A Study to Investigate the Factors that Influence Primary School Children's Participation in Physical Activity Outside of School Hours

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Declaration

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Abstract

The aim of this research project is to determine the factors that influence primary school children's participation in physical activity outside of school. A cross sectional mixed methods approach was used in this study. Participants included eighty-nine 5th and 6th class pupils aged 10-12 years old. A questionnaire was used to ascertain students' motivations and barriers to participation in physical activity outside of school hours. A smaller sub sample (n=35) of those who completed the questionnaire took part in focus groups. The focus groups were semi-structured in nature, with questions based on social cognitive theory. "I like to have fun," "I like being on a team" "I want to learn new skills" and "I like the teamwork" were the children's top motivators for participation in physical activity. 12.3% of participants cited lack of energy as a barrier to participation in physical activity, while only 4.4% believed lack of skill was a barrier. More robust findings relating to barriers were found during the focus groups. The children cited a lack of motivation, busy schedules, feelings of incompetence and the cost of sports clubs as impediments to participation. By determining the factors that influence participation this will help teachers, coaches and sports clubs understand children's reasons for participation, so that structures can be put in place to best support children's physical activity choices.

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Chapter 1: Introduction

Physical activity provides children with a number of health benefits, including improving both physical and mental wellbeing. It is crucial that children engage in sport and other physical activities from a young age in order to lay the foundation for lifelong engagement in healthy sporting experiences (Keegan, Harwood, Spray & Lavallee, 2009). Research indicates that the principal goals of children's sport are to provide rewarding experiences and to maintain their interest levels so that children continue to engage in sport and physical activity throughout their lives (Côté & Fraser-Thomas, 2007; McNamee & Bailey, 2009). It is also important that children engage in sport and physical activity to achieve health benefits.

Studies have shown that participation in physical activity promotes health and wellbeing, with evidence that regular physical activity contributes to the primary and secondary prevention of several chronic disease (e.g. cardiovascular disease, diabetes, cancer, hypertension, obesity, depression and osteoporosis) (Warburton, Nichol & Bredin, 2006). In contrast, it has been well documented that physical inactivity and sedentary behaviour lead to numerous health problems (González, Fuentes & Márquez, 2017). The World Health Organisation attributed 60% of the burden of disease in Europe to seven leading risk factors, one of which is physical inactivity. In Ireland, 9% of the burden of disease of coronary heart disease, 11% of type II diabetes, 15% of breast cancer, and 16% of colon cancer can be attributed to physical inactivity (Lee et al., 2012).

Only 19% of 10-12 year old children (5th and 6th class) in Ireland reached the recommended physical activity guidelines of 60 minutes of moderate-vigorous physical activity per day (Woods, Tannehill, Quinlan, Moyna & Walsh, 2010). With that in mind

it is vital to encourage children to engage in physical activity through a number of different means. Sport is a vehicle for increasing physical activity, so it makes sense to promote this type of physical activity among young children. It is therefore crucial to understand what motivates children to play sport and the barriers that exist to participation in sport. This allows us implement measures to promote sports uptake among children. Research to date has either focused on the barriers to participation or the motives for sports participation. A review by Bailey, Cope and Pearce (2013) found that children's participation in sport was mediated by five main factors; perception of competence, fun and enjoyment, learning new skills, parents and friends/peers. While a systematic review by Somerset and Hoare (2018) revealed that frequently reported barriers across quantitative studies were 'time' (n = 4), 'cost' (n = 3), 'opportunity/accessibility' (n = 3) and 'friends' (n = 2). Frequently reported barriers across qualitative studies were 'time' (n = 6), 'cost' (n = 5), 'not being good at sport' (n = 6) and 'fear of being judged/embarrassed' (n = 6).

The aim of this study is to address the gap in the literature to examine children's barriers and motivations to participation in physical activities outside of school hours. This was achieved through qualitative and quantitative measures to provide a robust exploration of the research question: what are primary school children's motivators and barriers to participation in physical activity outside of school hours? This information should be useful to those involved in the promotion of sport and physical activities among children, allowing them to motivate children to play sport, while also understanding the barriers children face.

Aim of this study

To determine the factors that influence the participation of primary school children in physical activity outside of school hours.

Objectives of this study

The objectives of this study are to determine what motivates primary school children to participate in sport and the barriers there are to participation in sport and physical activity outside of school hours.

Chapter 2: Literature Review

Physical activity is defined as any bodily movement produced by the contraction of the skeletal muscle, that results in energy expenditure greater than at rest (World Health Organisation, 2004). Physical activity is an umbrella term for many types of activity including; active living, active play, sport, physical education and active transport (Woods et al., 2010). For the purpose of this research project physical activity will be assessed in terms of the physical activities and sport children participate in outside of school hours (e.g. Gaelic football club, athletics club, martial arts). This literature review will examine the benefits of physical activity, the guidelines for engagement in activity, as well as providing information on participation rates in an Irish and international setting. Following this, sport will be examined as a popular mode of physical activity. The benefits of sports participation and previous literature regarding children's motivators and barriers to participation in sport and physical activity will also be outlined to provide context for this study.

Benefits of Physical Activity

The health and wellbeing benefits of physical activity are well documented in research. Studies have shown that there is a relationship between aerobic fitness and risk factors for cardiovascular disease and diabetes in children and adolescents (Andersen et al., 2006; Strong et al., 2005); suggesting that high fitness levels protect against such diseases. Physical activity also has a positive impact on bone health (Boreham & McKay, 2011). Furthermore, research has shown an association between physical activity and positive mental health and wellbeing (Biddle & Asare, 2011); such as a reduction in the symptoms of depression, stress, anxiety, and improvements in self-

confidence and self-esteem (Biddle & Asare, 2011; Morgan, Saunders & Lubans, 2012). While being physically active is beneficial at all ages, it is particularly important in the formative years for healthy growth and development (Caine & Maffulli, 2005) and preventing chronic diseases (Booth, Chakravarthy, Gordon & Spangenburg, 2002). These documented health benefits of physical activity highlight its importance to the overall development of children and demonstrate the value of promoting physical activity and sport to children throughout their time in primary school and beyond.

Physical Activity Guidelines for Children

In order to reap the health benefits of physical activity there are a number of physical activity guidelines. These guidelines are broken down for children, adults and older adults. The World Health Organisation (WHO) (2010) recommends that children and young people participate in at least 60 minutes of moderate to vigorous intensity physical activity (>60 min MVPA) per day. Moderate to vigorous activity requires a moderate amount of effort and noticeably increases the heart rate. Activities should also be incorporated that strengthen muscle and bone, at least three time per week (World Health Organisation, 2010). The activities should also be developmentally appropriate for the children, involving a range of activities which are enjoyable and fun (Department of Health and Children, 2009). The Irish Government has adopted these WHO guidelines for the children of Ireland.

Ireland's National Physical Activity Plan

According to the Department of Education and Skills, physical activity plays a very important role in the lives of children and young people. It is important because it acts as a medium for education, provides a basis for healthy living and acts as a vehicle

for social inclusion (Department of Education and Skills, 2012). The Irish Government has acknowledged the importance of physical activity to the health and wellbeing of the country's population, through the launch of the National Physical Activity Plan in 2016. This plan is part of the Government's Healthy Ireland initiative. The aim of the plan (Department of Health, 2016) is to:

> …increase physical activity levels across the entire population thereby improving the health and wellbeing of people living in Ireland, where everybody will be physically active and where everybody lives, works and plays in a society that facilitates, promotes and supports physical activity and an active way of life with less time spent being sedentary. (p.11)

The plan sets out eight key target areas, one of which is to increase children and young people's participation in physical activity. This is a key action area for the plan because previous literature has found that physical activity provides children with numerous health and wellbeing benefits, such as the aforementioned. In order to inform and develop strategies in which to increase children's participation rates, it is vital to understand their motivation and the barriers to participation. This is the aim of this research project.

Physical Activity levels in Ireland

In 2010, the Children's Sport Participation and Physical Activity (CSPPA) study (2010) assessed primary (5th and 6th class) and post-primary school children's activity levels. The results show that only 19% of children aged 10-12 years reached the recommended physical activity guidelines (i.e. 60 minutes MVPA). Girls were found to be less likely to meet the guidelines than boys (Woods et al., 2010). It also found that the likelihood of meeting the physical activity guidelines decreased as the children aged.

Furthermore, one in four children were unfit, overweight or obese and had elevated blood pressure (Wood et al., 2010). The results of the CSPPA study have been used as a baseline for the targets in the National Physical Activity Plan. The resulting target in the plan for children (aged 0-18 years old), is to increase by 1% per year the proportion of children engaging in at least 60 minutes MVPA per day (Department of Health, 2016).

