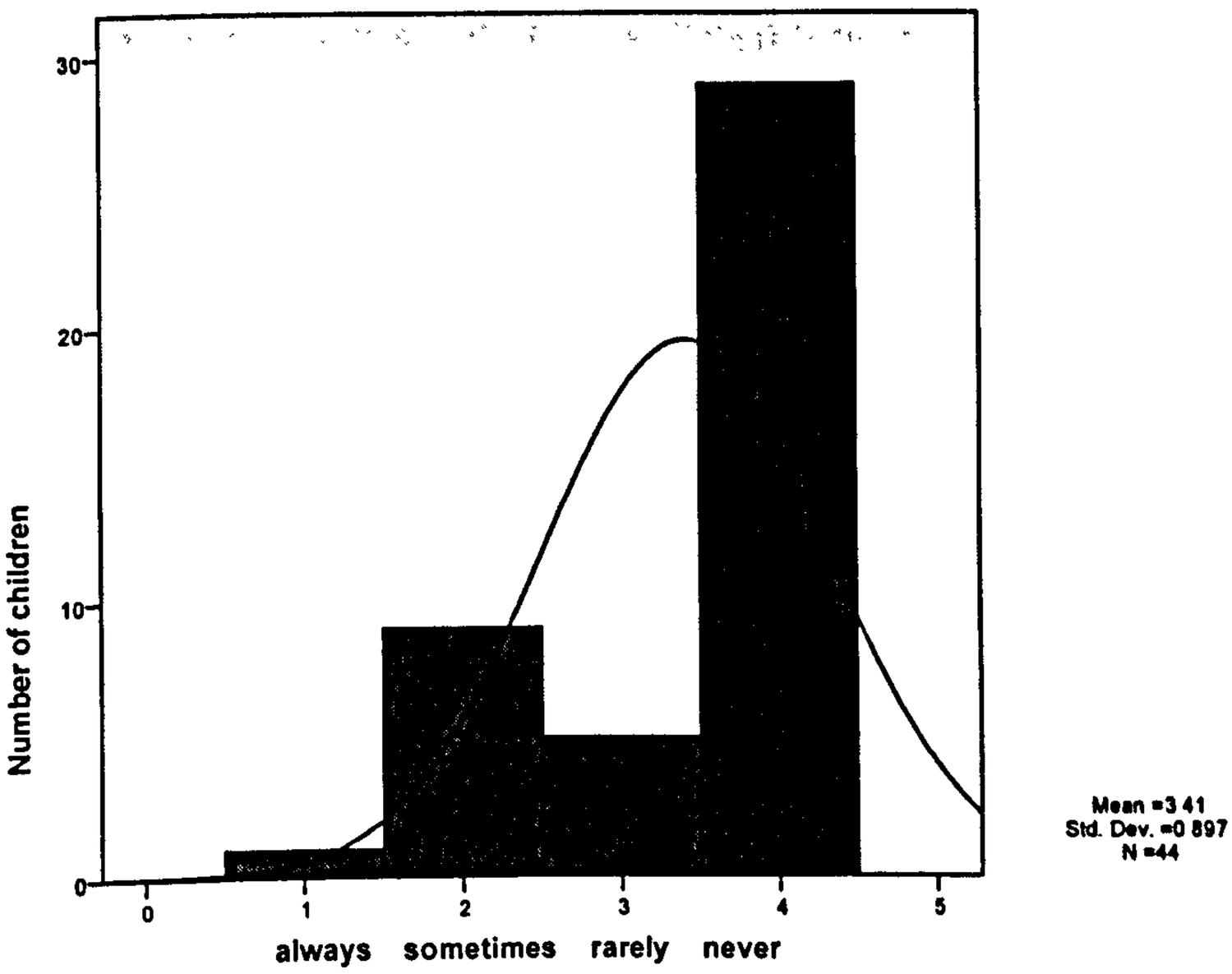
Table 12 – Sit out for part of the physical activity sessions offered at their school

Activity session	NUMBER OF CHILDREN RESPONDING	ALWAYS 1	SOMETIMES 2	RARELY 3	NEVER 4	MEAN
Breakfast time	15	0	3(6.4%)	3(6.4%)	9(19.1%)	3.4
Break time	42	1(2.1%)	9(19.1%)	2(4.3%)	30(63.8%	3.45
PE time	44	1(2.1%)	9(19.1%)	5(10.6%	29(61.7%	3.41
Lunch time	43	1(2.1%)	7(14.9%)	5(10.6%	30(63.8%	3.49
After school	21	0	5(10.6%)	4(8.5%)	12(25.5%	3.33

The majority of children, in this study, were never told to sit out during the physical activity sessions offered at their school. During breakfast time 9(19.1%), break time 30(63.8%), lunch time 30(63.8%) and after school 12 (25.5%) of the children involved in this study were never asked to sit out. However, during breakfast time 3(6.4%), break time 9(19.1%), lunch time 7 (14.9%) and after school 5(10.6%) were sometimes asked to sit out during the activity sessions. If these children were reported to sometimes be asked to sit out then if is evident that they were not always included in the activities.

Looking at the PE sessions 29(61.7%) were never asked to sit out but 9(19.1%) were sometimes asked to sit out and 1 child was always asked to sit out. The reasons for these results could not be ascertained as no children were asked in the questionnaire why they were sometimes told to sit out. The results for the PE session are illustrated by Chart 8 below.

Chart 8 – Sit out during PE



The next section of this chapter will investigate if parents feel that their children enjoy and feel part of the class or are given something else to do, instead of the same activity as the rest of the class.

INVESTIGATE IF THE PARENTS FEEL THAT THEIR CHILDREN ENJOY THE PHYSICAL ACTIVITY SESSIONS OFFERED AT THEIR SCHOOL AND IF THEY FEEL PART OF THE CLASS OR ARE THEY GIVEN SOMETHING ELSE TO DO?

<u>The questions involved in this section are;</u>

Q11. Is your child given something else to do during the physical activity sessions offered at their school?

Q11. Is your child given different equipment from the rest of the class during the Physical activity sessions offered at their school?

Q11. Does your child feel part of the class?

Q11. Is your child not allowed to join in during the physical activity sessions on offer at their school?

Q12. Overall does your child's ASN/disability prevent them from taking part in physical activity sessions offered at their school?

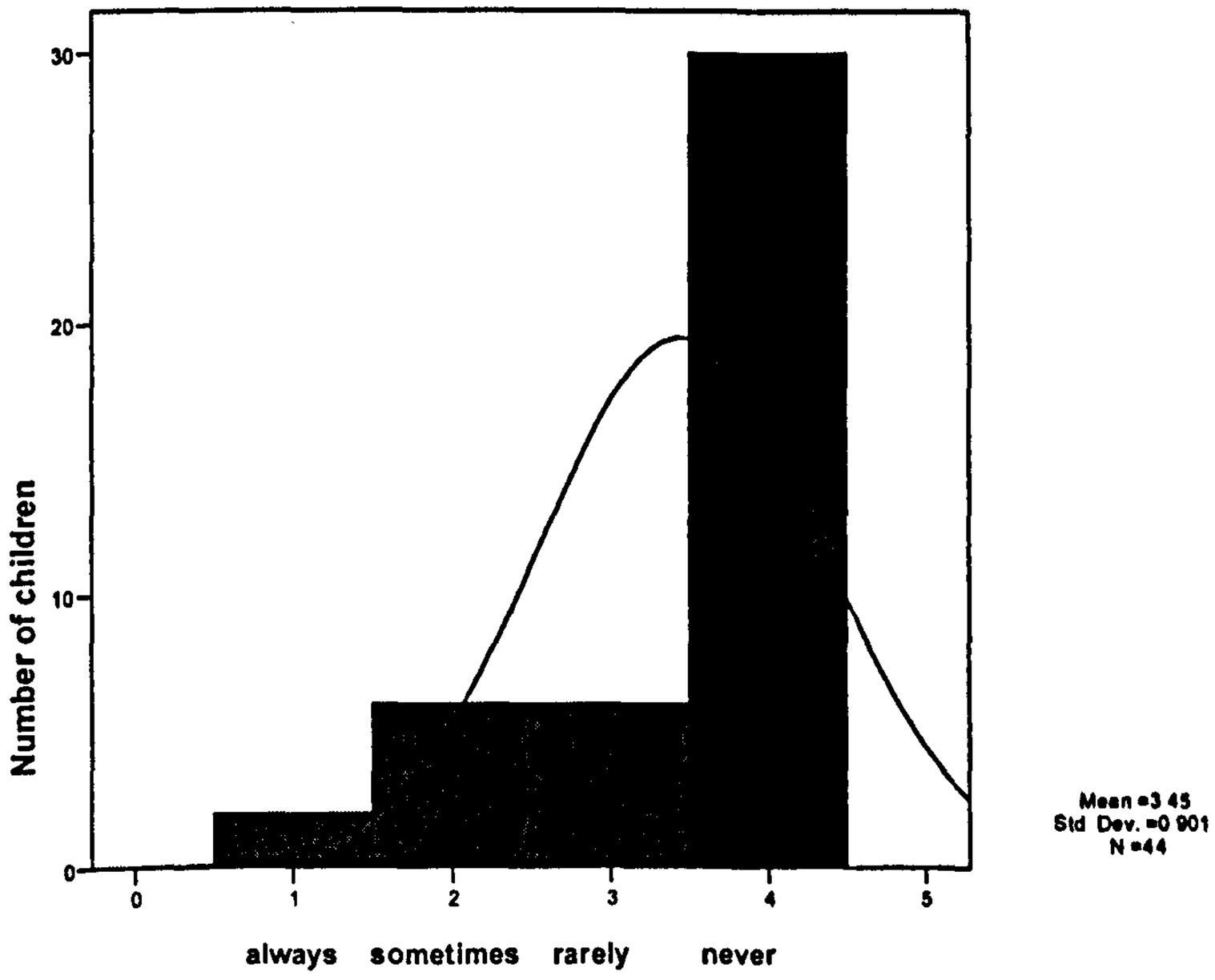
Q11. Is your child given something else to do during the physical activity sessions offered at their school?

Table 13 – Given something else to do during physical activity session offered at their school

Activity session	NUMBER OF CHILDREN RESPONDING	ALWAYS 1	SOMETIMES 2	RARELY 3	NEVER 4	MEAN
Breakfast time	15	0	5(10.65)	1(2.1%)	9(19.1%)	3.27
Break time	43	0	7(14.9%)	5(10.6%	31(66%)	3.56
PE time	44	2(4.3%)	6(12.8%)	6(12.8%	30(63.8%)	3.45
Lunch time	43	1(2.1%)	8(17.0%)	4(8.5%)	30(63.8%)	3.47
After school	21	0	4(8.5%)	3(6.4%)	14(29.8%)	3.48

Parents were asked if they felt that their child was given an activity that was different from other children in the class during the physical activity sessions offered at their school. The results, shown in table 13, report that the majority of children were not given something else to do. During PE only 2 (4.3%) of children were always given something else to do, 6 (12.8%) were sometimes given something else to do but the majority of children 30 (63.8%) were catered for in the class and given the same activities as the rest of the class. The PE results are illustrated in chart 9 below.

Chart 9 – Given something else to do during PE



The results shown in chart 9 above indicate that the majority of children (63.8%) were included in the PE sessions run at their school and not given something else to do. During PE, 6 (12.8%) children were sometimes given something else to do and 2 (4.3%) were always given something else to do.

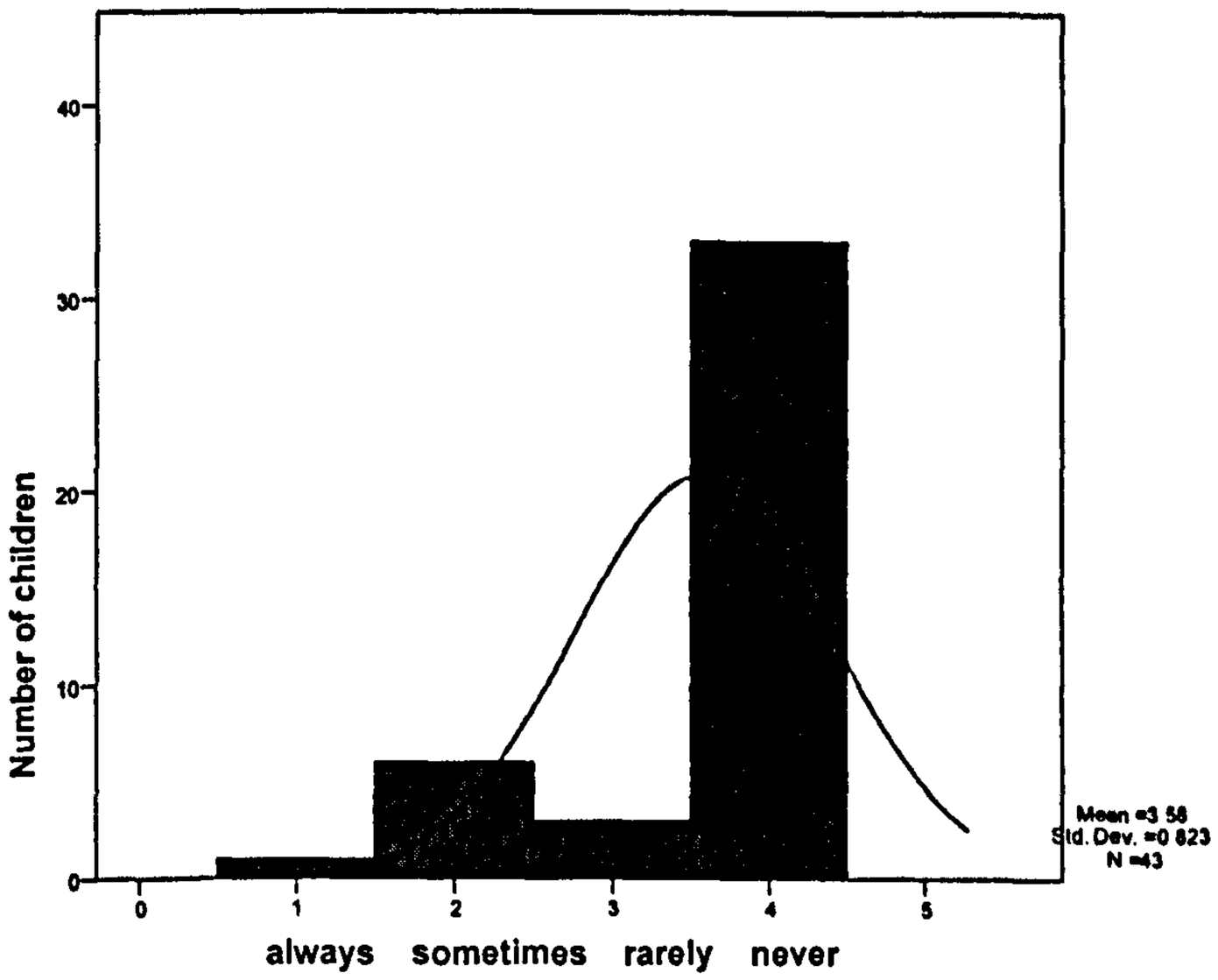
Q11. Is your child given different equipment from the rest of the class during the physical activity sessions offered at their school?

Table 14 – Given different equipment to use during the physical activity sessions offered at their school

Activity session	NUMBER OF CHILDREN RESPONDING	ALWAYS 1	SOMETIMES 2	RARELY 3	NEVER 4	MEAN
Breakfast time	15	0	3(6.4%)	1(2.1%)	11(23.4%	3.53
Break time	43	1(2.1%)	5(10.6%)	3(6.4%)	34(72.3%	3.63
PE time	43	1(2.1%)	6(12.8%)	3(6.4%)	33(70.2%	3.58
Lunch time	43	2(4.3%)	6(12.8%)	1(2.1%)	34(72.3%)	3.56
After school	21	1(2.1%)	2(4.3%)	3(6.4%)	15(31.9%)	3.52

The results above show that the majority of children are given the same equipment as the rest of the class during the physical activity sessions. This could be because the children are quite capable of using this equipment or it could be because the school does not have any adapted equipment that they could use. During PE the majority of children 33(70.2%) used the same equipment as the rest of the class. This could be because in primary PE there is a great variety of equipment available. Only 6(12.8%) were sometimes given different equipment. This could be because the children could not use the same equipment as the rest of the class or it could be that the teachers did not feel comfortable letting the children use that equipment. The PE results are illustrated in chart 10 below.