International Physical Activity levels

A crucial task is to identify how Ireland compares to international statistics on the percentage of children meeting the physical activity guidelines. The Canadian Physical Activity Levels Among Youth (CANPLAY) study (2009) found that only 13% of 5-19 year olds in Canada met their physical activity guidelines of 90 minutes of MVPA per day (Canadian Fitness and Lifestyle Research Institute, 2009). In comparison to Australia where 32% of 9-16 year olds met their national guidelines of 60 minutes of MVPA per day. It is worth noting the different national guidelines adopted in the different countries. Ireland and Australia advocate a minimum of 60 minutes MVPA per day, while in Canada the guideline is 90 minutes MVPA. Therefore, while only 13% of 5-19 year olds met the 90 minute guidelines in Canada, this percentage would potentially have been higher if the guidelines in Canada were the same as here and Australia - 60 minutes MVPA.

More recently, The Active Healthy Kids Global Alliance organised the concurrent preparation of Report Cards on the physical activity of children and youth in 38 countries from 6 continents (representing 60% of the world's population) (Tremblay et al., 2016). The report cards were used to grade countries in nine key areas (Overall Physical Activity, Organized Sport Participation, Active Play, Active Transportation, Sedentary Behaviour, Family and Peers, School, Community and the Built

Environment, and Government Strategies and Investments) from A = excellent, to F= failing. The reports found that the average grades for both Overall Physical Activity and Sedentary Behaviour around the world are D (low/poor). The average grade for indicators related to supports for physical activity was C. Lower-income countries generally had better grades on Overall Physical Activity, Active Transportation, and Sedentary Behaviours compared with higher-income countries. However, lower-income countries had worse grades for supports from Family and Peers, Community and the Built Environment, and Government Strategies and Investments. Denmark, Slovenia, and the Netherlands had the best average grades for all indicators combined. Overall, Ireland received a C grade as an average grade across all indicators (Tremblay et al., 2016). Evidently, there is huge room for improvement here. One way to improve this grade would be to promote the participation of children and young people in community based physical activities so that physical activity becomes a healthy habit that is nurtured as the child grows.

Sport as a vehicle for increased physical activity

School is a very important setting for children's physical activity, as it provides children with opportunities to be physical active through playground games, physical education classes and extra-curricular sport activities (Woods et al., 2010). National governing bodies, such as the GAA, provide coaches to schools to engage in coaching sessions. As the school day predominately centres around academic pursuits, this can leave little time for physical activity either through physical education classes or extra-curricular activities (Morgan & Hansen, 2008). Therefore, physical activity in school and outside school should be promoted. The International Society for Physical Activity recognises that sport participation is an investment that works to promote physical

activity (Trost, Blair & Khan, 2014). The Federation of Irish Sports compiled a submission on the future funding of Irish sport for the Irish Government. In this document sport is identified as a method of improving public health, contributing to the economy, building and strengthening communities, establishing pride in the country, supporting tourism and making people feel good (The Federation of Irish, 2009).

Sport is any type of physical activity which is organised and usually competitive and can be played in a team or individually (Eime et al., 2013). Sport is viewed as a vehicle to address low levels of physical activity (Ekelund, Tomkinson & Armstorng, 2011; Ekelund et al., 2012) and to tackle the high prevalence of obesity (Ogden, Carroll, Kit & Flegal, 2012). Engaging in sports is an important way for children to achieve their recommended level of physical activity (Scholas & Mindell, 2012). This is important because the majority of young people from developed countries are physically inactive (Janssen et al., 2005). Furthermore, a study by Engstrom (2008) found that experience in a broad range of sports during childhood does impact exercise habits in later life.

Benefits of Sport Participation

Sport is beneficial to physical health but it has many other benefits. Young people experience many positive developmental outcomes as a result of their participation in sport (Fraser-Thomas, Coté & Deakin, 2005). Children who engage in sport score higher on scales for happiness and mental health compared to those who do not participate in sport (Snyder, Martinez & Schwarzer, 2010). Quality of life also improves as a result of regular participation in sport (Khan et al., 2012). A systematic review of the psychological and social benefits of participation in sport for children and adolescents concluded that community based sport participation should be encouraged as a form of leisure time physical activity for children and adolescents, as it not only

improves physical health (e.g. decreasing obesity levels) but also improves psychological and social health outcomes (e.g. improved self-esteem, social interaction and fewer depressive symptoms) (Eime, 2013). In particular, team sports are associated with improved health outcomes due to the social interaction linked to participation (Eime, 2013).

Irish Children's Participation in Sport

Given the benefits of sport participation to children's physical, psychological and emotional health, this mode of physical activity should be utilised to a greater extent. In an Irish contest, the CSPPA study (2010) examined participation in extra-school sport (i.e. sport outside school hours). The study found that participation at least once a week in an extra-school sport increased by 2% (up to 83%) among primary school children since 2004. Furthermore, no differences were found between gender regarding their participation in extra-school sports. However, it is interesting to note that boys participate more in extra-school sports in post primary school compared to girls. Participation rates in extra-school sport are lower among lower social classes than for higher social classes. Team sports such as Gaelic football, soccer and rugby are popular sports for boys, while girl's engaged in individual (e.g. dance) and team sports (e.g. Gaelic football) (Woods et al., 2010). Children's motivations for participation centred around wanting to keep fit and having something to so. In comparison, barriers to participation included feeling incompetent and not having access to suitable sports/activities. It is worth noting that the Wood's study (2010) found that the link between activities offered in school and those available in the community varied. Some community activities/clubs (Gaelic football and soccer) were much better promoted and

linked to school, creating better pathways and much better recruitment and ultimately engagement from children (Woods et al., 2010).

Social Cognitive Theory and health behaviours

In working towards better results, it is necessary to broaden the focus. It is not enough to only know the physical activity participation rates of children. If we are to increase participation rates and get more children engaged in physical activity, it is critical to understand why children choose or choose not to engage in sport. There is a considerable body of research into why people adopt positive health behaviours, such as regular engagement in physical activity (Sniehotta, Scholz, & Schwarzer, 2005; Schwarzer, 2008). Much of the research has looked at social cognitive factors in predicting health behaviour (Haider, Sharma & Bernard, 2012; Martin, McCaughtry, Flory, Murphy, & Wisdom, 2011). Bandura's Social Cognitive Theory (SCT) examines the factors that influence healthy behaviours (Bandura, 1989).

SCT works in conjunction with knowledge, goals, outcome expectations, perceived environmental impediments and facilitators in the establishment of behaviour (Luszczynska & Schwarzer, 2005). The core determinants of SCT include knowledge of health risks and benefits of different health practices, perceived self-efficacy that one can exercise control over one's health habits and the outcome expectations about the expected barriers and benefits for different health habits. Other key determinants include health goals and the concrete plans and strategies for realising them and the perceived facilitators and social and structural impediments to the changes they seek (Luszczynska & Schwarzer, 2005). These core factors of SCT work together to initiate and subsequently maintain a target behaviour. For the purpose of this study, the target behaviour being examined is children's participation in physical activities outside of

school hours. The qualitative element of the study will look to determine children's reasons for participating in or not participating in physical activities outside of school hours, using SCT constructs to guide the focus groups.

Barriers to participation in physical activity

If policy makers and sporting organisations are to increase participation in sport among children and adolescence, it is important to identify and understand the factors that influence participation in sport. Some work has been done in this area to date. Somerset and Hoare (2018) conducted a systematic review (n=22 studies) on barriers to voluntary participation in sport for children. After analysing the results the researchers grouped the barriers into two groups: practical and personal. The practical barriers to participation included time, cost and location. Each of these barriers were further broken down. A child's schedule, parent schedule and transport were all linked to 'time' as a barrier to participation. Lack of resources, access to good equipment and transport were all factors associated with the overall barrier of cost. Location as a barrier was linked to space, access, suitability and transport. It is worth noting that the practical issue of transport linked to all barriers (cost, time and location).

Regarding the person centred barriers to participation, the researchers split these into external and internal factors. In terms of the external factors, a bad experience in PE, peer disapproval, stereotypes, gender stereotypes, negative appraisal and competition were barriers to participation. These factors were influenced by external factors such as teachers and class peers. Internal factors effecting children participation in sport include, their own perceived sporting ability, feeling self-conscious while participating in sport, a fear of judgement and conformity. Interestingly, competition was both an internal and external barrier to participation. Some children who were

competitive, were a barrier to participation for other children (internal factor), there were other children who disliked competition (external factor) (Somerset and Hoare, 2018).

Motivators for participation in physical activity

It is also important to look at the motivators for participation so that factors can be identified to target and ultimately increase participation. A literature review by Bailey and colleagues (2013) looked to answer the question; why do children take part in and remain involved in sport? Fifty-three studies were included for review in the study. The review found that children's participation in sport was mediated by five main factors; perception of competence, fun and enjoyment, learning new skills, parents and friends/peers. In terms of competence, children who master a skill, get a sense of positivity which increases their motivation to participate in sport (Carroll & Loumidis, 2001). In comparison, children who perceive themselves as incompetent, had reduced motivation and this in turn increased the likelihood of dropping out of sport (Woods, Bolton, Graber & Crull, 2007). Perhaps this feeling of competence may come from a fear of underperforming or concern about not being able to contribute to the team. This feeling of incompetence and the resulting pressure is something that needs to be addressed in sports clubs so that children feel they are in a safe and positive environment in which to learn skills and enhance them.

Fun and enjoyment are very important motivators for children. However, fun means different things to different people. There is an individualistic element to sport enjoyment and it is worth noting that fun and enjoyable experiences are not the same for all children (Bailey et al., 2013). Parents have an influence on their children's motivation to take part in sport too. It was found that a caring, supportive family

environment where sport is not taken too seriously motivates children to take part in sport (Allender, Cowburn & Foster, 2006). Children enjoy learning new skills and this was denoted as a motivation for participation in sport. Furthermore, social interaction with friends and peers is an important motivator for participation in sport. It is clear from this research that a positive sporting environment where children can engage in sport with their friends and are encouraged to do so by their parents, is vital to ensure that children take up a sport and remain involved.

Conclusion

Much of the research to date on physical activity/sport participation has focused on either the barriers to participation or the motivators to participation. Little research has been conducted in this area in an Irish context since the CSPPA study published in 2010. While there is some research on primary school aged children, much of the research on the factors that influence participation is conducted with adolescents. This appears to be a research focus because it is seen as a time where teenagers drop out of sport, particularly girls (Woods et al., 2010). However, it is important to identify primary school children's motivators and barriers to sport participation because by tapping into children's motives and addressing the barriers to participation, this could potentially reduce dropout rates. For the purpose of this study, the factors which influence children's participation in physical activities outside of school hours will include children's motivators and barriers to participation, using a mixed methods research design. The following chapter provides a detailed account of the mixed methods research approach undertaken to address the research question.

Chapter 3: Methodology

Research Design Overview

This study seeks to investigate the factors (i.e. motivators and barriers) that influence primary school children's participation in physical activity outside of school hours. A cross-sectional research design using mixed methods was used (Doyle, Brady & Byrne, 2016). A questionnaire comprised of questions about children's participation in physical activity outside of school hours and their motivations and barriers to participation was administered to fifth and sixth class Primary school pupils (See Appendix III) . For the qualitative element of the study, a convenience sample of students took part in focus groups. The focus groups were semi-structured in nature, with questions based on SCT (Bandura, 1989) (See Appendix IV).

Researcher's Positionality

The researcher is passionate about promoting physical activity as a health enhancing behaviour for children and keeping children engaged in sport as they age. This passion for sport and physical activity led to the completion of an undergraduate degree in Sport Science and Health in Dublin City University and a research Masters in the area of health-behaviour change and mobile health (mHealth) technologies.

In terms of the current research project, the researcher tried to ensure that the participants felt they were in a safe, positive environment in which to express their opinions and beliefs during the focus groups. However, given the teacher pupil relationship at play during the focus groups this may have impacted the children's openness and willingness to express their true feelings on certain occasions.

Research Sample

Recruitment. A recruitment letter addressed to the principal and board of management was sent to the primary school requesting the participation of children in the research. A consent letter was sent home to all parents/guardians requesting permission for their children to take part in the study. Over sampling was applied to allow for refusal to participate in the study. A minimum sample size of 60 pupils was proposed for questionnaire completion. The questionnaire was administered by the researcher on-site and took no more than 15 minutes to complete. All questionnaires were collected by the researcher upon completion.

Of the 89 pupils who filled out the questionnaire, a convenience sample of students were selected for inclusion in the focus group element of the study. A total of six focus groups took place, with between 5-6 participants in each group. Each group aimed to have an even split of boys and girls and 5th and 6th class pupils. Each focus group lasted no more than 50 minutes.

Participants. Eighty-nine 5th and 6th class pupils from a large suburban primary school, located 45 minutes from Dublin (Age range: 10-12 years old).

Inclusion criteria. Participants who met the following criteria were included in the study:

- 5th and 6th class Primary school children.
- Informed parental/guardian consent obtained prior to participation.

Ethical Approval and Consent

An application for level 2 ethical approval was submitted (Appendix I) to the Marino Ethics in Research Committee (MERC) and ethical approval was granted in

October 2018. The approach to ethics undertaken in this study is in line with research ethics guidance for social sciences. Firstly, initial consent was obtained from the gatekeepers (principal/board of management and parents/guardians). Following this each child signed an assent form to take part in the study (Sproull, 2002).

Each parent/guardian received an information form and informed consent form detailing the components of the study following approval of the study by the principal and board of management. Once they agreed to their child's participation, they signed the informed consent form and returned it to their child's class teacher. The children were then asked to sign an assent form before they took part in the questionnaire/focus group. All questionnaire and focus group data was anonymised. Data from the questionnaire and focus groups was assigned a unique code to protect the identity of participants. All information was securely stored and saved in a password protected computer. Thirteen months after the research is completed, all data will be destroyed in accordance with Marino policy.

Mixed Methods Research

A mixed methods approach was used in the design of this study. This approach encompassed a quantitative questionnaire and qualitative focus groups. Firstly, the children's motivators and barriers to participation in physical activity outside of school were examined through the questionnaire data. Secondly, focus groups were used to gain a deeper insight into the factors that influence engagement. Mixed methods research has numerous benefits. The questionnaires allowed for a large amount of data to be gathered on a generous sample size. The use of both approaches in the one study provides additional evidence and support for the findings in the study. Using both

qualitative and quantitative measures also helps to reduce the personal biases of the researcher (Creswell, 2013). Furthermore, the focus group work gave a voice to the participants, ensuring that the findings were grounded in the participants' views and experience (Wisdom & Creswell, 2013).

Questionnaire Design

In the opening section of the questionnaire, participants were asked to fill in the PACE+ screening tool (Prochaska, Sallis & Long, 2001) to indicate their habitual physical activity levels. In section two, participants selected the physical activity/sports they participate in outside of school hours. Sections 3 and 4 comprised of questions about children's participation in physical activity outside of school hours and their motivations and barriers to participation. The Participation Motivation Questionnaire (PMQ) (Gill, Gross & Huddleston, 1983) was used to ascertain children's motivation for participation. The Barriers to Physical Activity Quiz (Centers for Disease Control and Prevention, 2001) was used to determine children's barriers. The questions included in this study have been adapted from the primary school questionnaire used in the Children's Sport Participation and Physical Activity (CSPPA) study (Woods et al., 2010).

Focus Group Design

The focus groups were semi-structured in nature, with questions based on SCT (Bandura, 1989). SCT encompasses a specific set of psychosocial determinants i.e. self-efficacy, outcome expectations, goals, impediments and facilitators to provide a theoretical understanding of physical activity behaviour (Figure 1). To develop the focus group script, questions were framed in relation to each determinant in the SCT

theory (Appendix IV). Participation in physical activity outside of school hours was the target behaviour being assessed via the questions asked in the focus group.