Chart 10 – Given different equipment during PE



The next question investigated whether or not parents felt that their child were part of the activity sessions that were available at their school, or whether they never felt that they were part of the class.

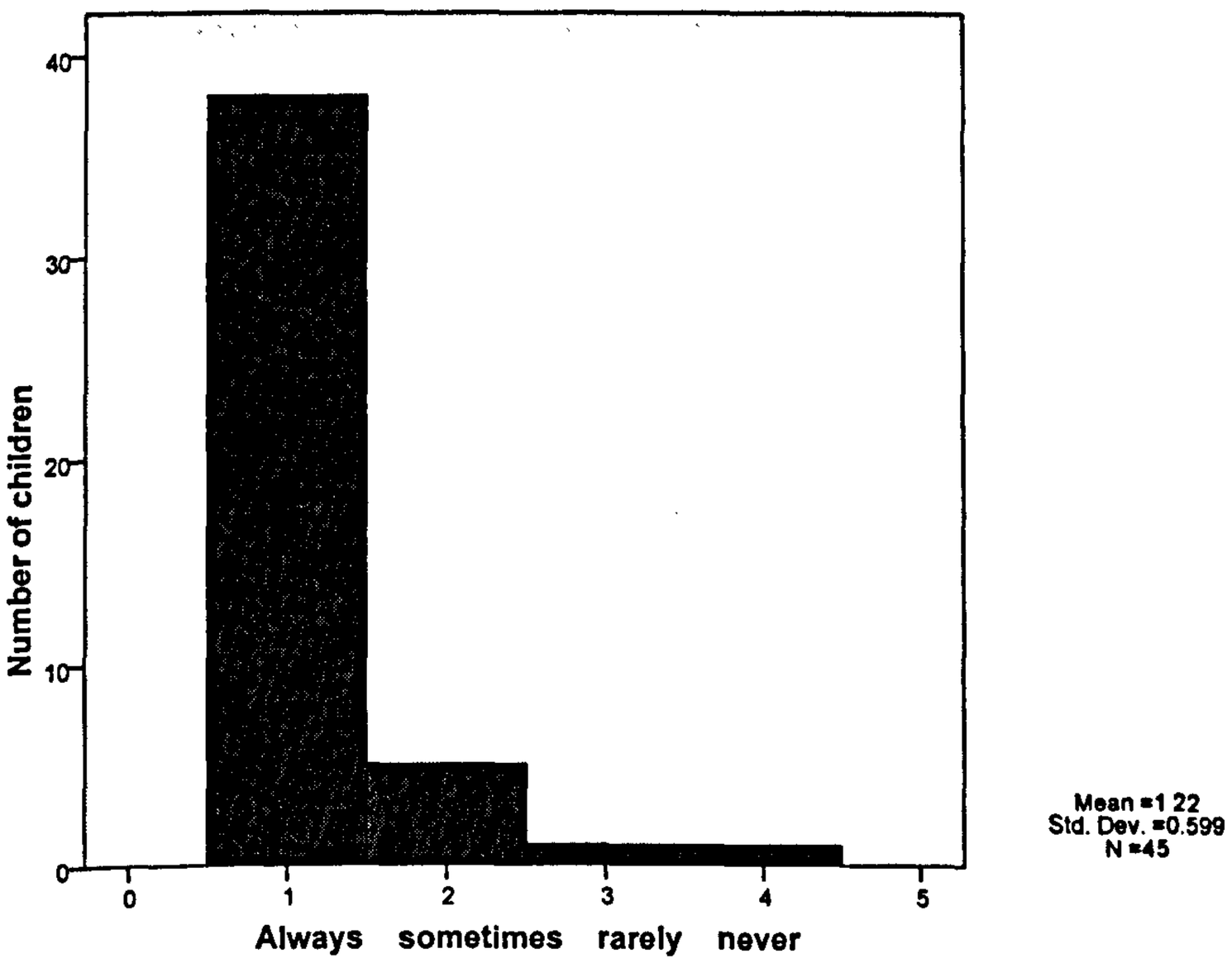
Q11. Does your child feel part of the class?

Table 15 – Feel part of the class

Activity session	Number of children responding	Always 1	Sometimes 2	Rarely 3	Never 4	Mean
Breakfast time	15	8(17.0%)	6(12.8%)	1(2.1%)	0	1.53
Break time	42	27(57.4%)	11(23.4%)	3(6.4%)	1(2.1%)	1.48
PE time	45	38(80.9%)	5(10.6%)	1(2.1%)	1(2.1%)	1.22
Lunchtime	42	27(57.4%)	13(27.7%)	0	2(4.3%)	1.45
Afterschool	21	15(31.9%)	3(6.4%)	1(2.1%)	2(4.3%)	1.52

The parents were asked if their child felt that they were part of the class. The majority of parents answered that their child always felt part of the class but there were some parents who felt that their children were never part of the class. Encouragingly during PE 38(80.9%) felt that they were always part of the class and only 1 parent felt that their child was never part of the class. The PE results are illustrated in chart 11 below.

Chart 11 – feel part of the PE class



Q11. Is your child not allowed to join in during the physical activity sessions on offer at their school?

Parents were asked if they felt that their child was not allowed to join in the physical activity sessions that were available at their school. This included activities at breakfast clubs, break time, PE, lunch time and after school activities organized by the school. Activities that are carried out during breakfast clubs, break time, lunch time and after

school clubs would be informal and involve play activities, where as activities offered during PE would be more structured and organized.

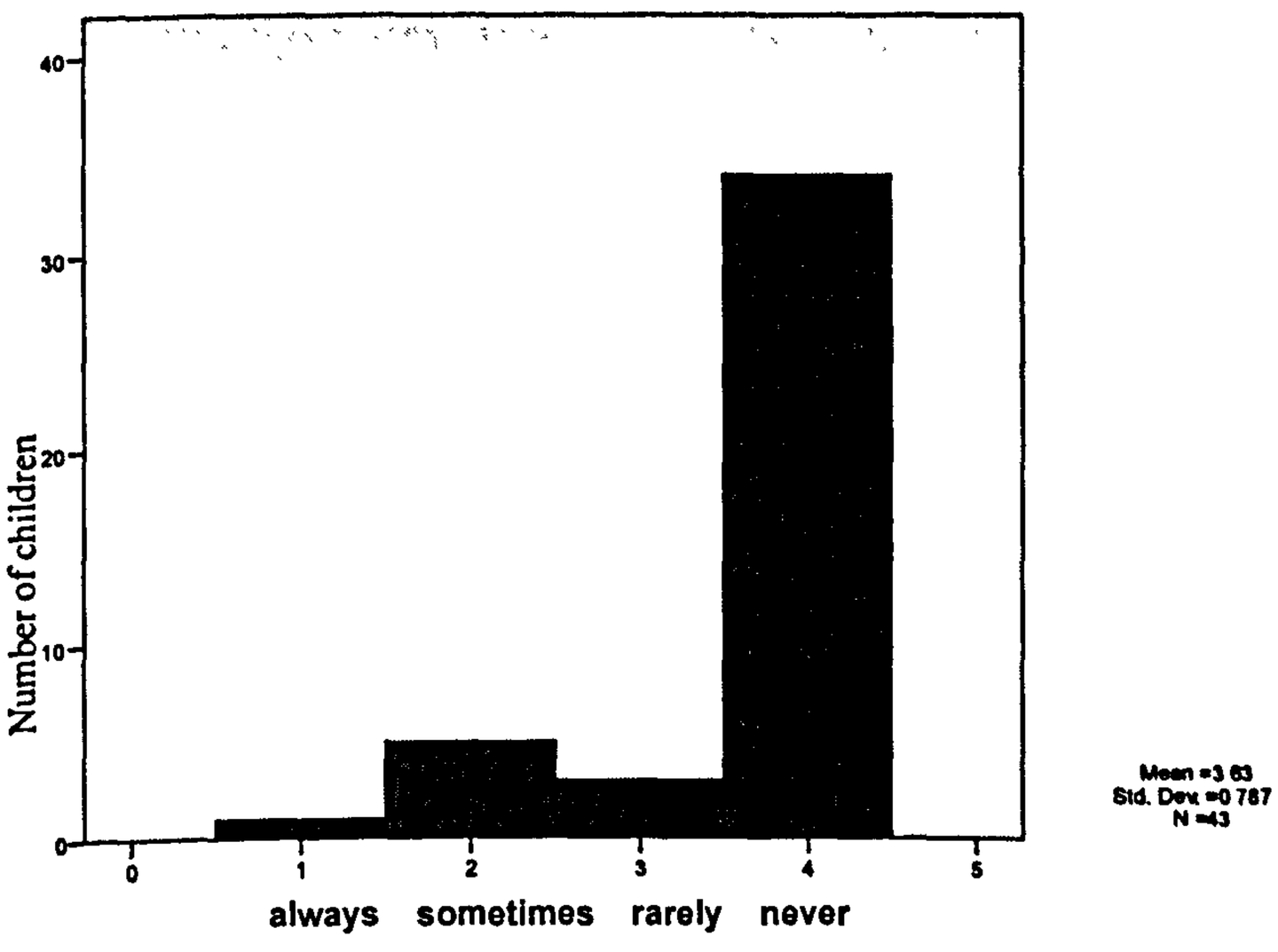
Table 16 – Not allowed to join in PA sessions

Activity session	Number of children responding	Always 1	Sometimes 2	Rarely 3	Never 4	Mean
Breakfast time	15	1(2.1%)	1(2.1%)	1(2.1%)	12 (25.5%)	3.60
Break time	42	1(2.1%)	10(21.3%)	3(6.4%)	28(59.6%)	3.38
PE time	43	1(2.1%)	5(10.6%)	3(6.4%)	34(72.35)	3.63
Lunch time	42	1(2.1%)	5(10.6%)	5(10.6%	31(66.0%)	3.57.
After school	19	3(6.4%)	2(4.3%)	14(29.8%	19(40.4%)	3.58

The majority of children were allowed to join in all of the above sessions, but some of the children were never allowed to join in. During breakfast time 12(25.5%) of children were always allowed to join in and only 1(2.1%) was not allowed to join in. This result was repeated for break time, lunch time and after school where 28(59.6%), 31 (66.0%) and 19 (40.4%) respectively were always allowed to join in and only 1(2.1%), 1(2.1%), 1 (2.1%) and 3(6.4%) were never allowed to join in. During PE 34(72.35%) of children were always allowed to join in and 5(10.6%) were sometimes not allowed to join in. There could be various reasons given for this. One parent in the survey said that she felt that her son was 'encouraged to sit at the side' during the class and that he found out that a 'sore tummy was the thing to say' as he was constantly asked if he had a sore tummy in the class so that if he said he had he was allowed to sit out (parent no 8). This parent also requested that the SEN assistant be available to help her son integrate with other children

during lunch and break times, but this was denied as she was told that SEN assistants are only available during class times. Another parent whose son has ADHD states that her son 'is excluded from physical activity because he cannot control his physical abilities and come back to classroom normality' (parents no 22). A few other parents also state that their children have to sit out of the PE sessions offered at their schools due to the fact that the teachers quote' don't know what they are doing' and that ' they do not understand my son's disability'.(parent no 33). The PE results are illustrated in chart 12 below.

Chart 12 – Not allowed to join in PE activities



Q12. Overall does your child's ASN/disability prevent them from taking part in physical activity sessions offered at their school?

Table 17 – Child's ASN/disability prevent the from taking part in physical activity sessions offered at their school

ASN/disability Prevent		Frequency	Percent
	yes	20	42.6
	no	25	53.2
	Total	45	95.7
Missing	NR	2	4.3
Total		47	100.0

The parents were asked if they felt that their child's ASN prevented them from taking part in physical activity sessions at their school. Twenty parents 42 (6%) answered yes and 25 (53.2%) answered no. Two parents declined to answer the question. If the parents answered yes to the questions above they were asked to give reasons why they thought that was the case. Various reasons were given as to why parents felt that their child's ASN prevented them from taking part in physical activity session offered at their school. The majority felt that the lack of understanding of the child's ability was one of the main reasons. Parent number 29 stated that "My child's physical disability means he will never be the best at any sport and in teams other children do not want to accommodate him on their team because they will not win". Another parents stated the there was not enough patience and understanding given to her son resulting in him sitting out the majority of the time. One parent said that her son missed out on PE because he attended a nearby learning centre every morning (parent no 6). This means that this child is not receiving any PE during the school week. Parent number 44 stated that there was not enough patience and understanding given to her son, which resulted in him sitting out sometimes or not enjoying the activities offered. One parent said that the 'school community involves my child at every level of opportunity, improving his potential by offering additional support if required (parent no 10).

It can be concluded from this section that the majority of parents felt that their child was fully included and enjoyed the PE sessions that were available at their school; however, this feeling was not reciprocated throughout the other physical activity session available. This was evident during breakfast and afterschool clubs where only a few children actually attended these sessions and of the ones that did only a few of them actually enjoyed and felt included in the sessions. This section also investigated the amount of physical activity time that was available during the school day. There were varying degrees of participation reported. This ranged from 60 minutes to 515 minutes per school week. It was also reported that 8 (17%) children were receiving the recommended 2 hours of PE per week. These results will be discussed further in the discussion chapter.

The last section of this study will look at the types of activities that the children take part in and would like to take part in, along with ascertaining their knowledge of what is available for them and finding out if they know where to access it.

ACTIVITIES THAT THE CHILDREN TAKE PART IN OR WOULD LIKE TO TAKE PART IN AND KNOWLEDGE THEY HAVE OF DISABILITY SPORTS

<u>The questions involved in this section are;</u>

Q13. List the favourite activities that you child currently does

Q13. List the favourite activities that you child would like to do

Q14. Does your child know of the name of any athlete with a disability?

Q15. Do you, as a parent, know where to obtain information about physical activity sessions for your child.

Q.16. Would you like to be given more information on activities available?

<u>Q13. List the favourite activities that you child currently does</u>

The parents were asked to indicate the 3 favourite activities that their child currently does and the 3 favourite activities that they would like to do.

Table no 18 below illustrates the favourite activity that the children in this study participate in. (See appendix 16 for the full results of this question)

Table 18 – Ist choice of favourite activity that child participated in

Activity	Frequency	Percentage
f/ball games	11	23.4
swim	7	14.9
No answer given	4	8.5
gym work	3	6.4
computer	2	4.3
art	1	2.1
ballet	1	2.1
chess	1	2.1
climbing	1	2.1
drama	1	2.1
f/ball kicking	1	2.1
games	1	2.1
gymnastics	1	2.1
heeling	1	2.1
judo	1	2.1
music	1	2.1
reading	1	2.1
playing	1	2.1
rugby	1	2.1
running	1	2.1
s/board	1	2.1
scooter	1	2.1
tennis	1	2.1
tv	1	2.1
walk	1	2.1
Total	47	100.0

When asked what sports the respondents had experienced, football 11(23.4%) and swimming 7(14.9%) were reported to be the most frequent sports that were participated in. When asked what sports the respondents would like to participate in again football 6(12.8%) and swimming 6(12.8%) were the most popular. See table 19 below;

Table 19 –Ist choice of favourite activity that child would like to participate in

Activity	Frequency	Percent
No answer given	8	17.0
f/ball	6	12.8
swim	6	12.8
Horse riding	3	6.4
running	2	4.3
badminton	2	4.3
art	2	4.3
aerobics	1	2.1
archery	1	2.1
athletic	1	2.1
b/ball	1	2.1
baseball	1	2.1
Bible class	1	2.1
Contact sport	1	2.1
Ride a bike	1	2.1
cycling	1	2.1
gymnastics	1	2.1
piano	1	2.1
jogging	1	2.1
sport	1	2.1
tap dancing	1	2.1
ten pin	1	2.1
wrestling	1	2.1
Wheelchair tennis	1	2.1
Wheelchair basketball	1	2.1
Total	47	100.0

The above responses corresponded to a survey carried out by Sports England in 2001 where swimming (37%) and football (14%) were two of the top five sports participated in during school time, by children with a disability. The Sports England report also stated that swimming (68%) and football (34%) were the most popular sport participated in outside of the school curriculum. It is apparent, from the tables above, that children with ASN/disabilities have limited participation in a wide range of PE activities and the second table (activities they would like to do) illustrates that there are a great deal of activities that they would like to try but are not given the opportunity to.