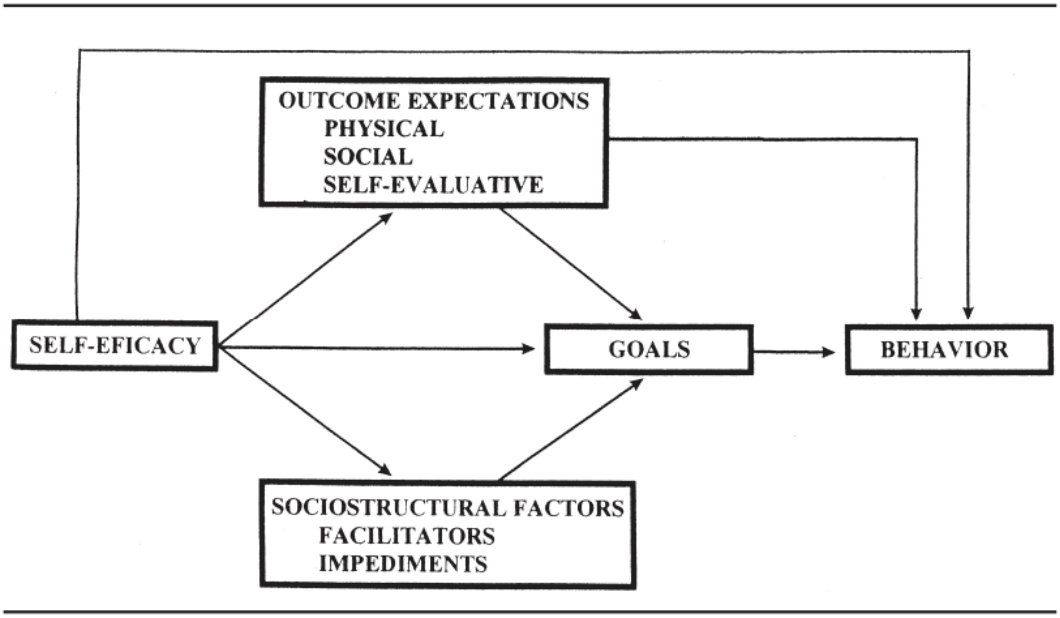

Figure 1: The social cognitive theory model of health behaviour.

Conducting the Research

The researcher gave a brief overview of the questionnaire, before the children started filling it out. If the children had any problems filling out the questionnaire they were asked to raise their hand and the researcher would address/clarify any issues. The questionnaire took approximately 15 minutes to complete. Once each child had completed the questionnaire, the researcher collected the questionnaires.

Of the participants who completed the questionnaire, a small convenience sample of children were selected to take part in the focus groups at a later date. In total 35 children took part in the focus groups (48.6% male). There were six focus groups in total. A pilot focus group was run and having reflected on the data collected the researcher decided to keep the data. Each focus group lasted on average 55 minutes in

duration with a maximum of six people per group. The researcher aimed to have gender balanced groups. The focus group was led by a moderator, who guided the interview.

Data Analysis

Questionnaire Analysis. Statistical Package for Social Sciences (SPSS) Version 24 was used to analyse the data. Data was cleaned and outliers were removed prior to analysis. Descriptive statistics such as, mean, mode, median, standard deviation and range were used in order to see, describe and summarise the data sets. The data was tested for normality, checking for skewness and kurtosis. Tests of normality established whether the data was normally distributed. This was essential in order to determine whether parametric or non-parametric statistical tests should be used (Maindonald & Braun, 2003).

Focus Group Analysis. The focus groups were transcribed verbatim. All participants were assigned an identification number for data reporting purposes. The data was analysed using directed content analysis (Elo & Kyngas, 2008). This method was used because it provides a useful method to validate and extend knowledge on the SCT framework. Furthermore, it allows for the constructs of SCT to guide the reporting and discussion of the qualitative data. An initial set of codes were generated for each focus group based on the data. This coding was done manually by going through the content of the entire data set and linking the information to particular codes. The researcher was left with a list of codes identified from the dataset. The codes were then sorted into broader themes under the SCT constructs, so that all the codes across each of the six focus groups, belonging to a particular theme were grouped together. This stage was performed in excel. From here the potential themes were given separate columns

and the corresponding codes were placed underneath the theme, along with participant quotes. In phase 4 the themes were revised and refined. All the coded data extracts were also reviewed to ensure they are appropriately coded to a given theme. The themes were then reviewed to ensure they accurately reflected the dataset and codes.

Conclusion

A mixed methods approach was taken in this study, using both questionnaire and focus group data. This was deemed the most appropriate approach to answer the research question. The questionnaire focused on finding the children's motivators and barriers to participation in physical activity outside of school. The focus groups added to the quantitative work. Through the lens of SCT the focus groups took a more in-depth look at the children's participation in sport/physical activity, examining the factors within the SCT constructs that play an important role influencing their engagement in physical activity. The following chapter presents the results of the quantitative and qualitative elements of this study.

Chapter 4: Presentation of Findings

The following chapter presents the finding of the quantitative questionnaire data and the qualitative focus group work. Part one details the quantitative findings, while part two presents the focus group findings, with the results presented under each construct of Bandura's SCT.

Part 1: Quantitative findings

Participants: Demographics

A total of 89 children took part in the questionnaire. The children were 5th class (n=44) and 6th class (n=45) pupils from a suburban primary school, 45 minutes from Dublin. Of the 89 children that took part, 34 were boys and 55 were girls and their ages ranged from 10-12 years old. Only three children indicated that they had a physical disability that affected their ability to participate in sport/physical activity. The condition provided by the children was asthma.

Habitual physical activity levels

To calculate the children's habitual physical activity levels, the children completed the two item PACE+. The first item asked them to report the number of days (0 – 7) they were physically active for at least 60 minutes per day in the past 7 days. The second item asked the same question with respect to a typical or usual week (Prochaska et al., 2001). An average value of the two items yielded a score of days per week that participants accumulated 60 minutes MVPA. Children qualified as meeting the recommended physical activity guidelines if they received an average of 7 days MVPA. Table 1 details the results of the PACE+ questionnaire.

Table 1: *PACE+ questionnaire results.*

	Over the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day	Over a typical or usual week, on how many days were you physically active for a total of at least 60 minutes per day	Average number of days that participants accumulated 60 minutes of MVPA.
Mean± SD (days)	3.2 ±1.8	4 ± 1.8	3.6± 1.7
Median (days)	3	4	3.5

After calculating the average response from the two items of the PACE+ questions, only 4.5% qualified as meeting the physical activity guidelines for youth of 60 minutes MVPA per day. A majority of 13.5% of respondents were active for 60 minutes on an average of 4.5 days per week.

Sports and Physical Activity Clubs

Section 2 of the questionnaire asked the children to indicate what sports they had (a) played in a club at least once since the beginning of the school year and (b) played in a club at least once a week since the beginning of the school year. The top three sports clubs that children engaged in at least once since the beginning of the school year were swimming (32.6%), badminton (23.6%) and Gaelic football (22.5%). Neither swimming or badminton featured in the top three sports that the total sample continued to play in at least once a week since the beginning of the school year; with the top three including Gaelic football (39.3%), soccer (37.1%) and other sports (22.5%).

Table 2 shows the breakdown by gender of the sports children (a) played in a club at least once since the beginning of the school year and (b) played in a club at least once a week since the beginning of the school year. Swimming (38.2%), badminton (29.4%) and athletics/cross country/Gaelic football (20.6%) were the most popular sports boys tried at least once since the beginning of the school year. The least popular sports for boys were squash and weight training. Only one boy indicated he did not try

any sport at least once since the beginning of the school year. Similar to the boys, swimming (29.1%), Gaelic football (23.6%) and badminton (20%) were the most popular sports that girls engaged in at least once since the beginning of the school year. The least popular sports for girls were squash (1.8%), aerobics(5.5%) rugby (5.5.%) and weight training (5.5.%). Two girls indicated that they had not tried any sports at least once since the beginning of the school year. Examining the sports the children indicated that they engaged in at least once a week since the beginning of the school year; soccer (61.8%), Gaelic football (44.1%) and badminton (32.4%) were most popular for boys. Gaelic football (36.4%), dance (30.9%) and soccer (21.8%) were the most popular sports for girls.

Table 2: *Sports club participation among boys and girls.*

	At least once since the beginning of the school year		At least once a week since the beginning of the school year	
	Boy (%)	Girl (%)	Boy (%)	Girl (%)
Adventure Activities	3 (8.8%)	7 (12.7%)	4 (11.8%)	3 (5.5%)
Aerobics	3 (8.8%)	3 (5.5%)	0	1 (1.8%)
Athletics	7 (20.6%)	7 (12.7%)	6 (17.6%)	7 (17.6%)
Badminton	10 (29.4%)	11 (20%)	11(32.4%)	5 (9.1%)
Baseball/rounders	4 (11.8%)	7 (12.7%)	4 (11.8%)	0
Basketball	8 (23.5%)	9 (16.4%)	4 (11.8%)	4 (7.3%)
Camogie	2 (5.9%)	7 (12.7%)	0	3 (5.5%)
Cross country running	7 (20.6%)	8 (14.5%)	9 (26.5%)	5 (9.1%)
Dance	3 (8.8%)	8 (14.5%)	2 (5.9%)	17 (30.9%)
Gaelic football	7 (20.6%)	13(23.6%)	15(44.1%)	20 (36.4%)
Gymnastics	2 (5.9%)	8 (14.5%)	1 (2.9%)	11 (20%)
Handball	6 (17.6%)	5 (9.1%)	1 (2.9%)	2 (3.6%)
Hockey	2 (5.9%)	5 (9.1%)	0	0
Horse-riding	2 (5.9%)	5 (9.1%)	1 (2.9%)	4 (7.3%)
Hurling	6 (17.6%)	4 (7.3%)	6 (17.6%)	1 (1.8%)
Martial arts	3 (8.8%)	6 (10.9%)	2 (5.9%)	3 (5.5%)
Rugby	6 (17.6%)	3 (5.5%)	2 (5.9%)	0
Soccer	6 (17.6%)	8 (14.5%)	21(61.8%)	12 (21.8%)
Squash	0	1 (1.8%)	1 (2.9%)	1 (1.8%)
Swimming	13 (38.2%)	16 (29.1%)	6 (17.6%)	9 (16.4%)
Tennis	4 (11.8%)	5 (9.1%)	2 (5.9%)	1 (1.8%)
Weight training	1 (2.9%)	3 (5.5%)	4 (11.8%)	5 (9.1%)
Any other sport	5 (14.7%)	6 (10.9%)	8 (23.5%)	11 (20%)
No sport	1 (2.9%)	2 (3.6%)	n/a	n/a