Parents were asked if their child knew the name of any athletes with a disability.

Q14. Does your child know the name of any athletes with a disability?

Table 20 – Know any disabled athletes?

Know name of athlete with a disability	Frequency	Percent
yes	3	6.4
no	44	93.6
Total	47	100.0

Only 3 children (6.4%) were reported to know the name of an athlete with a disability. This represents a very low figure which means that 44 (93.6%) of the children in this study did not have any role model to look up to. If the children do not know of any athletes with a disability then they might not be aware of the sports that are available for them to participate in.

Q15. Do you, as a parent, know where to obtain information about Physical Activity sessions for your child?

Table 21 - Where to obtain information about sessions that are available.

Know where to obtain information	Frequency	Percent
yes	24	51.1
no	23	48.9
Total	47	100.0

Nearly 50% of the respondents did not know where to obtain information about physical activity sessions that are available for their children to attend, out with the school day.

The majority of parents who did report knowing where to obtain information stated that this was found mainly in sport centers, libraries and given by Glasgow City Council.

Q16. Would you like to be given more information about the Physical Activity sessions available?

Table 22 – Want more information

Given more information	Frequency	Percent
yes	35	74.5
no	12	25.5
Total	47	100.0

Parents were asked if they would like to be given more information about physical activity sessions that were available for their children. A large proportion of the respondents 35(74.5%) wanted to be informed about the physical activity sessions that were available for their children. Twelve (25.5%) did not want any more information.

It can be concluded from this section that the majority of children with ASN/disability in this research project have limited knowledge of the range of disability sports that are available and where they can obtain information about them. Swimming and football are reported to be the most attended activities but the children do not know the names of any athletes who compete in these sports.

CONCLUDING COMMENTS OF THIS RESEARCH PAPER

The main findings of this results chapter can be summarized as follows, with more in depth discussion to follow in the discussion chapter.

1. The majority of children in this study were males (80.9%) which corresponds to studies that have reported that boys are far more likely than girls to have special needs (Docking 1990).

2. The majority of children in this study were reported to be on the Autism spectrum (31.9%).
3. The most common method of travelling to school was walking (38.3%), which corresponds with The PASS survey (CAHRU, 2003/2004).
4. 19.1% of parents felt that their children were prevented from taking part in breakfast and after school activities due to their method of transport to school (bus). It was reported that the parents felt that lack of flexibility in buses timetabling was a major barrier to their children attended these sessions. This was in agreement with a study by Sports England in 2001.
5. Extra curricular activities were poorly attended. Only approximately 11% of children attended. This again was in agreement with the Sports England study where it was reported that 14% of children with a disability attended compared to 45% of able bodied children. Various reasons were given for this lack of attendance, namely lack of understanding, transport and lack of enjoyment from the children.
6. Varying degrees of participation in physical activity during a school week were reported. This ranged from 60minutes in one child to 515 minutes in another. It was reported that the majority of children in this study (74.4%) were not receiving the American College of Sports Medicine recommendation of 60 Minutes of activity per day. Only 8 males (21%) and 3 females (33%) were reported to be taking part in 60minutes per day. These figures are much lower that the Scottish Executive Health Survey (2003) where 74% of boys and 63% of girls achieved the recommendation of 60 minutes of physical activity per day.
7. The majority of children in this study were reported not receiving the recommended two hours of PE a week (Target 2 of the Physical Activity Task Force, Scottish Executive 2007). Only 8 (17%) received 2 hours. Approximately 73% received 60 minutes or more of PE per school week.
8. The majority of parents in this study reported that their children enjoyed and were given the same opportunities as other children in PA sessions offered at their school.

9. The majority of parents felt that their children were fully included in some of the physical activity session offered at their school, especially during PE. However, it was reported that during lunch and play time this feeling changed slightly and only some parents felt that their children were fully included.
10. During PE it was reported that 9 (19.1%) of children were sometimes asked to sit out during the lesson.
11. When parents were asked 'does your child's ASN/disability prevent them from taking part in PA sessions offered at their school' 42.6% said YES. The main reason given for this was the lack of understanding of the child's disability and the lack of knowledge about the abilities of the children.
12. Swimming and football were reported to be the most frequent sports that were participated in.
13. Only 3 parents reported that their children knew the name of an athlete with a disability. This is a much lower figure than reported by Sports England (2001) where it was stated that 'only 36% of young disabled people compared to 70% of the general population of young people named a sporting figure that they particularly admired or looked up to' (Sports England 2001 p40).
14. Nearly 50% of the parents did not know where to obtain information about physical activity sessions that their children could attend out with the school day.
15. 74.5% of the parents wanted to be informed about PA sessions available for their children.

Above in a report of the key findings of the result chapter which will be discussed further in the discussion chapter.

CHAPTER FIVE -DISCUSSION

The purpose of this chapter was to discuss the results found in the previous chapter on the physical activity sessions that were available to children with ASN/disability in a mainstream primary school setting. It also aimed to discuss if the parents felt that their children were given the same opportunities, during these sessions, as other children in the school.

The first section of the chapter will examine the main characteristics of the children involved in this research project. Further discussions will be aimed at the physical activity sessions available and to establish if the parents felt that their children were included and lastly what activities their children take part in and would like to take part in.

Personal characteristics of the children involved in this study

The majority of children in this research project were reported as having Autism (19.1%) or Asperger's (12.8%). A report from Her Majesty's Inspectorate of Education (2006) states that 71% of pupils with Autism Spectrum Disorder (ASD) in primary schools were in mainstream classes and around 20% of primary school children have not been diagnosed. The National Health Service (2001) reported that ASD affects 60 per 10,000 (0.6%) children and four times more males than females (Ehlers and Gilbery 1993). The results of this research project are in agreement with these findings as it was reported that only 2 of the 9 children, who had Autism, were girls and of the 6 children reported having Aspergers only 1 was a girl.

The National Autistic Society (2001) argues that the inclusion of children with ASD into mainstream schools will place additional strain on schools to deliver an inclusive education to allow children, with ASD, to fulfill their full potential. The National Autistic Society (2001) also argues that children with ASD pose a huge challenge to any type of school environment and that up until a few years ago children with 'autistic' diagnosis either did not enter mainstream schools, or only spent a short time there.

In January, 2008, Lee Scott, a conservative MP from Ilford North in England introduced a private members bill to Parliament called The Education (Children with Autism) Bill. This bill proposes that schools review their special needs provisions for children with Autism or Asperger's syndrome. Scott stated that 'Existing legislation, guidance and codes or conduct are far from silent on what services and assistance should be made available to autistic children and their families and there is a need to try and improve education for autistic children'. He also stated that 'There is no lack of good will, but often we fail to follow through existing laws and good intensions, and in these circumstances many children are being left behind' (Scott 17.1.08).

Looking at the results in Table 3 of this research project, 9(19.1%) of the children in the study has a brother or sister who also has additional support needs or a disability. A report by Dot Lawton (2008) stated that about 17,000 families in the UK have more than one disabled child and approximately 6,500 of these families are caring for two or more severely disabled children. The report also provided evidence that these families have 'additional disadvantages compared with families with one disabled child' (Lawton 2007. summary report). These disadvantages included more extra costs, unsuitable housing, mothers reported to be more likely to have a disability themselves and fathers more likely to be out of work. The reasons stated might be why very few children in this study take part in after school activities as it may be particularly difficult for families with two or more children with a disability to access the support they need.

<u>Method of travelling to school and its effect on participation levels in physical activity</u>

Studies show that opportunities for children in the UK to be active are declining (National Heart Forum 2007). Car journeys to school have doubled in the last 20 years, with 30% of children going to school by car, less that 50% walking and 1% cycling (Department of Environment 1999).

In this study the most commonly reported method of transport, that children used to get to school, was walking, with 18 children opting for this method (38.3 %). This result corresponds with the Physical Activity in Scottish schoolchildren (PASS) survey 2003/04 which stated that 'walking was the most common means of travel to school'. In the PASS survey it was reported that 55% of primary aged pupils walk to school. As most children travel to school the journey is an important opportunity for establishing the routines and habits of walking.

The second most common method of travelling to school was walking and taking a lift in a car, with 9 children opting for this method (19.1%). Eight children travelled to school by car, which again corresponds to the PASS survey, where it was reported that about one in ten pupils reported travelling by car.

Parents were asked if they felt that their child's method of transport to and from school prevented them from taking part in breakfast and after school clubs. Nine parents (19.1%) answered yes to this question. They stated that their children could not attend these sessions because they travelled to school by school bus and the timetable of the bus company was not flexible in their finishing times. One parent stated that the 'school bus brings him straight home (the child) after school so he can't go to any after school clubs' (parent no 47).

These results confirm the findings of previous studies carried out by Sports England in 2001 where it was stated that only 14% of young people with a disability reporting taking part in extra curricular sport. This proportion was found to be much smaller than that of the general population of young people surveyed (45%). Transport was reported to be a major barrier against young people with a disability taking part in extra curricular activities. The Sport England report also stated that 84% of young people with a disability only experienced sport and physical activity in a school setting which was confined to lesson time. Murray (2002) says 'Lack of appropriate support, which includes transport, forces young disabled people into dependency and created barriers to full community inclusion and participation' (Murray, 2002, p.3).

Extra curriculum activity, activity which is offered outside the normal school day, but is organised by the school, was very poorly attended. Only 6 children (12.8%) attended breakfast time activity and 5 (10.6%) attended after school activity. Various reasons for the children in this study not attending breakfast and after school activities were given. One parent stated that 'there was not enough patience and understanding given to their child and that resulted in him sitting out sometimes or not enjoying the activity' (parent no 44). Another parent stated that their child could not attend the extra curriculum sessions as they had problems with transport (parent no 47).

A report by the Department of Education in 1988 called Building on Ability argued that transport, for many disabled people, was the single most significant factor inhibiting them from participating in sport. This report also argued that the integration of disabled children into mainstream schools had reduced their sporting opportunities. It was suggested that this was because there may only be 1 or 2 disabled children in a school and specialist coaching relating to their disability might not be available. If this is the case then talented children, with a disability, who could go on and compete in competitions such as the Special Olympics or the Paralympics, might not be identified. Future Paralympic teams could suffer due to lack of participation (DOE 1989).

The SEN and Disability Act 2001 says that schools have to take reasonable steps to ensure that disabled pupils are not placed at a substantial disadvantage in relation to education and other services they provided. This means that the schools must anticipate and address barriers that could prevent children with ASN/disability participating in the full curriculum. The schools need to plan strategies to increase the extent to which pupils with ASN/disability can participate in the school day, to include breakfast and after school clubs. If children with ASN/disability are hoping to achieve the recommended physical activity target of 60 minutes of activity each day then attending and participating in breakfast and afterschool clubs may be a way of doing it.

Physical activity time available

This section of the chapter will discuss the amount of physical activity that is available, to the children in this research project, during a typical school week and to question if the parents feel that their child is fully or partially included in these sessions.

As discussed previously in the literature chapter, children should aim to be physically active, for at least one hour per day (HEA 1998; Department of Health 2004). In response to Scotland's poor health status a National Physical Activity Task Force was set up by the Scottish Executive in June 2001 to promote an initiative called 'Let's Make Scotland More Active. The objectives of this task force was to consider and make recommendations on a strategy for increasing physical activity in Scotland and they suggested eleven key target areas to work on in order to achieve this (See appendix 3). The main aim of Target 1 was to get 80% of primary school children physically active by 2007. Target 2 aimed to make progress towards all children taking part in at least 2 hours of quality PE classes a week. A major aim of his research project was to investigate if children with a disability/ASN in mainstream primary schools were achieving these targets.

The results of this research project as displayed in Chart 2 indicated that the range of activity time available varied from 60 minute to 515 minutes per school week. The chart also shows that only eleven children (8 males (21%) and 3 females (33%)) achieved a figure of 360 minutes or more of physical activity time per school week, which is more than 60 minutes a day. Thirty two children did not achieve the recommended 60 minutes per day. These results can be compared to the Scottish Executive Health Survey (2003) where it was reported that 74% of boys and 63% of girls achieved the recommendation of 60 minutes of physical activity per day. While the data presented in this research project indicates that the majority of children are not participating in enough physical activity to maintain heath, as recommended by the Department of Health (2004), it has to be noted that the figures reported have to be read with caution as it is only an indication of the time that is made available to the children and not a true figure of how much time they

actually take part in continuous activity. The questionnaire only asks how much time is available for activities that they take part in during the day, it does not ask how long they are active for.

The benefits of participating in physical activity, for the child with ASN/disability, is similar to those of the able-bodied child. These benefits are not just limited to physical health, but also include the psychological health, including the cognitive, social and moral development of children (World Health Organisation 2001). The opportunity to participate in physical activity allows the child to feel good about themself. It can also produce a sense of well-being. Additionally, when a child is successful in the activity that they are doing it can lead to an improvement in their self-esteem and self confidence. This can be particularly marked in disadvantaged groups, such as those with learning difficulties (Gruber 1986). The World Health Organisation (2001) argues that physical activity should be a normal part of growing up for young children and that throughout the formative years of life physical activity play an important part in their development.

<u>Physical education sessions made available to children during the school week.</u>

This research project also sought to examine the amount of physical education time that was made available to children with disability/ASN in a mainstream primary school setting.

In 2004, following on from the Physical Activity Task Force's work a Physical Education Review Group was established to review the place of physical education in Scottish Schools. This review group recommended that all schools should be making progress towards all school children taking part in at least two hours of quality PE classes a week. In this research project parents were asked how many times a week their children received PE and how long each session was. As the results indicates (See chart 3) only 8 (17%) of the children were reported to achieve the recommendation of 2 hours of PE per week. Fourteen (29.8%) were reported to only receive 60 minutes and 1 child only achieved 15 minutes a week. Approximately 73% (25) of the respondents reported that their child received 60 minutes or more of PE per school week which is in agreement

with the a report published by the Scottish Executive in 2006 that stated that in Glasgow the average weekly PE time was 68 minutes. The PE review group stated that it is important to ensure that 'disabled pupils have access to appropriate experiences of quality physical education' (PE Review, 2004, p.24) but it is apparent from the results of this research project that this is not the case for all the respondents in this study.

<u>The inclusion of children with disability/ASN into physical activity sessions offered at the schools</u>

As well as looking at how much physical activity time that was available to the children, involved in this research project, questions were also asked about whether the parents felt that their child was fully included in these sessions or were they given something else to do.

In terms of inclusion effectiveness, a substantial number of parents (72.3%) indicated that they felt that their children were fully included in the physical education sessions offered at their schools, but in contrast 9 (19.1%) felt that they were only sometimes included (See table 9). Children with a disability/ASN have a variety of needs which need to be addressed in different ways. Teachers face many challenges to fully include children with disabilities/ASN into their lessons. Various studies, as discussed in the literature review, argue that teachers feel that they have had insufficient training and practical experience as well as inadequate support to allow full inclusion to take place (Robertson, 2000; Brownlee and Carrington; Vickerman 2002; Booth 2003; and Hamill 2005). Children with disabilities/ASN do not automatically need a curriculum that is different but they need one which is motivating, interesting, stimulating and accommodating and takes into account their learning style which will provide an opportunity for them to fulfill their full potential. (Hamill 2005).

Children with disability have a fundamental right to inclusive education, which is supported through legislation, and the physical needs of these pupils must be met (Hayes 2003). Hayes states that teachers 'need to have an open mind, positive attitude and a

readiness to review and modify existing learning and teaching strategies' (Hayes and Stidder 2003, p49) in order in ensure that children with a disability are given maximum opportunity to participate and perform. Hayes also argues that teachers need to recognise individual pupil's needs and treat each child 'equally but different' (Hayes 2003 p49).

Block (1999) argues that because children with a disability comprise the minority in schools their specific needs are often not being met.

> *An inclusive school is a place where everyone belongs,*
> *is accepted, supports, and is supported by his or her*
> *peers and other members of the school community*
> *in the course of having his or her educational needs met'.*
>
> Stainback and Stainback (1990, p.1)

Looking at the results for lunch and break times (See table, 9) it is evident that not all parents believe that their children are fully included in the playground activities. During break time 4 (8.5%) and during lunch time 4(8.5%) parents stated that they their children were never included in the activity sessions offered at their school. No reasons were given for this but it could be because the sessions were unstructured and the children did not feel able or confident enough to take part in. Woolley et al (2003) in a report on inclusion of disabled children in primary school playgroups argued that there are three main barriers to inclusion in play for children with a disability. She states that these are organisation, social and physical barriers. She suggests that organisation barriers result in lack of play opportunities due to children with a disability having a full time SEN in attendance during break times which could restrict the activities that the children did. Staff responsible for the children could be afraid that they would hurt themselves in some of the play activities and prevent them taking part. Social barriers according to Woolley were that children with a disability spent a great deal more time with staff which could restrict their opportunities to mix and play with their own peers. This could prevent the children making friends. She also suggested that these children sometimes felt more

comfortable in adult company than in the company of their own peers. Some physical barriers existed to the inclusion of children with ASN/disability in playground activities. These related to access to the playground, equipment within it, playing surface and the design of the playground.

In addition to questions asked about inclusion in the physical activity sessions offered at the school, the parents were also asked if their child was given something else to do instead of joining in with the rest of the class. During PE the results were very encouraging as they demonstrated that the majority of children (63.8%) were included in the PE sessions run at their school and not given something else to do. During PE, 6 (12.8%) children were sometimes given something else to do and 2 (4.3%) were always given something else to do. Participating in only selected activities many enforce the idea that children with ASN/disability have different interests and that they are 'more different than similar to individuals without disabilities' (Stainback and Stainback 1990, p.45). However it has been acknowledged that children with ASN/disabilities are more easily 'included' in certain activities for example outdoor activities and dance (Penny 2002) than in team activities. In a survey by Brownlee and Carrington (2000) it was reported that trainee teachers did not feel adequately prepared for their role as inclusive teachers. They also felt that they lacked theoretical knowledge in methods on how to include all children into a session.

There is a great deal of debate on the inclusion of children with ASN/disabilities and whether this will have a negative affect on the physical education programme for other children in the class (Walker and Bullis 1991). Lamster (1998) found that the effects of integration on non-disabled children meant that some activities had to be 'slowed down'. This could be the case if the sessions are not planned to accommodate all ability levels. Studies, that support inclusion, have shown that the inclusive process can be successful and that the curriculum has been reinforced with the necessary practical and instructional adaptations to suit the child's needs. Linert, Sherrill and Myers (2000) and Block and Zeman (1996) agree that children with ASN/disabilities, when supported, can be included in regular physical education classes without compromising the programme for the other

children. Additionally Block and Zeman (1996) suggest that proper support can bring about successful inclusion and this should be determined by the child's support team and written into their individual physical education program prior to inclusion.

For inclusion in physical education to work children with ASN/disability have to be seen to have ability rather than disability. To ensure that children with ASN/disability are included in all aspects of physical activity in schools 'Teachers should aim to give every pupil the opportunity to experience success in learning and to achieve as high a standard as is possible (QCA, 1999, p28).

Given the same opportunity and enjoy the sessions.

Parents were asked if they felt that their child was given the same opportunity to participate in physical activity sessions offered at their school and if they enjoyed them. The majority of parents felt that their children were given the same opportunity as other children, without ASN, to take part in physical activity sessions offered at their schools. Looking at the results illustrated in Table 8, 40 (85.1%) of parents said that during PE their child was always given the same opportunity. The results from other physical activity session throughout the school day were in agreement with these findings. If schools are offering children with a disability/ASN the same opportunities, to participate in physical activity as other children, then they are showing evidence of inclusion which will counteract discrimination and an appreciation of diversity of individuals and groups within society.

The majority of parents in this research project indicated that they felt that their child enjoyed the physical activity sessions offered at their school (See Table 7). During PE 56.4% of the children were reported to always enjoy the sessions but 15.4% said that they never enjoyed PE. Unfortunately there were no specific questions set to ascertain the reason for this answer, however, a number of statements were collected from parents when asked if their child's ASN prevented them from taking part in physical activity sessions offered at their school. These statements could be looked at to examine why

some of the children felt that they did not enjoy PE. Parent number 9 stated that their child 'had weak muscle tone so can't keep up with peers'. Parent number 23 stated that their child was 'always last to get picked' and parent number 44 stated that 'there was not enough patience and understanding given to their child in the physical activity sessions offered at their school'. Further research would have to be carried out to investigate the real reasons for this lack of enjoyment. More training has to be given to teachers on how to include children with ASN/disability so that all children can take part and enjoy the PE sessions offered at their schools.

During lunch time the majority of children (60%) were reported to say that they always enjoyed physical activity, 32.5% that they sometimes enjoyed it, 2.5% rarely enjoyed it and 5.0% never enjoyed it (See Table 7). Of the 6 children who attended breakfast time activity, 33% said they always enjoyed it, 33% sometimes enjoyed it, 16% to rarely enjoy it and 16% to never enjoying it. Only 5 children reported attending after school activities. 60% of these children reported always enjoying it, 20% sometimes and 20% never. The results in this research project provide evidence that the majority of children with a disability in a mainstream setting do not attend after school activities and of the ones that do attend only a few of them actually enjoy it. If the children do not enjoy the activity then they will be less likely to continue doing it and this could have consequences in terms of their future health and well being as well as social aspects. Tony Blair said that 'it is in schools where children first get to try sport' (DCMS, 2000, p. 2). Physical activity and sport have the potential to increase individual confidence and self esteem as well as benefits in terms of improving mental and physical health (Health Education 1998) and children with a disability should be encouraged to take part as much as possible to gain these benefits.

Individual provision and asked to sit out during the physical activity sessions

Parents were asked if their child received individual provision during physical activity sessions at their schools. The results of this question were very widely spread, as can be seen in the table 10. Some children were always given individual provision and this

could be because they need extra help in being able to achieve the tasks set. Unfortunately there were no questions in this research project to ascertain why these children were given this individual provision during the physical activity sessions.

As discussed earlier in the literature review Brownlee and Carrington (2000) argues that teachers wanted more practical experiences and knowledge about including people with a disability into mainstream classes. Smith (2004) agrees with this theory when he suggests that many teachers lack confidence in including children with a disability into their class. All children should have access to appropriate physical activity sessions. Lavay (1992) argues that the training teachers receive may not fully prepare them to be able to provide appropriate individual programmes for children with ASN/disability. The UK government in their document Count Us In (2002) states that 'Schools need to be more flexible and responsive in how they plan and deliver programmes for pupils if they are to succeed in meeting the needs of all their pupils successfully' (HMIE, 2002, 5.9). This document also suggest that if effective inclusion is to occur then teachers have to 'develop a learning and teaching approach which are responsive to pupils' personal learning styles'(HMIE, 2002, 5.9). The education of pupils with ASN/disability is a key challenge for all schools. Vickerman (2000) argues that 'equality for pupils with SEN is both socially and morally right in any modern society' (Vickerman, 2000, p.47). She also argues that giving equality to children with ASN/disability 'is not about treating all pupils in the same fashion but recognising individual pupils needs, then plan accordingly for them' (Vickerman, 2000, p.47). Dyson (1999) agrees with this theory and suggests that pupils with ASN/disability should be 'treated equally but different' and this would help to meet their individual needs for equal accessibility to physical activities offered at their schools.

Parents were also asked if their children were asked to sit out for part of the activities offered at their school. The majority of children were never told to sit out during the physical activity sessions offered at their school but unfortunately some of the children were reported to sometimes be asked to sit out which means that they were not always included in the activities (See table 12).

Looking at the PE sessions 29(61.7%) were never asked to sit out but 9(19.1%) were sometimes asked to sit out and 1 child was always asked to sit out. The reasons for these results could not be ascertained as no children were asked why they were sometimes told to sit out. The parents were asked if their child felt part of the class. The majority of children said that they always felt part of the class but there were some children who felt that they were never part of the class. Children with additional support needs and or disabilities do not always interact with their peers without disabilities and this can lead to social isolation (Goodwin and Watkinson 2001). If the children feel that they are on the periphery of an activity then this could be a negative experience for them. Various researchers have argued that negative experiences in PE lessons may discourage children form taking part in sport and exercise in the future. (Coakley and White, 1992). In order for the child with ASN/disability to have a better chance of being socially accepted they need to be able to learn, play and develop alongside each other, within the local community of the school (DfES, 2004).

Sugden and Talbot (1998) advocate that teaching pupils with SEN is merely an extension of existing mixed ability teaching. Additionally Vickerman et al (2000) argues that teachers should take action and 'modify and adapt existing practices in order to facilitate full entitlement to the National Curriculum of Physical Education (NCPE) for pupils with SEN' (Vickerman 2000 p52). Sugden and Talbot (1998) suggests that a better way to include all children in PE is to move away from a traditional method of teaching where children are learning to move to a method of moving to learn. When a teacher is planning a session Vickerman (2000) suggests that they should start from the premise of full inclusion within the activity then adapt or modify the activity to suit. She also suggests that the activity should be adapted to suit the child rather than the other way around. All children should be accommodated into the activity somehow no matter what their ASN/disabilities are. There are many ways that this can be done, especially in primary schools, where adapted equipment can be used (for example larger balls, smaller court sizes, less players in a team) and also TOP Sportability programmes incorporated into classes.

Sage (1986) states that 'Early play experiences carried out in group situations can enhance the development of social skills' (Sage1986 p 59). He also argues that sport experiences provide opportunities for learning about co-operation with team mates and leadership skills. If children are told to sit out during physical activity sessions offered at their schools then they are not being given the opportunity to develop these skills. Additionally Pueschel (1990) argues that children can achieve massive benefits through participation in physical activity. These can include body awareness, improved self esteem, a chance to make friends and have fun, develop social skills and develop a feeling of belonging. According to the Department for Education and skills and the Department for Culture, Media and Sport (2002) 'all children, whatever their circumstances or abilities, should be able to participate in and enjoy PE and sport' (DfES 2002 p1). Furthermore Cale (2000) argues that schools are the ideal setting for the 'provision of PA because they provide one of the few opportunities to address the full range of individuals in a population' (Cale 2000 p 71).

In a study conducted in 2003 by the NOP for the Disability Rights Commission (DRC) it was reported that half of the respondents (49%) said they had missed out on PE or games due to their disability. Around a half (46%), who said that they had missed out on PE or games, felt that they would have been able to take part if the school had taken better account of their disability. (DRC, 2003). The responsibility for making sure that the children are not left to sit out during the physical activity sessions offered at their schools lies with the teacher and the school. Solity (1993) argues that planning and delivering a curriculum that is accessible by all is a complex and skilful process. He also suggests that learners have different needs which need to be address in different ways and that 'differentiation is the curricular strategy which caters for this variation' Hamill (2005 p22). It was acknowledged in a document by the HMIE (2002), called Count Us In, that 'schools need to be more flexible and responsive in how they plan and deliver programmes for pupils if they are to succeed in meeting the needs of all their pupils successfully' (5.9). Teachers need to ensure that their teaching meets the statutory requirements to facilitate inclusion and accessibility for children with ASN/disabilities in their classes.

Parents were asked if their child was given something else to do during the physical activity sessions offered at their school. The results (See table 13) show that the majority of children (63.8%) were included in the PE sessions run at their school and not given something else to do. During PE, 6 (12.8%) children were sometimes given something else to do and 2 (4.3%) were always given something else to do. Participating in only selected activities many enforce the idea that children with ASN/disability have different interests and that they are 'more different than similar to individuals without disabilities' (Stainback and Stainback 1990, p.45). However it has been acknowledged that children with ASN/disabilities are more easily 'included' in certain activities for example outdoor activities and dance (Penny 2002) than in team activities. In a survey done by Brownlee and Carrington (2000) it was reported that trainee teachers did not feel adequately prepared for their role as inclusive teachers. They also felt that they lacked theoretical knowledge in methods on how to include all children into a session.

Parents were also asked if their child was given different equipment from the rest of the class during the physical activity sessions offered at their school. The results from this question indicate that the majority of children are given the same equipment as the rest of the class during the physical activity sessions (see table 14). This could be because the children are quite capable of using this equipment or it could be because the school does not have any adapted equipment that they could use.

Facilities and equipment are not always available to meet the specific needs of the children with ASN/disabilities in the class. The physical education class could be modified to enable all individuals to participate safely, successfully and with satisfaction. The Youth Sport Trust have created a specially designed programme called TOP Sportsability which focuses on the integration of disabled and non-disabled young people through a variety of sporting challenges which could be performed during the PE class. This is done through a series of inclusive equipment sets and resource cards. There are five inclusive games included in the resources, which are also played by elite participants in the Paralympic games. These include boccia, goalball, polybat, table cricket and table hockey. The Youth Sport Trust argues that these games will offer the opportunity to

integrate disabled and non-disabled young people in unique sports challenges. Training on how to use the TOP Sportsability programme can be given to teachers.

All children, no matter what their ASN/disability is, should be given the opportunity to participate in and enjoy the physical activities sessions that are offered at their school and it is the teacher, along with the school, responsibility to ensure that this is the case. Additional training may be needed in order for this to happen and this should be given if required.

Activities that the children participated in and would like to participate in

The last section of this study will look at the types of activities that the children take part in and would like to take part in, along with ascertaining their knowledge of what is available for them and finding out if they know where to access it.

The parents were asked to list the favourite activities that their child currently took part in and the ones they would like to take part in (See Table 18, 19 and appendix 16). The results of this research project confirm the findings of previous studies from Sports England, where it was reported that football and swimming were the most frequent sports that were participated in by children with a disability. No questions were asked why this was the case but it has been suggested that this could be 'because swimming is a sport that appeals to a cross section of people because, whether you're doing an easy or hard workout, it doesn't place too much pressure on the joints and keeps you fit and healthy at the same time' (Welsh Assembly Government, 2006, p.1). Football, on the other hand is all about fun and enjoyment; it unites people and makes social integration much easier. The chance to be part of a team and to contribute to its success is a precious experience for anyone. The recognition that disabled people gain from their able-bodied peers gives them pride and strengthens their self-esteem. Football teaches important life skills such as team spirit, fairness and conflict management. Many other sports were participated in but only by a few children. For example only 1 child had participated in climbing, rugby

and tennis. From the results of this research project it is evident that children with ASN/disabilities have limited participation in a wide range of PE activities. Table 19 (activities they would like to do) illustrates that there are a great deal of activities that they would like to try but are not given the opportunity to. Again swimming and football were the two most favorite sports that the children would like to participate in. Many other sports were mentioned, for example, contact sports, wheelchair tennis and basketball. Opportunities should be given to the children to participate in these sports.

Parents were asked if their child knew the name of any athlete with a disability. Not surprisingly only 3 children (6.4%) said that they did. This represents a very low figure which means that 44 (93.6%) of the children in this study did not have any role model to look up to. These results correspond to a study done by Sports England in 2001, which stated that 'only 36% of young disable people compared to 70% of the general population of young people named a sporting figure that they particularly admired or looked up to'.(Sports England 2001 p 40) . Great gaps exist in knowledge in the subject of disability sport. The poor results show that even increased reporting in the media has not contributed toward increasing the level of awareness and knowledge that people have about sport for athletes with a disability. Media coverage of disability sport tends to describe the performance as a personal achievement. It portrays the athletes as 'victims' or courageous people who 'overcome' the 'painful' experience of disability in order to participate in sport (Thomas and Smith 2007). De Pauw (2005) argues that visible role models are very valuable to the development of disability sport and to the encouragement of sports participation by all age groups. She reports that, since the 1980's, athletes with a disability have been features in media coverage, but this coverage is still low 'as is the comfort level of the populace at seeing these athletes featured (De Pauw 2005, p14). If the media could cover disability sport as a sporting event first and the disability as a distant second then the disability sport movement could be perceived as real. Howe (2001) argues that a change in society's perspective and understanding of disability sport is needed and the media have the power to change this. If children with ASN/disabilities do not have any role models to aspire to then this will not give them any encouragement to become involved in disability sports.