The questionnaire also sought to find out how often children attend sports clubs, if they receive coaching for their sport and how often they attend sports grounds/leisure centres for their sport. In relation to the sports the children engage in, 56% indicated that they take part in sports/physical activities with a club 2-3 days a week (figure 2). 88% said they received coaching at their club to help them get better at their sport (figure 3). Some 49% indicated that they attend a sports field/ground or sports/leisure centre to take part in some form of sports or PA on 2-3 days a week (See figure 4).

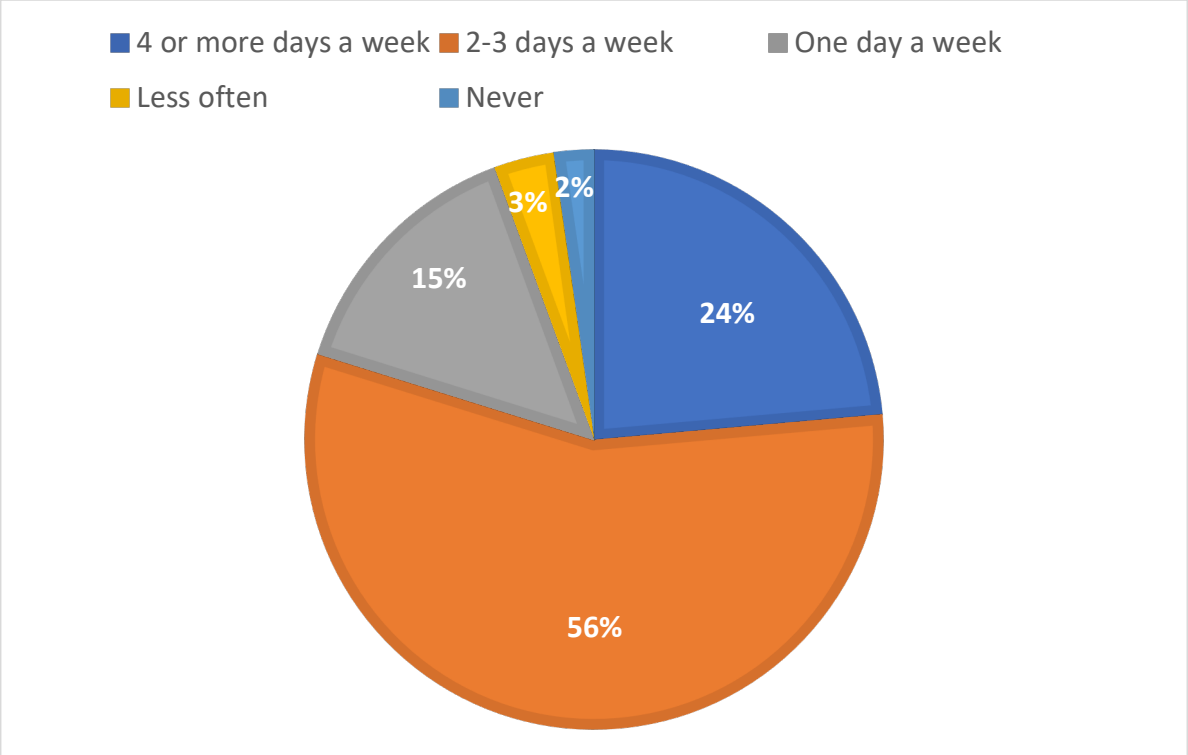

Figure 2. Number of days children take part in sports and physical activities with a club

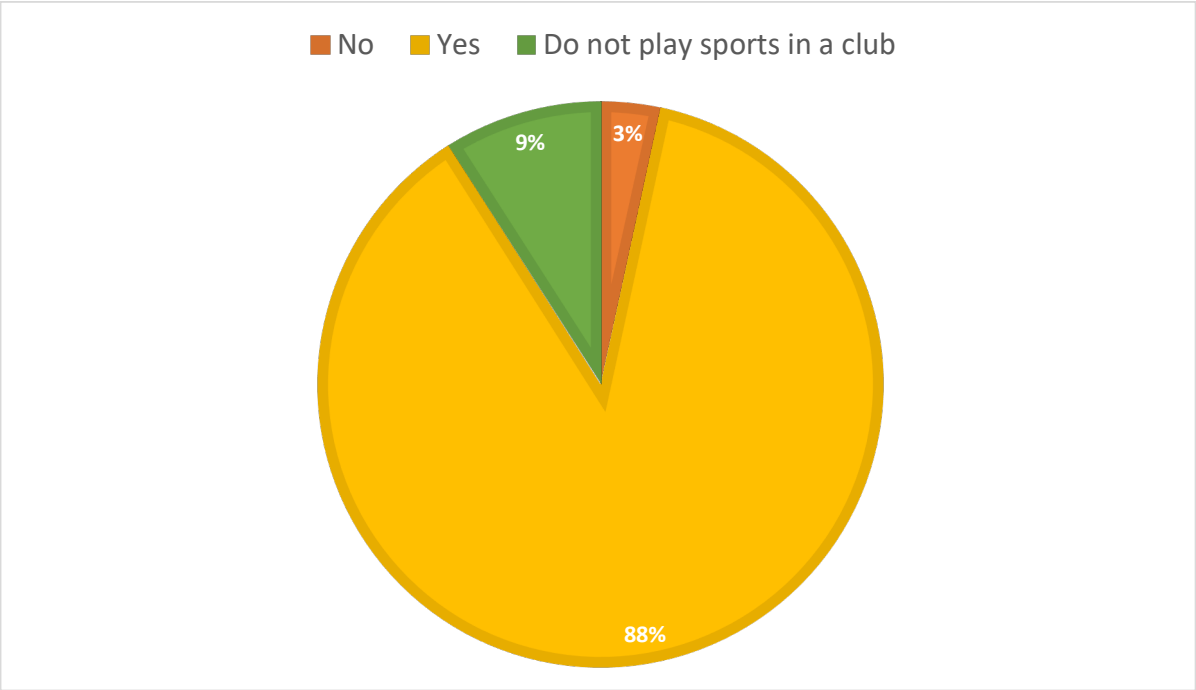

Figure 3. Percentage of children who receive coaching at a club.

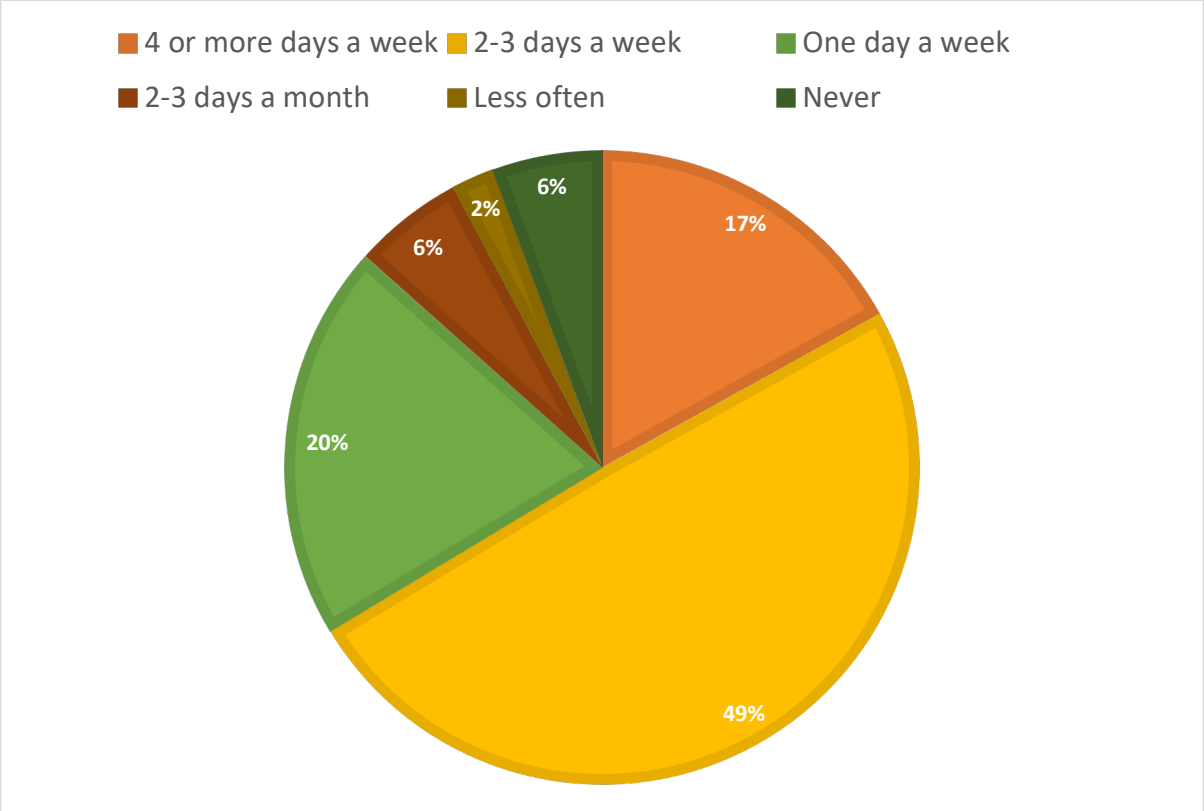

Figure 4. Number of days children go to a sports field/ground or sports/leisure centre to take part in sports and physical activities.

Barriers to Participation

A 21-item scale, the Barriers to Physical Activity Quiz (Centres for Disease Control and Prevention, 2001) evaluated perceived barriers to physical activity. Participants indicated the likelihood of each of the 21 statements listed, with response options ranging from zero (very unlikely) to three (very likely). Table 3 shows the percentage of the participants' who responded either somewhat likely or very likely to each of the 21 statements.

Table 3: *Responses to the Barriers to Physical Activity Quiz.*

Statement	Percentage
I've been thinking about becoming more physically active, but I just can't seem to start.	24.7%
If we had exercise facilities and showers at school, then I would be more likely to be physically active.	19.1%
My usual social activities with family or friends do not include physical activities.	18%
I'm just too tired after school to be active.	16.9%
I want to be more physically active, but I just can't seem to make myself stick to anything.	16.8%
My day is so busy now, I just don't think I can make the time to include physical activity in my regular schedule.	15.7%
I'm too tired during the week and I need the weekend to catch up on my rest.	15.7%
Participating in physical activities can be risky	11.2%
I really can't see myself learning a new sport.	11.2%
I'm not good enough at any physical activity to make it fun.	11.2%
I'm embarrassed about how I will look when I participate in physical activity with others.	10.1%
I know of too many people who have hurt themselves by overdoing it when they are physically active.	10.1%
It's just too expensive. You have to take a class or join a club or buy the right equipment.	10.1%
I don't get enough sleep as it is. I just couldn't get up early or stay up late to be physically active.	9%
Physical activity takes too much time away from other commitments - like school work, family, etc.	8.9%
My free times during the day are too short to include physical activity.	8.9%
I'm afraid I might injure myself.	7.9%
I don't have access to jogging trails, swimming pools, bike paths, etc.	7.8%
It's easier for me to find excuse not to be active that to go out and do something.	6.7%
None of my family members or friends like to do anything active, so I don't have a chance to be physically active.	5.6%
I don't get enough exercise because I have never learned the skills for any one sport.	5.6%

The questionnaire comprised seven subscales (each with three questions) namely lack of time, social influence, lack of energy, lack of willpower, fear of injury, lack of skill and lack of resources. A score of 5 or above in any category shows that this is an important barrier for the respondent to overcome. Table 4 shows the percentage of participants who scored 5 or more in each of the subscales. 12.3% of participants cited lack of energy as a barrier to participation in physical activity, while only 4.4% believed lack of skill was a barrier.

Table 4: *Barriers to sports/physical activity participation.*

Barriers to PA	Percentage
Lack of energy	12.3%
Lack of willpower	10%
Fear of injury	9%
Social influence	6.7%
Lack of resources	6.7%
Lack of time	5.5%
Lack of skill	4.4%

Motivation to Participation

The reasons for participating in sport/physical activity outside of school hours were ranked according to the proportion of respondents rating each item as very important (see table 5). The five most important reasons for participating in sport/physical activity for the total sample were "I like to have fun," "I like being on a team," " I want to learn new skills," "I like the teamwork," and "I want to be physically fit". The five least important reasons were "I like the rewards," "I want to release

tension," "I like to win," "I want to be popular," and "I want to get rid of energy".

Table 5 shows a further breakdown of the different motivators for boys and girls.

Table 5: *Rank Order of Reasons for Participating in Sports/Physical Activity.*

	Total		Boys (n = 34)		Girls (n=55)	
Item	**%**	**Rank**	**%**	**Rank**	**%**	**Rank**
I like to have fun	93.3%	1	94.1%	1	92.7%	1
I like being on a team	84.3%	2	82.4%	2	85.5%	2
I want to learn new skills	79.8%	3	73.5%	5	83.6%	3
I like the teamwork	79.8%	3	73.5%	5	83.6%	3
I want to be physically fit	78.7%	4	82.4%	2	76.4%	5
I like to get exercise	76.4%	5	70.6%	6	80%	4
I like the team spirit	75.3%	6	76.5%	4	74.5%	7
I like the excitement	75.3%	6	76.5%	4	74.5%	7
I like to have something to do	74.2%	7	79.4%	3	70.9%	9
I want to improve my skills	73%	8	70.6%	6	74.6%	6
I like the challenge	71.9%	9	70.6%	6	72.7%	8
I like to do something I'm good at	70.8%	10	64.7%	8	74.5%	7
I want to go on to a higher level	68.5%	11	70.6%	6	67.3%	10
I like the action	66.3%	12	70.6%	6	60%	12
I like to meet new friends	64%	13	67.6%	7	61.8%	11
I like the coaches or instructors	61.8%	14	52.9%	10	67.3%	10
I want to stay in shape	59.6%	15	70.6%	6	52.7%	13
I like to get out of the house	59.6%	15	58.8%	9	60%	12
I want to be with friends	55.1%	16	64.7%	8	49.1%	15
I like to compete	55.1%	16	70.6%	6	45.5%	16
I like to use the equipment or facilities	48.3%	17	47.1%	12	49.8%	14
I want to gain status or recognition	36%	18	50%	11	27.3%	20
I like to feel important	36%	18	35.3%	14	36.4%	17
My parents or close friends want me to play	33.7%	19	41.2%	13	29.1%	19
I like to travel	29.2%	20	26.5%	16	30.9%	18
I like the rewards	29.2%	20	29.4%	17	29.1%	19
I want to release tension	28.1%	21	32.4%	15	25.5%	21
I like to win	28.1%	21	32.4%	15	25.5%	21
I want to be popular	16.9%	22	29.4%	18	9.1%	23
I want to get rid of energy	13.5%	23	14.7%	19	12.7%	22

Part 2: Qualitative Findings

Thirty-five pupils from fifth and sixth class, who had previously taken part in the questionnaire took part in the focus groups. Appendix V provides a brief description of the key qualitative findings linked to the SCT constructs. The qualitative findings are presented below connected to each specific SCT construct.

Self-efficacy

Data collected for the construct self-efficacy focused on the four key areas which have been deemed to influence a person's self-efficacy; personal accomplishment/mastery, vicarious experience, verbal persuasion and emotional arousal. Exploration of these was essential in order to determine what shapes a child's self-efficacy to participate in physical activity outside of school hours.

Many of the children experienced achievements in sport and physical activity. The children noted that the achievements could be big or small, with bigger achievements noted as winning competitions and matches, while smaller achievements may be the learning or improving a skill: "I think you don't have to win something. They can be small or big it doesn't really matter, it's just achieving something" (Ch4, FG4). The children expressed their delight and pride in their achievements. These achievements helped to motivate the children and keep their interest level in the sport: "it could motivate you to work harder and try get even better if you keep winning" (Ch3 FG4). While many children said that they liked to win, it was noted that, "it's not really all about winning, it doesn't matter" (Ch2, FG1). Having fun was considered most important for the children: "I don't really care win or lose. I just like playing with friends, as I already said. And just having fun, that's it" (Ch6, FG1).