IMPLICATIONS

This research project identified the existing physical activity sessions that were available to children with disability/ASN in a school day. In doing so it has highlighted the gaps in sporting provisions and the barriers the children have to override in order to participate in these sessions. While data in this research project was limited evidence indicates that further research is needed in order to establish how these barriers can be overcome.

Despite growing policy and legislation promoting inclusion of children with ASN/disability into mainstream education more research is needed to investigate the effectiveness of these policies. Particular interest to this researcher would be how the effectiveness of this inclusion is towards participation in physical activity. It was reported in this study that young children with a disability/ASN are more likely to participate in physical activity during the school day than they were out of school. Researchers argue that it is vital that positive foundations to sport and physical is established in the school setting (Coakley and White, 1992; Sportscotland 2004). To achieve this it is important that opportunities are made available for the children to take part in a variety of physical activity sessions. This should involve opportunities to be able to develop skills in a variety of activities, gain confidence, team building and to develop positive attitudes to health lifestyles. Barriers to participation levels have to be addressed. The main barriers to participation in physical activity for the children are lack of understanding, attitudinal, physical, transport and finance, equipment and awareness. The nature of a child's ASN/disability should not prevent them from participating in physical activity although certain adaptations may have to be made. More research is needed to determine how much physical activity is available to children with ASN/disability and the barriers against them taking part. This in turn would raise knowledge and awareness about how much physical activity they actually participate in. this knowledge could then be used to ensure that equal opportunity is available to all.

Implication for Practice

From the findings of this research project it is possible to offer the following implications for policy makers and practitioners to address.

Looking at the results in this research project nearly 50% of the parents did not know how to obtain information about physical activity sessions that their child could attend out with the school day. This lack of awareness of current provision is a major barrier to low participation levels in after school activities and it has to be addressed by agencies concerned. Children with disability/ASN, in mainstream education, tend to be dispersed very thinly and although this may mean that they have more opportunities to become socialized into mainstream society it may also mean that in terms of sporting opportunities they may be losing out. Information access points in school could be established to make parents aware of the sporting activities that are available for their children out with the school day.

To enhance inclusive opportunities in physical activity sessions offered at the schools, more training opportunities should be made available for teachers to become familiar with inclusive practice in a PE context. In-service training and continuing professional development for teachers should be subject specific and practically orientated. Practically based training opportunities should include strategies for including children with disability/ASN into mainstream curriculum activities.

CHAPTER SIX - CONCLUSION

This study has established the current opportunities available for participation in physical activity for children with ASN/disabilities using a sample of mainstream primary schools in Glasgow. In addition it has explored some of the personal experiences of these children in an effort to suggest how improvements may be made in this area. The empirical study reported here has demonstrated that children with ASN/disabilities in a sample of primary schools in Glasgow participate to a varying degree in physical activity during the school day. It has also revealed that, although many school children are given the same opportunity to participate in physical activity as their able- bodied peers, there are still a considerable number of children who are excluded from these activities.

This investigation has demonstrated that although there are an increasing number of children with ASN/disability now being educated in mainstream schools, in some cases more could be done to integrate these children better, particularly in the areas of PE and physical activity. It is evident that the move from 'special' to 'inclusive' schooling has not always been straightforward and is often still affected by perceptions and attitudes towards disability. In addition it has highlighted the importance of developing experienced and skilled teaching staff who can fully implement new approaches to children with ASN/disabilities in mainstream schools. The report has shown that in some cases, there are still low expectations of the abilities of children with ASN/disability because of their perceived lack of cognitive skills. Therefore the importance of support for teachers to enable them to adjust and adapt to the pupil's different needs cannot be overemphasised.

The report discovered that increased participation in physical activity for this minority group can only be achieved if barriers faced by young disabled children are fully understood and acted upon. Specific guidance, support and training has to be offered to the people involved in the delivery of physical activity and physical education in order to ensure that children with ASN/disabilities are given an equal opportunity to participate in sessions with their able bodied peers. In order to achieve best practice training

opportunities at both Initial Teacher Training and post graduate levels need to be developed to give pre-service and in service physical educationalist the knowledge and skills to teach physical education to all children in their class, including those with ASN/disabilities.

The lack of similar studies in this field has restricted the extent to which this geographical sample can be compared and contrasted with studies elsewhere. In addition this study was carried out with a relatively low number of participants, in part due to low response rates and the method of data collection. However enough information was gathered to point to some significant areas which need to be addressed. For example, this sample revealed that children with ASN/disabilities in the mainstream primary school setting were less likely to participate in extra curriculum activities. On average only 11% of the children in this survey attended extra curriculum activities. This outcome almost mirrored a study by Sport England where it was reported that only 14% of children with disabilities attended extra curriculum activities compared with 45% of the general school population. A number of key reasons were identified in this study for this lack of attendance including problems with transport, lack of awareness by sports coaches and teachers and a lack of enjoyment for some of the children involved.

As discussed, many studies point to the importance of physical activity in the development of children's fundamental skills, movement and their likelihood to maintain healthy lifestyles and the continuation of sport into later life (Blair et al 1988, WHO 1995, Department of Health 2004). However, the lack of participation in extra curriculum activities shown by the sample group, if replicated throughout Scottish schools, could point to a detrimental effect on the development of sport and disabled sport in general. Indeed there has been concern expressed recently about the future of Paralympic teams (Sports Review 2005). The children in this study seem, in many cases to be missing out on opportunities to participate and benefit from physical activity at a participation level, which can be the entry level of many disabled athletes.

This report has discovered that this could be down to a number of factors. For example the survey revealed that lack of attendance in after school activities could be linked to the fact that only 50% of the parents knew where to obtain information about physical

activity session available for their children. This lack of knowledge about opportunities available outside the school environment could be alleviated by encouraging schools to form stronger links with external sporting clubs, sporting bodies and Glasgow City Council to provide the children and their parents with information about what activities are available to them.

A National Physical Activity Task force was set up by the Scottish Executive in June 2001 to promote the initiative 'Let's make Scotland more active'. Eleven targets were set to raise Physical activity levels in all age groups in Scotland. In 2003 a Scottish Health survey reported that 74% of boys and 63% of girls aged 2-15 participated in the recommended time of 60 minutes of physical activity or more on 7 days a week. The Scottish Executive's Target 1 for 2022 is that 80% of all children should meet the minimum recommendation levels of physical activity. However, this small scale survey found that the majority of children with ASN/disabilities (74.4%) were not achieving the recommended level of physical activity. There was also a significant difference in the physical activity time made available to the children in different schools. The range of activity time available for the whole group ranged from 60 minutes to 515 minutes per school week. Only 11 children achieved the recommendation of 360 minutes or more of available physical activity time per school week, 32 did not achieve this level. The lack of participation by this group of children clearly needs to be addressed if the Scottish Executive's target from 2022 is to be achieved.

Target 2 of the Scottish Executive Task force recommends that all school children, including those with a disability, should take part in at least two hours of high quality physical education classes each week. This research paper showed that only 8 (17%) of the children sampled achieved this recommendation. Worryingly one child only achieved 15 minutes of PE per week and a number of respondents did not respond to the question asked about how much PE they did in a school week. This could be because they did not understand what the question was asking or they could not remember. If only 8% of the children involved in this survey are achieving the Scottish Executive's recommendation of two hours of PE per school week then there is clearly a long way to go before the Scottish Executive target is achieved.

In this study the majority of parents (72.3%) felt that their children were fully included in the physical education sessions offered at their schools however, this figure was not replicated in other physical activity sessions. A fair proportion of the parents felt that their children were only sometimes included in lunch time (23.4%), play time (27.7%) and afterschool activities (10.6%) Some parents indicated that they felt that their children were never included in these activities. There could be a number of reasons why parents feel that their children are not included in these activities. Suggestions, given in this research paper, include social, organizational and physical barriers. However, further research is needed to investigate what the main barriers are and ways to overcome them.

This report identifies significant areas where improvements could be made, in order to facilitate and encourage better participation and inclusion of children with ASN/disabilities in mainstream schools in the promotion of physical activity. At present, although there are some cases of good practice, too often it is left to the individual schools' discretion on how to implement an increase in physical activity for all pupils. While it is important to have motivated staff, highly trained and supported, a level of consistency in the delivery of service should be maintained throughout Scottish schools, both as part of the curriculum and after school activities.

Steps should be taken to inform parents of the opportunities available in extra-curricular activities. If this information is not given then it is difficult to see how the Health Education Authority recommendation of 60 minutes of physical activity per day will be achieved. Indeed there is a danger that participation levels will fall further if action is not taken. This worrying trend is evident in some schools where children are not attaining the minimum level of 30 minutes per day of physical activity.

As Riddoch et al (1991) stated 'Establishing a habit of physical activity early in life is important to encourage an active lifestyle in adulthood ... Inactivity in childhood will lead to inactivity in adulthood and subsequently elevate the risk of adult disease' (p17). Schools can be viewed as a suitable setting to establish patterns of physical activity

among young children. All young children, including those with ASN/disabilities, should have the same choices and chances to participate in activities in their education as their peers. To achieve this training, resources, funding and innovation, from all parties, has to be at the heart of future strategies. These have to be implemented at local and National level in order to eliminate the discrepancy between provisions provided by different local authorities.

It is imperative that 'all children, whatever their circumstances or abilities, should be able to participate in and enjoy physical education and sport' (DfES and DCMS 2002 p1).

CHAPTER SEVEN - EVALUATION

The principle method of data collection for this research was the completion of a self administered questionnaire by the parents of children with ASN/disabilities in a primary mainstream school setting. The reasoning behind the parents answering the questions was that it was felt that the children were too young to understand how to fill in the questionnaire. One way round this would have been for the researcher to have been available in person to help the children answer the questionnaires. This was not possible due to work restrictions from the researcher. Another method that could have been employed would have been to let the teachers or SEN assistants help the children complete the questionnaires but this also was felt to be unrealistic as they do not know what the children do after school. Also it was felt that teachers would find this too time consuming.

Poor responses were the main concern with this research. One hundred and 71 questionnaires were sent out and only 47 were returned. Various reasons were given for this poor response including perception communication difficulties, an inability to read or understand what was being asked, a lack of interest in the subject or phraseology used. To elicit a better response a different approach could have been used. If time was not an issue then the researcher could have visited the schools involved in the study and helped the children to fill in the questionnaires. Being there in person would mean that if there were any queries about the questions asked the researcher could be able to assist the children.

Identifying the subjects for the research proved to be very difficult. Glasgow City Council would not identify schools that could be contacted for this research and finding the approach client base was very time consuming. To overcome this all the schools in the Glasgow area could have been contacted, but this would have proved very time consuming and expensive.

The information that was obtained from this research, although limited in respect of responses was very interesting and informative and hopefully will be of use to various agencies.

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APPENDIX 1 – ADDITIONAL SUPPORT NEEDS

Pupils have additional support needs when they experience barriers to their learning achievement and full participation in the life of the school. These barriers may be created as the result of factors such as the ethos and relationships in the school, inflexible curricular arrangements, and inappropriate approaches to learning and teaching.

The barrier or barriers may also relate to pupils physical, sensory or intellectual disabilities, to emotional and social needs, challenging behaviour, autistic spectrum disorders and communication difficulties, and to chronic illness and absence from school.

Barriers to learning may also arise from difficult circumstances such as parents who abuse drugs or alcohol. Children who are looked after may also face barriers to learning.

Pupils with additional support needs include all of those pupils who under current legislation are described as having special educational needs. The spectrum of additional support needs ranges from those which are long term, profound and complex to those which are short term and quickly met.

It is the responsibility of education authorities, schools and support agencies to work with the pupil and his or her parent(s) and carer(s) to ensure that the barriers are removed, overcome, or minimised and pupils with additional support needs are able to fulfil their potential.

Inclusion and Equality – Part 2: Evaluating education for pupils with additional support needs in mainstream schools (2004) Page 1.

What are Additional Support Needs?

The term "additional support needs" is significantly broader than its predecessor, "special educational needs". A child or young person is said to have additional support needs where, for whatever reason, they need additional support with their education. This applies whether the need for additional support is temporary or ongoing.

The term "additional support" simply means some kind of educational provision that is over and above (or significantly different to) the education normally provided to pupils of the same age in local mainstream schools.

Additional support is provided in order that children or young people with additional support needs can benefit from an education which is:

"directed to the development of the personality, talents and mental and physical abilities of that child or young person to their fullest potential."

The Scottish Executive's Code of Practice suggests the following as examples of factors which may give rise to additional support needs:

- learning environment
  - inflexible curricular arrangements
  - inappropriate approaches to learning and teaching
  - more able children
  - children with English as an additional language
- family circumstances
  - homelessness
  - parental drug or alcohol misuse
  - children who are parents
  - children who are carers
  - children looked after by the local authority
- disability or health need
  - motor or sensory impairment
  - specific language impairment
  - autistic spectrum disorder
  - learning difficulties
  - ADHD
  - depression or other mental health problems
- social and emotional factors
  - children who are being bullied
  - children who are suffering racial discrimination
  - children who are bullying
  - children with behavioural difficulties

This is far from being an exhaustive list - there are many more examples which could have been given. However, this does not mean that every child fitting one of the above categories necessarily has additional support needs. This will depend on the amount and type of support required by the individual child.

http://ww.additionalsupportneeds org uk/guide/asn htm - cited 20/1/2008

APPENDIX 2 – Scottish Health Survey - 2003

Chapter 4 Physical Activity

SUMMARY

- 74% of boys and 63% of girls aged 2-15 participated in physical activity for 60 minutes or more on 7 days a week (the level of activity currently recommended for children). The Scottish Executive's long-term target is for 80% of children to meet the recommendations.
- A further 12% of boys and 18% of girls participated for at least 30 minutes on 7 days (which is the recommended target for children who are currently inactive).
- There was a small increase between 1998 and 2003 in the proportion of children who did at least 60 minutes' physical activity on 7 days: from 72% to 74% for boys and from 59% to 63% for girls.
- The most common type of physical activity children reported doing was walking (92% of boys and 94% of girls participated at least once in the past 7 days) followed by active play (91% of boys and 88% of girls) and sports and exercise (73% of boys and 68% of girls).

Table 4.1 Proportions meeting the physical activity recommendations,[a] 1998 and 2003, by age and sex

Aged 2-15
1998, 2003

	Age					Total
	2-4	5-7	8-10	11-12	13-15	
	%	%	%	%	%	%
Boys						
1998	66	77	77	70	67	72
2003	77	75	77	78	68	74
Girls						
1998	69	68	64	57	36	59
2003	70	75	75	57	41	63

APPENDIX 3 – The 11 Key Targets by 2007 are:

Target 1	80% of primary school children will be physically active
Target 2	We will have made progress towards all school children taking part in at least two hours of high quality physical education classes a week.
Target 3	85% of those aged 13-17 will take part in sport, in addition to the school curriculum, more than once a week.
Target 4	49% of those aged 14 plus in Social Inclusion Partnership areas will take part in sport at least once a week.
Target 5	55% of those aged 17-24 will take part in sport more than once a week.
Target 6	43% of those aged 45-64 will take part in sport at least once a week.
Target 7	Over 250 Scots will have been medallists on the world stage.
Target 8	Scotland will have 500 sports halls available to the public so that 70% of Scots have access to a hall within 20 minutes walk.
Target 9	Over one million Scots will play sport as members of clubs.
Target 10	Scotland will sustain 150,000 volunteers who are contributing to the development and delivery of Scottish sport.
Target 11	Every local authority area's community planning process will have contributed to the targets of sport 21 2003-2007.

APPENDIX 4 – Minister for Education and Young People 10 point action plan.

In his 10 point action plan, the Minister for Education and Young People has pledged to:

• Provide for 400 additional PE teachers to support the growing emphasis on physical education.

• Ask the curriculum review group to ensure that there is sufficient flexibility in the curriculum to allow schools to accommodate the provision of at least 2 hours of good quality physical education for each child every week, and more if possible. This should be achieved by schools over the coming four academic years.

• Ensure that the physical education curriculum is reviewed as a priority in the 2nd phase of the curriculum review. This will include the development of advice on an appropriate pre-school curriculum to encourage participation in school-based physical education.

• Issue guidance to local authorities on physical education within the context of our National Priorities planning and reporting under the 2000 Act to help monitor progress in meeting these three key aims.