The vicarious experiences of family and friends helps to improve children's self-efficacy regarding their participation in physical activity. Most of the children who took part in the focus groups came from very active families. Many of the children talked about how they picked up a sport because a family or friend was involved in the sport: "Yeah my friend is like the only reason why I'd ever be playing football" (Ch5, FG2). The participants were happy and "proud" (Ch4 FG5) to come from active families and felt encouraged and supported by their active families to engage in physical activity. The children often spoke about how they received praise from family, friends and coaches and that this was very important to them. Verbal persuasion such as praise has been identified as a factor that influences self-efficacy. The children spoke about how praise acts as a motivational tool and a form of encouragement: "it encouraged me to try harder and do better" (Ch1, FG2).

The final factor that influences self-efficacy is emotional arousal. Throughout the focus groups the children acknowledged the positive feelings that arise from participating in physical activity, including feeling happy, proud and feeling good about one's self: "It makes me feel happy or good about myself" (Ch2, FG2). An additional benefit of sport was the fact that it helps the children to clear their mind and destress, particularly from school: "Yeah it helps to clear my mind a lot. There's so much going on in school, with like secondary school and all coming up" (Ch5, FG1).

Outcome expectations

There are three types of outcome expectations that impact whether or not a person will engage in a target behaviour, in this case physical activities outside of school hours. The three types of outcome expectations are physical, social and self-evaluative. In terms of the physical expectations the children acknowledged that "sport

is not just good for you physical health, it's good for your mental health as well" (Ch3, FG5). Time and time again the children highlighted that they believed it was good for them to get out in the fresh air. The children acknowledged the numerous health benefits resulting from physical activity but they were in agreement that they don't engage in physical activities just for the health benefits; these benefits were viewed as a bonus for the children: "when you're getting fitter and healthier it's like a bonus" (Ch1, FG3). When asked if they participated in sport to "look a certain way" the children were adamant that looking a certain way was not important, with one child exclaiming that "it doesn't really matter what you look like" (Ch3, FG4).

In terms of the social expectations, all the children said that their family and friends take an interest in their physical activity and that is nice to receive support from others. One child spoke about how her dad helps her to learn her skills: "so say I'm struggling on a skill, my dad will help me and make me keep doing it until I get it…so it really motivates me" (Ch4, FG4). It was reiterated throughout the groups that family members encourage children to be active and not to be sitting inside all day. The children often spoke about how their parents wanted them "to go outside and play" (Ch4, FG6).

Finally, the self-evaluative outcome expectations revealed that while children associate many positive emotions with sports participation, there are some negative emotions that are sometimes part of sports participation. Overall the children appeared to be quite hard on themselves, talking about how they can sometimes let themselves down and feel sorry for the mistakes they make. One of the girls who competes at baton twirling spoke about her disappointment and upset at making mistakes: "sometimes like when I forget and I'm on the floor I get a bit upset, like oh my god I didn't do well, that was really bad." (Ch1, FG3). At times the children spoke of their frustrations and anger

for not picking up a skill straight away: "it can be very frustrating because you're really trying and you just can't do it" (Ch 3, FG5).

Sociostructural factors: Facilitators and Impediments

The children all spoke very highly of the huge range of facilities and clubs on offer in their local community. They spoke about how these excellent facilities and clubs help to facilitate their participation in physical activities. However, the children noted how distance was not an issue, as they would be willing to travel in order to participate in physical activity: "my mam says she doesn't mind how long we have to drive to get to a ballet place, as long as I want to do it" (Ch3, FG3). This refers to a desire among parents to do everything necessary to support their children's activities.

In terms of the impediments to sports participation, a lack of motivation after a long and busy day, as well as a demanding time schedule were the most commonly noted impediments in the focus groups. One child spoke about how his days are so busy that sometimes he is "too busy doing other stuff" (Ch5, FG2). The cost of joining sports clubs was also identified as a barrier to participation. Some participants spoke passionately about how clubs should not be expensive so that they would be accessible to all:

> You could be doing a sport every day or five different sports and like that could be a few hundred every week…you might not be able to afford to do that much. You might have to stop a few which you wouldn't like but you wouldn't have a choice. (Ch5, FG5)

However, one group said that money was a parental issue and should not be the concern of children:

you shouldn't really feel pressured "oh do we have enough money?"…It's not good for someone young to be pressured that their parents don't have enough money. (Ch4, FG3)

Goals

Most children said they set goals, both short and long term. Goals were set relating to their skills and aspects of performance and were used as a motivating tool, as something to work towards: "it's hard work playing a load of sports, so if you give yourself a goal and it pays off then you feel good about yourself" (Ch4, FG5). Those who did not set goals played their sport solely for fun and to play with friends: "No. I don't really set goals. I just do it for the fun and just to be with friends" (Ch6, FG1). However, the majority of participants, even those who do not already set goals, acknowledged that goal setting would help drive their motivation to participate and stay involved.

Conclusion

"I like to have fun," "I like being on a team" "I want to learn new skills" and "I like the teamwork" were the top motivators for children's participation in physical activities outside of school hours. Some 12.3% of participants cited lack of energy as a barrier to participation in physical activity, while only 4.4% believed lack of skill was a barrier. More robust findings regarding barriers were found during the focus groups. The children cited a lack of motivation, busy schedules, feelings of incompetence and the cost of sports clubs as impediments to participation. The following chapter will discuss these results in further detail and place them in the context of previous literature in the area.

Chapter 5: Discussion and Analysis of Findings

As we have seen, research points to the importance of physical activity as a health promoting activity for all ages, particularly children. Therefore it is particularly important for researchers to define what factors motivate children and also to identify the barriers to participation in physical activity. Knowing these two conflicting sides will help us to promote and encourage participation in sport. The aim of this study was to use both qualitative and quantitative means to determine the factors that influence Irish primary school children's participation in physical activity outside of school hours. A lot of data was gathered from the mixed methods approach taken. The following chapter will discuss and analyse the key findings from the questionnaire data and connect these findings to any significant points raised in the focus groups relating to the children's motives and self-identified barriers to participation in physical activity.

Motives for sports participation

Data from the questionnaire revealed that "I like to have fun," "I like being on a team" "I want to learn new skills" and "I like the teamwork" were the children's top motivators for participation in physical activity outside of school hours. These motivators correspond to some of the motivating factors for participation found in a review by Bailey, Cope and Pearce (2013). The review found that children's participation in sport was mediated by five main factors: perception of competence, fun and enjoyment, learning new skills, parents and friends/peers.

Fun and enjoyment. The fun and enjoyment children derived from physical activity was found to be extremely important in motivating children's engagement in sport. This finding was reiterated in the current study with 93.3% of children rating "I

like to have fun" as very important in the questionnaire. This was further emphasised during the focus groups where the children regularly spoke about fun and enjoyment as a reason for starting a sport and for continuing engagement in the sport: "I just like doing it for fun, it's not really all about the winning" (Ch4, FG4). It is therefore important that community sports clubs have an ethos that promotes fun as a core component of their activities by creating a positive, motivational climate. This approach would help to ensure that the coaching environment supports children's motives for participation (Cumming, Smoll, Smith, & Grossband, 2007). In a study on the role of community sports coaches in creating optimal social conditions for life skill development, the coaches expressed the importance of offering fun activities for children to keep them in engaged in sports, week on week (Super, Verkooijen & Koelen, 2018). With this in mind, skills development, making friends and effort should be prioritised over competition and winning in order to encourage long-term engagement (Smoll & Smith, 2006).

Teamwork. Some 84.3% of respondents indicated that "I like being on a team" as a very important reason for their participation in sport. 79.8% of respondents also indicated that teamwork was very important to them. These findings link to the motivating factor 'friends/peers' found by Bailey and colleagues (2013). The review found that social interaction is an important motivating factor driving sports participation, providing opportunities for team work, gaining social acceptance (Smith, Balaguer & Duda, 2006), making friends (Light & Lemonie, 2010) and meeting new people (MacPhail, Gorely & Kirk, 2003). This research project also found that teamwork played a significant motivating role, highlighting the important function that sports play in the social development of children. During the qualitative element of the

study the children frequently spoke about their friends as the reason why they initially started a sport and that they enjoyed playing sports with their friends and/or making new friends: "my friend did gymnastics so now I'm starting to do gymnastics" (Ch3, FG6).