• Ensure that appropriate research is supported by the Scottish Executive to inform future learning and teaching.

• Ask HMIE and Learning and Teaching Scotland to work together to gather and disseminate good practice in physical education. This will include advice on making a wider range of activities available for young people which responds to their needs and aspirations.

• Ask HMIE to monitor implementation of the move to 2 hours per week as part of the future inspection.

• Learning and Teaching Scotland will also work with relevant agencies to hold regional seminars to raise awareness and understanding of the report. These will take place over the next academic session.

• Continue dialogue with the teacher training institutions to secure the additional places needed for the expansion of the additional PE teacher numbers.

• Ensure more opportunities are made available to Primary Teachers to enhance their qualifications to support more physical activity in schools.

http://www.scotland.gov.uk/Resource/Doc/933/0019904.pdf - cited 2/2/06

APPENDIX 5 -

UNIVERSITY OF STRATHCLYDE

APPLICATION FORM FOR UNIVERSITY ETHICS COMMITTEE

This form applies to research with human participants undertaken by staff or students of the University of Strathclyde which falls within the remit of the University Ethics Committee (see Code of Practice, para 5.1) or the Departmental Ethics Committees (see Code of Practice, para 5.2).

However, this form should NOT be used for any research involving clinical trials (see Code of Practice, para 2(vii)) or medicinal products, nor for research involving staff, patients, facilities, data, tissue, blood or organ samples from the National Health Service. Applications for ethical approval for research involving the National Health Service in any way must be made under the governance arrangements for National Health Service Research Ethics Committees (see Code of Practice, para 3.2(d)) using the form issued by COREC (see Code of Practice, para 6.1).

Information sheets for volunteers and consent forms to be used in this study should be submitted with the application form for consideration by the Committee.
The application will be judged entirely on the information provided in this form and any accompanying documentation - full grant proposals to funding bodies should not be attached.

1. <u>Chief Investigator</u>

Name: Brian Green
Status: .....Senior Lecturer..... ...
Department: ...Department of Sport, Culture and the Arts..... ...
Contact details: Telephone: .....0141 -950-3132.....
E-mail: b.green@strath.ac.uk.....

2. <u>Other Strathclyde Investigator(s)</u>

Name(s): ..... Margo Turner
Status (e.g. staff, post/undergraduate): MPhil Student
Department(s): ...Department of Sport, Culture and the Arts

If student(s), name of supervisor: Brian Green
Contact details: Telephone: ...0141 589 3575.....
E-mail: ...Margo.turner@strath.ac.uk.....

Please provide details for all researchers involved in the study

3. Non-Strathclyde collaborating investigator(s)

Name(s): .....

Status: .....

Department/Institution: .....

If student(s), name of supervisor: .....
Contact details: Telephone: .....
E-mail: .....

Please provide details for all researchers involved in the study

4. Title of the research:

..... Physical Activity Levels among Young People with a Disability.....
.....

5. Where will the research be conducted? (Note that the Committee reserves the right to visit testing sites and facilities)

Strathclyde University, Library, Primary schools in Glasgow

.....
.....

6. Duration of the research (years/months):
(Expected) start date: September 2006.....
(Expected) completion date: September 2007.....

7. Sponsor:

..... University of Strathclyde

.... Department of Sport, Culture

And the /Arts.....

8. <u>Funding body</u> (if applicable):

.....n/a.....

Status of proposal – if seeking funding (Please tick as appropriate):

i) In preparation .....

ii) submitted .....

iii) proposal accepted by funding body .....

Date of submission of proposal .....

Date of commencement of funding .....

9. <u>Research objectives</u>:

Brief outline of the background, purpose and possible benefits of the research.

All children whatever their circumstances should be able to participate in Physical Activity. Regular participation both within and beyond the school day provides the opportunity of improving health, fitness, boost confidence and self esteem, teach leadership, teamwork and social skills (World Health Organisation 1995). These attributes can be transferred to other aspects of life. The following research intends to look at Physical Activity levels among young People with a Disability to see if they are given the same opportunities as other children in a Mainstream setting.

BACKGROUND

The concept of education for all was initially established in Great Britain by the 1970 Handicapped Children Education Act which transferred responsibility for children with 'Severe handicaps' from Health to Education Authorities. Children who were perceived to have severe cognitive disabilities were entitled to school based education for the first time.

In 1978 Baroness Warnock reviewed educational provision in Great Britain for children and young people with the recommendation that categorisation of handicapped be replaced by Special Education Needs (SEN). The Education (Scotland) Act of 1980 set out the legal definition of SEN:

'Children and young persons have Special Education Needs if they

have a learning difficulty which call for provision for Special Educational Needs to be made for them'

Moving to Mainstream (2003 P7)

The 1980 Education Act also introduced a legal document called The Record of Needs (RoN)
Which set out the nature of a child's Special Education Needs and detailed the provisions required to meet these needs. A RoN will be kept until the child is 18 years old.

Since 1980 a number of acts have been passed to bring about the inclusion of children with a disability in mainstream schools. These are The Standards in Scotland's School Act 2000, the Special Educational Needs and Disability Act 2001 and the Education (Disability, Strategies and Pupils' Education Records (Scotland) Act 2002 (Moving to Mainstream 2003).

As part of the Standards in Scottish School Act 2000(section 15), schools across Scotland will offer Mainstream education to all children, including those with Physical and Educational Special needs, other than in exceptional circumstances. According to statistics published by the Scottish Executive 2002, there were approximately 837 pupils (33%) with SEN in Glasgow mainstream schools.

In November 2003, the Scottish Executive Department (SEED) commissioned the Scottish Centre for Research in Education (SCRE) from the University of Glasgow to evaluate the impact of the above act on all involved parties (pupils, parents, teachers and other professionals). It was believed that, due to the act being brought into place, more children with Special Educational Needs (SEN) would be registered into Mainstream schools.

In 2004 the Education Additional Support for Learning Scotland Act was passed. This act replaced the term SEN with Additional Support Needs (ASN). It aimed to modernise and strengthen the system for supporting children's learning by introducing Co-ordinated Support Plans (CSP). The term ASN has a far broader definition than SEN.

' Pupils have ASN when they are experiencing barriers to their learning achievements and full participation in life of the school'

HMI Inspector of Education (2004 P1)

The Spectrum of ASN ranges quite dramatically from being long term, profound and complex to those which are short term. A child with ASN may require assistance for a variety of reasons (being bullied, a family members dies, being chronically ill, having parents who abuse drugs to name but a few reasons) as well as those who have behavioural or learning difficulties, physical, sensory or intellectual disabilities. A new

Co-ordinated Support Plan (CSP) will be drawn up for such children. The CSP will replace the Record of Needs and its aim is;

> 'To plan long term and strategically for the achievement of Learning outcomes and to foster co-ordination across the ranges of services (multi agencies and multi disciplinary) required to achieve this'
>
> Moving to Mainstream (2003 P7)

A recent survey by the Scottish Executive on the Evaluation of the Active Primary school Pilot Programme (APSPP) was published in January 2006. In this report an analysis was published on how much Physical Activity was undertaken by children. The evaluation was funded by Sportscotland and was undertaken by a team from the SCRE Centre. However, only one question was asked in respect of Disability.

> 'Does your child have any long-term illness, health problems or disability which limits their daily activity' QA4

A report from Disability Scotland says that 'Inclusion' in physical activity and sport for people with a disability is being driven vigorously within education but there are still examples of pupils being excluded from PE lessons. This is being blamed on lack of understanding of disability and lack of training on how to include people with a disability into lessons. (Gavin MacLeod 14/12/05) If this practice of exclusion is widespread then questions will need to be asked about any gap in provision that is being offered to young people with a disability.

PURPOSE AND POSSIBLE BENEFITS.

Disability is defined as:

> 'A physical or mental impairment which has a substantial and long term adverse effect on a person's ability to carry out normal day to day activities'
>
> DCMS (2003)

In order to define Disability for the purpose of this study the author has decided to set a 'boundary' to define the client group to be researched. Only children with Additional Support Needs and or Record of Needs will be sent a Questionnaire. Records of Needs

will gradually be phased out over the next two years by the Co-ordinated support plans, but at present they are still in use.

To get a clearer picture on how much Physical activity children with a Disability undertake each week a questionnaire, which asks questions about Physical activity and disability, will be used. This will expand on previous research findings.

The results of this questionnaire will be compared to the Scottish Executive analysis and hopefully a truer picture will be given as to how much PA is undertaken by children with a Disability. This research will also investigate if Sport 21 (2003-07) Target of 2 hours of PE is be achieved by the children in question.

These results could then be used to encourage various agencies (Schools, Governing Bodies, to name but a few) to pinpoint areas of concern and better tailor provisions.

This research will also investigate if Sport 21 (2003-07) Target of 2 hours of PE is being achieved by the children in question.

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WEB SITES;

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Disability Rights Commissions – Publications – Education.
www.drc-gb.org/publicationsandreports

GTC Scotland (2005) - From Integration to Inclusion – Baroness Warnock - Annual Lecture of the General Teaching council for Scotland.
www.gtcs.org.uk/gtcs-content/docs/Annual_lecture_speech_05.pdf

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www.hmie.gov.uk/documents/publication/hgiosasnms.pdf

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http://www.show.scot.nhs.uk/sehd/patf/index.htm

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www.sportengland.org

Scottish Executive (2001) Interchange 67; raising attainment of Pupils with SEN
www.scotland.gov.uk/edu.asp

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www.opsi.gov.uklegislation/scotland/en2004/2004en04.htm

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www.scotland.gov.uk/publications/2006

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www.hmie.gov.uk

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www.audit-scotland.gov.uk

Sportscotland – Sport 21 2003-2007. The National Strategy for sport
www.sport21

10. Nature of the participants:

Number: Ten schools will be sent questionnaires in the first instance

Approximately 170 children will be involved in the research.
Age (range): 5-11
Gender of volunteers: Male/female
Recruitment method(s)

As part of the Standard Schools Act 2000 (sec 15), schools across Scotland will offer mainstream education to all children, including those with physical and educational special needs, other than in exceptional circumstances. The thought behind this being that the majority of children with special needs should be given the right to be included alongside their peers in Mainstream School (Scottish Executive Mainstreaming People with SEN – Evaluation 2006). To undertake this study, children with Additional Support Needs and or Record of Needs, from a selection of Primary Schools in Glasgow, will be asked to fill in a questionnaire, with their parents help.

A 'pilot' school (Battlefield Primary) where there are 10 children with ASN and or RoN, will be used to ascertain if the questionnaire is appropriate for the age and ability group. Modifications will then be made to the questionnaire if needed, and then a Random sample of approximately ten schools in the Glasgow area will be identified to be used. Schools will be identified once ethics permission is given, Glasgow city council will not issue numbers, or names, of children with ASN or RoN until ethics permission is given from the University. Further permission will then have to be obtained from Glasgow city council to allow this research to be carried out.

Once schools are identified an Information letter will be sent out to the head teachers asking for permission for their schools to become involved in this research. Once this has been obtained consent forms, information sheets and questionnaires will be sent to the participating schools, along with addressed envelopes for their return. A follow up letter will be sent if returns are poor and as the responses are anonymous everyone will be sent a letter regardless if they have replied or not.

Inclusion/exclusion criteria (if appropriate) Children with a RoN and or ASN in primary schools.

Screening procedure (if appropriate) None

Any special skills, attributes, medical conditions?

Yes varied Medical Conditions. (unknown at present)

Any vulnerable participants (see Code of Practice, annex 2)?:

Yes respondents have cognitive Learning Disabilities and Physical Disabilities.

Justifications for sample size (e.g. power calculations)?:

Sample size reflects what the researcher feels is appropriate to time and resources available. As each Mainstream school only has a small proportion of children with disabilities a greater number of schools will need to be used to gain sufficient information to be able to answer research questions. According to statistics published by the Scottish Executive in 2002, there were approximately 837 pupils (33%) with SEN in Glasgow Mainstream schools. To get an accurate picture as to how much Physical Activity is undertaken by these children a figure of 20% has been selected, which is approximately 170 children.

11. <u>What consents will be sought and how</u>?

(Consent forms and participator information sheets (and questionnaires where used) should be appended to this application or forwarded to the secretary of the University Ethics Committee when they are prepared and before the research begins. Ethical approval for the project will only be conditional until the Committee has approved the consent forms and information sheets as well)

1. Permission from the Local Authority.
2. Permission from head teacher will have to be sought before using the school in the study.
3. Consent forms will be sent to parents of children involved in the study.
4. An Information sheet will be attached to the Questionnaire to give reason for study and instructions as to how to fill in the questionnaire.

12. <u>Methodology</u>

Design: -- what kind of design is to be used in the research (e.g. interview, experimental, observation, randomised control trial, etc...)?

Children will be pre selected for study. The criteria being if they have a Record of Needs and or ASN.

Techniques: -- what methods will be employed and what exactly is required of participants?

Questionnaires will be distributed to participants to take home and answer with their parents/guardian. These questionnaires will then be returned to the school, and then to Brian Green at Strathclyde University. I will then collect them from him. Each school will be given a code number so that I can establish how many questionnaires have been returned. If returns are poor then a follow up letter will be sent to all participants to try and gain more response.

Reference should be made to any of the following to be used in the research:

Invasive techniques	No
Use of drugs, foods, liquids	No
Any deception	No
Physical exertion - as part of their normal day.	No extra Physical exertion is required.
Manipulation of stress/anxiety	No
Intimate and/or confidential information being sought (see Code of Practice, para 5.1).	No
Acquisition of bodily fluids or tissue	No
Access to confidential data (e.g. medical reports)	No

The duration of the study for participants and frequency of testing (if repeat testing is necessary) -

A two week period will be given to complete and return the questionnaire. If questionnaire is not returned, a follow up letter will be sent to encourage them it. Another two week period will be given. If the questionnaire is still not returned then a second letter will be sent.

13. <u>Potential risks or hazards:</u>

Full details should be given of any potential risks or discomfort for participants, any burdens imposed and any preparatory requirements (e.g. special diet, exercise), as well as any steps/procedures taken to minimize these risks and/or discomforts.

Not applicable

14. <u>Any payment</u> to be made:

Include reference to reimbursements for time or expenses incurred, plus any additional fee/incentive for participation. – Not applicable

15. What <u>debriefing</u>, if any, will be given to volunteers? Executive summary of results will be sent to participating schools if requested.

.....

.....

16. What are the <u>expected outcomes</u> of the research? How will these be disseminated?

Will you seek to publish the results?

Research has been carried out on Physical Activity levels among school children but there is a gap in knowledge as to how much Physical Activity is undertaken by children with a disability. This research hopes to address this. If Information gathered was of interest to external agencies (Glasgow City council, department of Education, Schools involved) then I would seek to publish it.

.....

.

17. Nominated person (and contact details) to whom participants' concerns/questions should be directed before, during or after the research.

.....Brian Green.....

18. Previous experience of the researcher(s) with the procedures involved. Research in this area for Position as Lecturer in Sport Studies at Langside College, Glasgow and BA degree course at Strathclyde University.

.....

.....

19. <u>Generic approval</u>: if approval is sought for several separate pieces of research, all employing the same basic methodology and serving the same overall objective, then generic approval can be sought for a 3-year period. Give, <u>on a separate sheet</u>, further details about additional studies to be covered by this approval application, using the relevant headings (1-16 above), and drawing attention to any variations in methodology, participants, risks, etc. Student projects can also be submitted via Generic approval – see Code of Practice on Investigations on Human Beings, Section 6.3.

20. Sponsorship

This application requires the University to sponsor the investigation. I am aware of the implications of University sponsorship of the investigation and have assessed this investigation with respect to sponsorship and management risk. I agree on behalf of the University that the University is the appropriate sponsor of the investigation and there are no management risks posed by the investigation.

Signature of Head of Department

....

Date: ....

21. Declaration

I have read the University's Code of Practice on Investigations on Human Beings and have completed this application accordingly.

Signature of Applicant/Chief Investigator

....

Signature of Head of Department

....

Date: ....

* *

Notes

1. If there is any variation to any aspect of the research (location, investigators, methodology, risks, etc.) then the Secretary to the Ethics Committee should be notified in writing immediately.

2. Should anything occur during the project which may prompt ethical questions for any similar projects the lead investigator should notify the Ethics Committee.

3. Insurance and other approval requirements from appropriate external bodies must also be in place **before** the project can commence.

* *
*

For applications to the University Ethics Committee this completed form should be sent (electronically or hard copy) to Research and Consultancy Services in the first instance.

APPENDIX 6 – GLASGOW CITY COUNCIL ETHICS FORM

RESEARCH

Application Form

Section A - Application to Undertake Research

Category 1

Institutional Externally Funded

Application for undertaking research in Glasgow City Council Education Services

1 Name of the incorporated body you represent (i.e. University, College etc.)

University of Strathclyde

2 Names and designations of the applicants (the first name entered should be the coordinator/director/lead of the project

Brian Green, Senior Lecturer, Department of Sport, Culture and the Arts, University of Strathclyde

Margo Turner, MPhil Student, University of Strathclyde, Lecturer in Sport at Langside College, Glasgow

3 Sources and total amount of *funding available* or *applied* for (*delete as appropriate*)

No funding required

£

4 *Anticipated* or *actual* amount of funding (*delete as appropriate*) method and frequency of payments (eg 3 equal annual payments of £X)

Not applicable

5 Anticipated timescale of project

Start September 2006

Finish September 2007

6 Base or location of project (*this will normally be the address for correspondence*)

Contacts details:
Brian Green
Senior Lecturer,
Department of Sport, Culture and the Arts
University of Strathclyde
76 Southbrae Drive
GLASGOW G13 1PP

7 Title of Research Project

Physical Activity Levels among Young People with Additional Support Needs.

8 Abstract. (In not more than 500 words give a synopsis of what the project is about, (including any hypotheses) and how you intend to conduct it, including methodology. You may attach a typewritten abstract in this form. If so enter Abstract Attached

WHAT PROJECT IS ABOUT

As part of the Standards in Scottish School Act 2000 (section 15), schools across Scotland will offer mainstream education to all children, including those with physical and educational special needs, other than in exceptional circumstances

A recent survey by the Scottish Executive on the Evaluation of the Active Primary School Pilot Programme (APSPP) was published in January 2006. The report provided an analysis of how much Physical Activity was undertaken by children. However only one question was asked in respect of disability. A report from Disability Scotland (Gavin MacLeod, December 2005) says that 'Inclusion' in physical activity and sport for people with a disability is being driven vigorously within education. The proposed study is being undertaken to establish if children with additional support needs (ASN) are being given the same opportunity as other children to participate in all aspect of Physical Activity during the school day. A questionnaire (attached) with more in-depth questions on participation of children with ASN will be used.

The results of this questionnaire will then be compared to the Scottish Executive analysis and hopefully a more detailed analysis will be given as to how much physical activity is undertaken during a school day. These results could then be used to encourage various agencies (E.g. schools, governing bodies, teacher education institutions) to address any areas of concern and potentially enhance provisions.

CONDUCTING THE STUDY

Ethics approval to undertake this study has been obtained from University of Strathclyde. Once permission is given by Glasgow City Council a questionnaire will be sent out to 11 Primary Schools in the Glasgow Area (One as a pilot and 10 others for the main study)

It is hopeful that information will be forthcoming from Glasgow City Council as to how many children with ASN attend primary schools in Glasgow (as this was denied until ethics approval was granted), so that the schools to be used in the study can be selected. If possible the researcher would like to use Battlefield Primary School as a pilot school for the questionnaire. Once the pilot study has been completed, any required adjustments to the questionnaire will be made and then the main study will be conducted. Overall approximately 170 children will be involved in the study.

METHODOLOGY

A letter will be sent to the Head Teachers, of the schools to be included in the study. This will ask permission to use their schools. If a positive reply is received communication will then be opened via a phone call to the school to arrange how the questionnaires will be distributed. Questionnaires will be sent to the school along with the parental information sheet and informed consent forms. These questionnaires will be completed by the parents of the children involved in the study. A timescale will be given to return the forms to the school, in an envelope provided. Once all the forms are returned to the school they will be placed in a large envelope and returned to Brian Green at Strathclyde University. If there is a poor response, in returning the questionnaires, a follow up questionnaire will be sent.

9 Form of project output (Cite the major form/s of output anticipated eg research report(s) curriculum material journal articles book etc In the case of reports cite primary destination(s) of such documentation)

The following appendices have formally been approved by University of Strathclyde (Department of Sport, Culture and the Arts) Ethics Committee These will be used in the research and will be sent to the participating schools

- Letter to Head Teacher
- Parents Information sheet
- Consent Form
- Questionnaire

Information gathered will then be used in preparation of an MPhil Thesis
Feedback will also be given to participating schools if desired
It is intended that the study will be submitted for publication in appropriate professional journals and publications

10 Access and facilities being requested from Glasgow City Council, Education Services (List the type of data required, the names of individual establishments if known and the category of personnel eg staff pupils; students parents etc with an estimate of numbers, if relevant).

1. Information regarding the numbers of children with ASN in Glasgow primary schools.
2. Permission to send out Questionnaires to 11 schools in Glasgow, to include Battlefield Primary School as the pilot school (Questionnaire will be given to parents children with ASN)
3. The schools to be involved in the study will be identified once Glasgow City council give numbers of children with ASN in Primary Schools in Glasgow
4. It is intended that approximately 170 children will be involved in the main study

11 Any other information (include below any further information you believe relevant in this application)

12 Declaration

I certify that the information given in this section is to the best of my knowledge complete and accurate.

Signature of Applicant: _____

Date: _____

Signature and designation of staff member/agent authorised to contract on behalf of the institution: _____

Date: _____

APPENDIX 7 – LETTER TO HEAD TEACHER AND RETURN SLIP

UNIVERSITY OF STRATHCLYDE
DEPARTMENT OF SPORT, CULTURE AND THE ARTS
RESEARCH INFORMATION

Date

Dear Head Teacher

PHYSICAL ACTIVITY LEVELS AMONG YOUNG CHILDREN WITH ADDITIONAL SUPPORT NEEDS

I am currently undertaking an MPhil at Strathclyde University researching Physical Activity Levels among Young Children with Additional Support Needs. My research aims to establish how much physical activity is undertaken by young people with ASN in a typical school week.

A recent survey by the Scottish Executive on the provision of Physical Education was published in January 2006. In this report an analysis on how much Physical Education was undertaken by children in Scotland was given. Only one question was asked regarding disability. To get a clearer picture as to how much physical activity children with ASN undertake each week I have designed a questionnaire which asks more in depth questions about physical activity levels.

I would be very grateful if you would allow your school to participate in this research. With your support this research could highlight areas that were previously missed on the Scottish Executive survey.

The University Ethics Committee and Glasgow City Council have approved the research that I propose to undertake and my work will be monitored continually by my research supervisor, Brian Green, Senior Lecturer at Strathclyde University. Please be assured that all information gathered will be confidential and anonymous.

Could you please indicate below whether you will allow your school to participate in this research? If the answer is yes then further communication will be forwarded to you as to how the Questionnaire will be distributed and collected.

Thank you for taking time to read and reply to this letter. A stamped addressed envelope is included for your reply.

Any questions regarding this information letter should be addressed to:

Brian Green
Senior Lecturer
Department of Sport, Culture and the Arts
Strathclyde University
76 Southbrae Drive
GLASGOW G13 1PP

REPLY SLIP

Name of Head Teacher .....

Name of School .....

Phone Number .....

I AGREE/DISAGREE for School to be included in this research

Please circle correct response

Yours sincerely

Margo Turner

APPENDIX 8 – COPY OF PERMISSION SLIP FROM GLASGOW CITY COUNCIL TO UNDERTAKE RESEARCH PROJECT

Executive Director
(Education, Training & Young People)
Ronnie O'Connor
BA(Hons) DipEd

Education Services
Glasgow City Council
Wheatley House
28 Cochrane Street
Merchant City
Glasgow G1 1HL

Glasgow
CITY COUNCIL

Phone Direct Line 0141-287-4946
Fax 0141-287 3795
Email john.scougall@education.glasgow.gov.uk

Website www.glasgow.gov.uk
Our Ref JS/Rsrch
Date 21 November 2006
If phoning please ask for John Scougall

Mr Brian Green
Senior Lecturer
Dept of Sports, Culture and the Arts
University of Strathclyde
76 Southbrae Drive
GLASGOW
G13 1PP

Dear Mr Green

Proposed Research Project – Physical Activity Levels among Young People with Additional Support Needs.

Thank you for your completed research application form regarding the above.

I now write to advise you that this department has no objection to you and Ms Turner seeking assistance from our Primary Schools. I would confirm however that it is very much up to the Head Teachers to decide whether or not their school assists you with the research.

A copy of this letter should be sent to the Head Teacher when contacting the schools.

This approval is also on the condition that as there is pupil involvement regarding this research, parental/guardian consent must be requested, and given, before such involvement. A further condition of this approval is that two copies of the final research findings are sent to me, at the above address, when completed.

I hope that this is helpful and that you have success with your research.

Yours sincerely

JOHN SCOUGALL
Principal Officer
Admin, ICT & Schools

APPENDIX 9 – Introduction Sheet for parents

PHYSICAL ACTIVITY LEVELS AMONG YOUNG PEOPLE WITH ADDITIONAL SUPPORT NEEDS

Your child has been invited to take part in a research study. The research is being undertaken as part of a MPhil by Margo Turner from Strathclyde University. Please take time to read the following information carefully.

PART 1: Information sheet – tells you the purpose of the study

PART 2: Gives you more detailed information about the conduct of the study

A) A Consent form for you to read and sign
B) The questionnaire, including instruction on how to fill it in.

This questionnaire is anonymous and you are not asked to provide any personal details.

APPENDIX 10 – Parents Information sheet

PARENTS INFORMATION SHEET

PHYSICAL ACTIVITY LEVELS AMONG YOUNG PEOPLE WITH ADDITIONAL SUPPORT NEEDS

What is the purpose of this study?

A recent survey by the Scottish Executive on the provision of Physical Education was published in January 2006. In this report an analysis of how much PE was undertaken by children in Scotland was given. However, this study only asked one question in respect of Disability. To get a clearer picture as to how much physical activity children with additional support needs undertake each week I have designed a questionnaire which asks more in depth question about your child's physical activity levels.

This questionnaire is only, at present, being sent out to mainstream primary schools in Glasgow, and the result will be compared to the Scottish Executive survey on all children attending primary schools.

Why has your child being chosen?

This questionnaire is being issued to children with additional support needs who attend Mainstream Primary schools so that a true picture of activity levels can be established.

Does my child have to take part?

No it is up to you whether or not you allow your child to take part in this research. If you do agree, you will be given this information sheet to keep and be asked to sign a consent form.

Did anyone check the study is Okay to do?

Before any research is allowed to happen it has to be checked by an ethics committee. This project has been checked by Strathclyde University Ethics committee.

What will I do with the Questionnaires?

These questionnaires should be returned to the school in the envelope provided, they will then be sent to;

Brian Green
Senior Lecturer
Department of Sport, Culture and the Arts
University of Strathclyde
76 Southbrae Drive.
GLASGOW, G13 1PP.

Telephone Number 0141-950 3132

The questionnaires will be stored at Strathclyde University where they will be made available for research.

Results from these questionnaires will be available by contacting Brian Green at the above address.

APPENDIX 11 – CONSENT FORM

CONSENT FORM

PHYSICAL ACTIVITY LEVELS AMONG YOUNG PEOPLE WITH ADDITIONAL SUPPORT NEEDS

Margo Turner
Strathclyde University

- I confirm that I have read and understand the information sheet for the above study and had the opportunity to ask questions.

- I understand that participation is voluntary and that my Child can withdraw at any time and without giving reason.

- I understand that any information gathered from this study will remain anonymous.

- I understand that Questionnaires will be stored at Strathclyde University and I give my permission that any information gathered can be used as part of an MPhil research project by Margo Turner, Strathclyde University.

- I agree/ do not agree (delete as applicable) to allow my child to take part in the above study.

Name of Person giving consent _____

Date _____

Signature _____

APPENDIX 12 – QUESTIONNAIRE

QUESTIONNAIRE

PHYSICAL ACTIVITY LEVELS AMONG YOUNG CHILDREN WITH ADDITIONAL SUPPORT NEEDS

- When answering the questions with your child please read the questions carefully and tick either the Yes or No box.
- If comments are asked for it would be very helpful if you could give some.
- There are no right or wrong answers.
- Try to answer these questions as honestly as possible. No one else will see your answers. Your name or address has not been asked for so you will not be able to be identified.
- Only true answers will help identify any issues that might arise and benefit your child.
- The more information you provide the better able we are to make recommendations.

WHAT DO WE MEAN BY PHYSICAL ACTIVITY

Physical Activity is any activity that makes you breathe harder than normal and feel a bit warmer. Some examples include running, rollerblading, swimming, walking briskly to school, dancing, cycling, and playing tig and most kinds of sports.

Q1 What school does your child attend? ☐

Q2 Is your child a boy or a girl? Boy ☐ Girl ☐

Q3 How old is your child years ☐ months ☐

Q4 What class is your child in?

P1 ☐ P2 ☐ P3 ☐ P4 ☐ P5 ☐ P6 ☐ P7 ☐

Q5 What Additional Support Needs does your child have?

Please list:

Q6 How many other children are in the family? ☐

Q7 Do any of them have Additional Support Needs? YES ☐ NO ☐

Please List:

Q8 How does your child travel to and from school?

- Car ☐
- Walk ☐
- Bus ☐
- Taxi ☐
- Other ☐

Q9 Does the method that your child travels to and from school prevent him/her from taking part in Breakfast or after school clubs?

YES ☐ NO ☐

Please comment:

SCHOOL DAY

There are various times throughout the school day where your child could take part in Physical Activity. In the previous school week, which of these activities did your child do? Could you please tick or answer questions in the boxes below to indicate the correct response.

Q10

	BREAKFAST CLUBS	BREAK TINE	DURING P.E. LESSONS	LUNCH TIME	AFTER SCHOOL
Name Activity					
Approximate time Per session?	mins	mins	mins	mins	mins
How many times per week?	days	days	days	days	days
Organised session by school	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Please ask your child how they enjoyed the above activities 1 Always enjoyed 2 Sometimes enjoyed 3 Rarely enjoyed 4 Never enjoyed Please circle correct response	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4

Q11 During Physical Activity sessions throughout the School Day do you feel that your child is?

(Please tick correct response)

1 – ALWAYS 2 – SOMETIMES 3 – RARELY 4 – NEVER

BREAKFAST CLUBS

BREAKFAST CLUBS	1	2	3	4
Encouraged by the school				
Fully included in the activity				
Partially included in the activity				
Given individual provision				
Part of the class				
Given the same opportunity to take part				
Not allowed to join in				
Told to sit out for part of the activity				
Given something else to do				
Does your child use different equipment from the rest of the class				
This is not done at our school				

BREAK TIME

BREAK TIME

	1	2	3	4
Encouraged by the school				
Fully included in the activity				
Partially included in the activity				
Given individual provision				
Part of the class				
Given the same opportunity to take part				
Not allowed to join in				
Told to sit out for part of the activity				
Given something else to do				
Does your child use different equipment from the rest of the class				
This is not done at our school				

DURING P.E. LESSONS

DURING P.E. LESSONS

	1	2	3	4
Encouraged by the school				
Fully included in the activity				
Partially included in the activity				
Given individual provision				
Part of the class				
Given the same opportunity to take part				
Not allowed to join in				
Told to sit out for part of the activity				
Given something else to do				
Does your child use different equipment from the rest of the class				
This is not done at our school				

LUNCH TIME

LUNCH TIME

	1	2	3	4
Encouraged by the school				
Fully included in the activity				
Partially included in the activity				
Given individual provision				
Part of the class				
Given the same opportunity to take part				
Not allowed to join in				
Told to sit out for part of the activity				
Given something else to do				
Does your child use different equipment from the rest of the class				
This is not done at our school				

AFTER SCHOOL CLUBS

AFTER SCHOOL CLUBS		1	2	3	4
	Encouraged by the school				
	Fully included in the activity				
	Partially included in the activity				
	Given individual provision				
	Part of the class				
	Given the same opportunity to take part				
	Not allowed to join in				
	Told to sit out for part of the activity				
	Given something else to do				
	Does your child use different equipment from the rest of the class				
	This is not done at our school				

Q12 Overall do you think that your child's Additional Support Needs prevent them from taking part in Physical Activity in school?

YES ☐ NO ☐

If yes please comment.

Q13 Please list the 3 favourite activities that you child:

CURRENTLY DOES	WOULD LIKE TO DO
1.	1.
2.	2.
3.	3.

Q14 Does your child know the name of any disabled athletes?

YES ☐ NO ☐

If yes please name them

Q15 Do you know where to obtain information about activities available? outside of school provision?

YES ☐ NO ☐

If YES Where?

Q16 Would you like to be given more information on activities available?

YES ☐ NO ☐

Thank you for completing this questionnaire. Please return the questionnaire to the school in the envelope provided.

If you have any questions concerning the questionnaire please contact

Brian Green
Senior Lecturer
Department of Sport, Culture and the Arts
University of Strathclyde
76 Southbrae Drive
GLASGOW, G13 1PP

0141-950 3132
b.green@strath.ac.uk

APPENDIX 13 – Answers that had to be checked with the schools

PUPIL NUMBER	SCHOOL	ACTIVITY TO CHECK	ORGANISED BY SCHOOL YES/NO
7	Battlefield	PE – 45 mins X4 days a week	yes
12	Cardonald	PE – 30 mins X 5 days a week	yes
18	Mosspark	Lunchtime - 60 mins X 5 days a week	no
32	Tinto	PE – 60 mins X 5 days a week	yes
38	Croftfoot	Lunch 60 mins X 5 days a week	no
42	Sandwood	Lunch 60 mins X 5 days a week	no
45	St Anthony's	Lunch 60 mins X 5 days a week	no

APPENDIX 14 – Second letter to Head Teacher

University of Strathclyde
Jordanhill Campus
76 Southbrae Drive
GLASGOW G13 1PP

24/4/07

Dear Head Teacher

Physical Activity Levels among young people with Additional Support Needs – research project By Margo Turner from Strathclyde University.

Thank you for allowing your school to take part in this research project. I am now in the process of trying to gather in the completed questionnaires so that I can write up the results of my study. I will phone you within the next few days to arrange collection of the completed questionnaires.

Thank you again for your assistance in this study. I hope that it will give valuable information which can be used in the future to improve delivery of physical activity to children with Additional Support Needs.

Yours sincerely

Margo Turner

APPENDIX 15 – 3RD LETTER TO HEAD TEACHERS

University of Strathclyde
Jordanhill Campus
76 Southbrae Drive
GLASGOW G13 1PP

14/6/07

Dear Head Teacher

Physical Activity Levels among young people with Additional Support Needs – research project By Margo Turner from Strathclyde University.

Thank you for allowing your school to take part in the above study. I am now in the process of finishing my research and I am trying to gather in any returned questionnaires that you might have in the school. I have enclosed a stamped addressed envelope for your convenience.

Thank you once again for your assistance. I know that this is a very busy time of the year for you and I really do appreciate you giving up your time to help in this research.

Yours sincerely

Margo Turner

APPENDIX 16 – ACTIVITIES WOULD LIKE TO DO

activity1 does

	Frequency	Percent	Valid Percent	Cumulative Percent
No answer	4	8.5	8.5	8.5
art	1	2.1	2.1	10.6
ballet	1	2.1	2.1	12.8
chess	1	2.1	2.1	14.9
climbing	1	2.1	2.1	17.0
computer	2	4.3	4.3	21.3
drama	1	2.1	2.1	23.4
f/ball	11	23.4	23.4	46.8
f/ball/	1	2.1	2.1	48.9
games	1	2.1	2.1	51.1
gym	3	6.4	6.4	57.4
gymn	1	2.1	2.1	59.6
heeling	1	2.1	2.1	61.7
judo	1	2.1	2.1	63.8
music	1	2.1	2.1	66.0
NR	1	2.1	2.1	68.1
playing	1	2.1	2.1	70.2
rugby	1	2.1	2.1	72.3
running	1	2.1	2.1	74.5
s/board	1	2.1	2.1	76.6
scooter	1	2.1	2.1	78.7
swim	7	14.9	14.9	93.6
tennis	1	2.1	2.1	95.7
tv	1	2.1	2.1	97.9
walk	1	2.1	2.1	100.0
Total	47	100.0	100.0	

activity2 does

	Frequency	Percent	Valid Percent	Cumulative Percent
No answer	6	12.8	12.8	12.8
art	3	6.4	6.4	19.1
b/ball	1	2.1	2.1	21.3
bowls	1	2.1	2.1	23.4
cards	1	2.1	2.1	25.5
climbing	1	2.1	2.1	27.7
computer	2	4.3	4.3	31.9
cubs	1	2.1	2.1	34.0
cycling	1	2.1	2.1	36.2
dance	1	2.1	2.1	38.3
dodgebal	1	2.1	2.1	40.4
duck/duc	1	2.1	2.1	42.6
exercise	1	2.1	2.1	44.7
f/ball	2	4.3	4.3	48.9
games	1	2.1	2.1	51.1
gym	1	2.1	2.1	53.2
judo	2	4.3	4.3	57.4
PE	2	4.3	4.3	61.7
play	1	2.1	2.1	63.8
playing	1	2.1	2.1	66.0
read	1	2.1	2.1	68.1
reading	1	2.1	2.1	70.2
rounders	1	2.1	2.1	72.3
skating	1	2.1	2.1	74.5
ski	1	2.1	2.1	76.6
snooker	1	2.1	2.1	78.7
softplay	1	2.1	2.1	80.9
swim	7	14.9	14.9	95.7
tae kwon	1	2.1	2.1	97.9
tennis/s	1	2.1	2.1	100.0
Total	47	100.0	100.0	

activity3 does

	Frequency	Percent	Valid Percent	Cumulative Percent
No answer	12	25.5	25.5	25.5
art	2	4.3	4.3	29.8
biblecla	1	2.1	2.1	31.9
build	1	2.1	2.1	34.0
chess	1	2.1	2.1	36.2
cricket	1	2.1	2.1	38.3
cycline	1	2.1	2.1	40.4
cycling	2	4.3	4.3	44.7
dart	1	2.1	2.1	46.8
drama	1	2.1	2.1	48.9
draws	1	2.1	2.1	51.1
f/ball	3	6.4	6.4	57.4
gym	1	2.1	2.1	59.6
gymn	1	2.1	2.1	61.7
hurdles	1	2.1	2.1	63.8
judo	1	2.1	2.1	66.0
jumping	1	2.1	2.1	68.1
maths	1	2.1	2.1	70.2
role pla	1	2.1	2.1	72.3
snowboar	1	2.1	2.1	74.5
swim	5	10.6	10.6	85.1
Taekwond	1	2.1	2.1	87.2
talk	1	2.1	2.1	89.4
talking	1	2.1	2.1	91.5
tv	2	4.3	4.3	95.7
twinwalk	1	2.1	2.1	97.9
walking	1	2.1	2.1	100.0
Total	47	100.0	100.0	

like to do

	Frequency	Percent	Valid Percent	Cumulative Percent
No answer	8	17.0	17.0	17.0
aerobics	1	2.1	2.1	19.1
archery	1	2.1	2.1	21.3
art	2	4.3	4.3	25.5
athletic	1	2.1	2.1	27.7
b/ball	1	2.1	2.1	29.8
badm	1	2.1	2.1	31.9
badmin	1	2.1	2.1	34.0
badminto	2	4.3	4.3	38.3
biblecl	1	2.1	2.1	40.4
contact	1	2.1	2.1	42.6
cycle	1	2.1	2.1	44.7
cycling	1	2.1	2.1	46.8
f/ball	6	12.8	12.8	59.6
gymn	1	2.1	2.1	61.7
h/riding	3	6.4	6.4	68.1
piano	1	2.1	2.1	70.2
run	1	2.1	2.1	72.3
running	2	4.3	4.3	76.6
sport	1	2.1	2.1	78.7
swim	6	12.8	12.8	91.5
tap danc	1	2.1	2.1	93.6
ten pin	1	2.1	2.1	95.7
wrestl	1	2.1	2.1	97.9
wrestlin	1	2.1	2.1	100.0
Total	47	100.0	100.0	

like to do

	Frequency	Percent	Valid Percent	Cumulative Percent
No answer	24	51.1	51.1	51.1
b/ball	3	6.4	6.4	57.4
climbing	1	2.1	2.1	59.6
cycling	2	4.3	4.3	63.8
dancing	1	2.1	2.1	66.0
f/ball	1	2.1	2.1	68.1
friends	2	4.3	4.3	72.3
golf	2	4.3	4.3	76.6
hockey	2	4.3	4.3	80.9
PE	1	2.1	2.1	83.0
playing	1	2.1	2.1	85.1
reading	1	2.1	2.1	87.2
run	2	4.3	4.3	91.5
singing	1	2.1	2.1	93.6
swim	2	4.3	4.3	97.9
tramp	1	2.1	2.1	100.0
Total	47	100.0	100.0	

like to do

	Frequency	Percent	Valid Percent	Cumulative Percent
No answer	15	31.9	31.9	31.9
astronom	1	2.1	2.1	34.0
b/ball	1	2.1	2.1	36.2
badmingt	1	2.1	2.1	38.3
baseball	1	2.1	2.1	40.4
cycling	2	4.3	4.3	44.7
drama	1	2.1	2.1	46.8
f/ball	4	8.5	8.5	55.3
gaelic f	1	2.1	2.1	57.4
games	2	4.3	4.3	61.7
getpicke	1	2.1	2.1	63.8
guitar	1	2.1	2.1	66.0
hockey	1	2.1	2.1	68.1
hurdles	1	2.1	2.1	70.2
iceskate	1	2.1	2.1	72.3
music	1	2.1	2.1	74.5
PE	1	2.1	2.1	76.6
rugby	2	4.3	4.3	80.9
ski	1	2.1	2.1	83.0
skiing	1	2.1	2.1	85.1
swim	2	4.3	4.3	89.4
t/tennis	1	2.1	2.1	91.5
tae kwon	1	2.1	2.1	93.6
tramp	2	4.3	4.3	97.9
ttennis	1	2.1	2.1	100.0
Total	47	100.0	100.0	

APPENDIX 17 – Descriptive statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
sex of the person	47	1	2	1.81	.398
age in years	47	5	12	9.13	1.825
class attending	47	1	7	4.70	1.793
additional support needs	46	2	18	7.83	4.649
other children in family	47	0	7	1.49	1.412
any others have ASN	47	1	2	1.81	.398
transport methods	47	1	8	2.70	1.944
transport prevent activity	46	1	2	1.80	.401
mins per session	6	5	30	24.17	10.206
times per week	6	1	5	3.67	2.066
organised by school	7	1	2	1.14	.378
enjoyed	8	1	4	2.50	1.195
activity at breaktime	47	1	4	2.72	1.314
mins per session	38	10	30	15.53	3.244
times per week	39	2	5	4.85	.670
organised by school	37	1	2	1.62	.492
enjoyed	39	1	4	1.51	.790
mins per session	37	15	60	49.03	14.260
times per week	39	1	2	1.46	.505
organised by school	37	1	1	1.00	.000
enjoyed	39	1	4	1.74	1.069
mins per session	38	10	45	32.11	10.308
times per week	40	2	5	4.78	.800
organised by school	36	1	2	1.72	.454
enjoyed	40	1	4	1.53	.784
mins per session	5	60	60	60.00	.000
times per week	5	1	2	1.20	.447
organised by school	19	1	2	1.74	.452
brekclub encouraged	15	1	3	1.53	.640
brekclub included	15	1	4	1.73	.961
brekclub partially	15	1	4	2.80	1.146
brekclub individual	15	1	4	2.87	.990
brekclub part	15	1	3	1.53	.640
brekclub same	15	1	3	1.53	.743
brekclub not allowed	15	1	4	3.60	.910
brekclub sit out	15	2	4	3.40	.828
brekclub something else	15	2	4	3.27	.961
brekclub different equip	15	2	4	3.53	.834
brekclub not done	15	1	4	3.80	.775
break encouraged	44	1	4	1.73	1.020
break included	44	1	4	1.75	.967
break partially	42	1	4	2.74	.989

break individual	43	1	4	3.09	1.087
break part	42	1	4	1.48	.740
break same	43	1	3	1.42	.587
break not allowed	42	1	4	3.38	.936
break sit out	42	1	4	3.45	.916
break something else	43	2	4	3.56	.765
break different equip	43	1	4	3.63	.787
break not done	44	1	4	3.82	.620
PE encouraged	46	1	4	1.26	.612
PE included	45	1	4	1.31	.633
PE partially	39	1	4	2.74	1.141
PE individual	44	1	4	2.80	1.112
PE part	45	1	4	1.22	.599
PE same	46	1	4	1.22	.629
PE not allowed	43	1	4	3.63	.787
PE sit out	44	1	4	3.41	.897
PE something else	44	1	4	3.45	.901
PE different equip	43	1	4	3.58	.823
PE not done	44	1	4	3.89	.538
lunch encouraged	44	1	4	1.57	.925
lunch included	44	1	4	1.52	.902
lunch partially	42	1	4	2.69	1.115
lunch individual	43	1	4	3.07	1.163
lunch part	42	1	4	1.45	.739
lunch same	45	1	4	1.49	.895
lunch not allowed	42	1	4	3.57	.801
lunch sit out	43	1	4	3.49	.856
lunch something else	43	1	4	3.47	.882
lunch different equip	43	1	4	3.56	.908
lunch not done	43	1	4	3.84	.615
aftersch encouraged	19	1	4	1.68	.946
aftersch included	21	1	4	1.57	.870
aftersch partially	21	1	4	3.19	.981
aftersch individual	21	1	4	3.24	.944
aftersch part	21	1	4	1.52	.981
aftersch same	21	1	4	1.67	1.065
aftersch not allowed	19	2	4	3.58	.769
aftersch sit out	21	2	4	3.33	.856
aftersch something else	21	2	4	3.48	.814
aftersch different equip	21	1	4	3.52	.873
aftersch not done	21	1	4	3.43	1.121
know any disabled athletes	47	1	2	1.94	.247
where to obtain information	47	1	2	1.49	.505
given more information	47	1	2	1.26	.441
orderid	47	1	47	24.00	13.711

COMPUTE BFastTime = breakfast1*breakfast2	6	5.00	150.00	97.5000	65.40260
COMPUTE BreakActTime = breaktime1*breaktime2	38	30.00	150.00	75.2632	19.48483
COMPUTE PEActTime = PE1*PE2	34	15.00	120.00	69.3824	32.40746
COMPUTE LunchActTime = Lunch1*Lunch2	34	50.00	225.00	147.7941	57.81621
COMPUTE AfterActTime = after1*after2	5	60.00	120.00	72.0000	26.83282
COMPUTE TotalActTime = BFastTime + BreakActTime + PEActTime + LunchActTime + AfterActTime	0				
Breakfast1a	43	0	30	3.37	9.176
Breakfast2a	43	0	5	.51	1.470
breaktime1a	43	0	30	13.72	5.885
breaktime2a	43	0	5	4.28	1.695
PE1a	43	0	60	42.19	21.674
PE2a	43	0	2	1.28	.666
lunch1a	43	0	45	28.37	14.214
lunch2a	43	0	5	4.33	1.599
after1a	43	0	60	6.98	19.461
after2a	43	0	2	.14	.413
COMPUTE BfastActTime = Breakfast1a * Breakfast2a	43	.00	150.00	13.6047	40.96057
COMPUTE breakactivitytime = breaktime1a * breaktime2a	43	.00	150.00	66.5116	30.50244
COMPUTE PEactivitytime = PE1a * PE2a	43	.00	120.00	61.8372	39.73300
COMPUTE lunchactivitytime = lunch1a * lunch2a	43	.00	225.00	134.8837	72.99289
COMPUTE afteractivitytime = after1a * after2a	43	.00	120.00	8.3721	24.77808
COMPUTE TotActTimeA = BfastActTime + breakactivitytime + PEactivitytime + lunchactivitytime + afteractivitytime	43	60.00	515.00	285.2093	107.55941
Valid N (listwise)	0				