While the physical benefits of sport are well known, it is evident from this and previous research that the social element of sport is crucial to a child's love of a sport and for long-term engagement. The value of developing social skills through sports participation must not be overlooked, rather its importance should be emphasised to children. Children learn invaluable life skills such as leadership, communication and socialisation skills through participation in sport (Sopa & Pomohaci, 2014). Furthermore, team sports allow children to learn how to interact with their peers and with adults, including coaches and referees (Sopa & Pomohaci, 2014). The social benefits of sports participation should therefore be promoted at home, in school and at club level so that children understand the value of sports to their overall development.

New skills. "I want to learn new skills" (79.8%) was another key motivator for children. This concurred with the finding in the Bailey review (2013) where learning new skills was a primary motive for children. A study by MacPhail et al. (2003) included in the review found that children enjoyed learning new skills because of the inherent challenge it presents. The qualitative work in the present study also revealed that children enjoyed learning new skills and getting better at their skills through sports participation: "It makes me feel happy… if I were to do something that would make my skills to a higher level" (Ch2, FG2). This finding is particularly relevant to coaches and volunteers at club level. Coaches play an important role in "creating social conditions for positive youth development" (Super et al., 2018, p.174). Sports coaches have also

been found to acknowledge their responsibility in creating a safe, caring environment, that allows the children to experience moments of success (Super et al., 2018). The children viewed the learning of and improving of skills as moments of success which then act as motivators for participation: "they make me work harder, so say I'm struggling on a skill my dad will help me…Then when I start to get it he'll say well done…so it really motivates me." (Ch4, FG4). Children want to learn new skills so it is important that they get the best possible chance to learn those skills by having well trained and motivated coaches and mentors. Coaches and parents need to be aware of the important role they play in encouraging participation and in the teaching of new skills, so that children are facilitated to learn new skills and more importantly be motivated to do so.

Fitness levels. An Irish study by Woods et al., (2010) found that keeping fit and for something to do were key motives for primary school children's participation in sport outside of school hours (Woods et al., 2010). While neither of these factors were in the top three motivators in the present study, wanting to be physically fit was ranked the second highest motivator for boys and came in at fifth place for girls; indicating that fitness does play a role in children's engagement in physical activity. During the focus groups the children spoke about how sports gave them something to do and that it was better for them than sitting inside: "it's probably better than sitting in on the PlayStation when you could be outside getting fresh air" (Ch1, FG5). In a world where more and more young children are reaching for technology instead of the great outdoors, it is vital to ensure that community based physical activities are easily accessible to children; meaning that the healthy choice becomes not only the best option but the easiest, most accessible option.

Barriers to sports participation

Only 3.4% of respondents indicated that they had not played in a sports club since the beginning of the school year. Therefore, it is unsurprising that very low percentage barriers were reported in the questionnaire data. However, while the quantitative element of the study did not reveal much in relation to the barriers children may face, the qualitative element revealed some interesting findings. The analysis of both sets of data identified the following factors as barriers to physical activity participation of children outside school hours: busy schedules, lack of motivation, feelings of incompetence and cost of clubs.

Busy schedules and lack of motivation. Lack of energy (12.3%) and lack of willpower (10%) were the top two barriers to sports participation reported in this study. These findings were further emphasised by a finding in the focus groups where some children reported that at times they had a lack of motivation to participate in sports, commenting that they often felt tired and unmotivated after a long day at school: "No motivation or like just tired after a long day, not energised to do it" (Ch3, FG2). Furthermore the children spoke about how busy their lives are and how it is often hard to fit in all their activities. These barriers relate to the barrier 'time' found in a systematic review by Somerset and Hoare (2018).

If children feel that their day is too busy and this is a barrier to physical activity participation, it is up to government agencies, schools and community clubs to be aware of this and try to address these issues. One way to address the barrier of children's busy schedules would be for schools to promote physical activity as an important part of a child's routine and to promote it as part of their homework. This would help children to form healthy habits that they can continue to develop as they age. Furthermore, greater

links need to be made between community based sports clubs and schools. In order to increase children's overall physical activity levels it may be necessary to organise more sports during the school day. This would help children with their busy schedules and it would also offer community clubs, such as the local GAA, rugby and soccer clubs the opportunity to recruit more members. But society may also need to look at how much children are doing and try to reduce other activities, in favour of physical activities.

Feelings of incompetence. From the questionnaire data only 4.4% of children cited lack of skill as a barrier. However, the qualitative data revealed that the children were often very tough on themselves and had high expectations when learning a new skill. This finding is similar to the finding in the CSPPA study (2010) which found that feelings of incompetence was one of the key reasons for non-participation. Returning to the current study some of the children expressed how they felt they were not good enough if they experienced difficulty learning a new skill: "It gets me so frustrated. I can do things fine at school and then certain positions in ballet… I can't do it" (Ch3, FG3). The children's perception of their sporting ability corresponds to the barrier that they spoke about in the focus group where they sometimes felt incompetent if they struggled to learn a particular skill (Somerset and Hoare, 2018).

In order for children to become confident at a skill it is imperative that they receive the best coaching that a club can offer. Therefore clubs need to constantly upskill coaches so that children can be provided with the best coaching and feedback needed to improve their skills. Training of coaches needs to place greater emphasis on the development of pedagogical knowledge so that coaches can attempt to provide a supportive coaching environment (Jones, Morgan & Harris, 2012). As children highlighted fun and enjoyment as motivating factors, coaches need to make sport fun. It

is only through this supportive coaching environment that the children's confidence in their ability and their competence will improve, leading to prolonged engagement and ultimate enjoyment of sport.

Cost of sports/PA clubs. Although cost was not identified as a barrier in the questionnaire data, it was cited as a potential barrier to sports participation in many of the focus groups. This finding corresponds to the Somerset and Hoare (2018) review which found that cost was a barrier to children's sport's participation. The children spoke about how they engage in multiple clubs and this can cause a financial burden.

> You could be doing a sport every day or five different sports and like that could be a few hundred every week… You might have to stop a few which you wouldn't like but you wouldn't have a choice. (Ch5, FG5)

Studies have shown that children from poorer backgrounds and those from single parent families are more likely to be affected by such a barrier (Biddle, Whitehead, O'Donovan, & Nevill, 2005; Brodersen, Steptoe, Boniface & Wardle, 2007). Certain sports can also be expensive if there is a need for specialised equipment. The children in the focus groups spoke about how cost can impact on whether a child engages in a sport: "some people can't afford it and they might love that sport but they can't do it" (Ch2, FG2). To counteract this many sports programmes and clubs offer free or reduced pricing for families exhibiting financial need. This may be one way to reduce the financial burden on parents and allow children to participate in physical activities. Furthermore, more low-cost or free physically activities, such as active play with friends and going for a brisk walk need to be promoted by schools and local communities, so that children reach their target of 60 minutes MVPA per day. Sport and/or physical activity need not be costly.

Limitations of this study

- The findings of this study cannot be generalised to the entire primary school pupil population, as only 89 pupils took part. Future work on a larger sample size would help build on these findings and gather more generalizable findings in the area.
- Due to the fact that only one researcher conducted the research, validation of the coding could not be undertaken; whereby two or more members of a research team independently code the same piece of transcription and compare notes.

Chapter 6: Conclusions and Recommendations

Conclusions

Physical activity is recognised as a health enhancing behaviour and should be promoted throughout the life span. Children spend a large proportion of their day in school and while they do receive opportunities to be active through lunch breaks and PE this is not enough to meet the guidelines of 60 minutes of MVPA per day (WHO, 2010). It is therefore important that children continue to be active outside of school hours. Sport has been viewed as a vehicle for increased physical activity among children. This research aimed to find children's motives and barriers to participation in sports/physical activities outside of school hours so that these factors could be harnessed to promote physical activity among primary school children.

The key motivators for children's participation in sport as found in this study are fun, teamwork and learning new skills. These motives link to some of the key factors found in a review paper by Bailey and colleagues (2013), namely fun and enjoyment, learning new skills and friends/peers. In particular fun and enjoyment was found to be the most important motivating factor for children with 93.3% of children rating this a very important to them. The quantitative element of the study revealed that lack of energy (12.3%) and lack of willpower (10%) were the top two barriers to sports participation reported in this study. However, given that 96.6% of participants engage in sports and physical activities it was to be expected that the children would not have many barriers to club participation outside of school. Nevertheless, the qualitative element of the study did provide some rich data regarding children's perceived barriers to sports participation that the quantitative questionnaire did not pick up on. These barriers included lack of motivation, busy schedules, feeling incompetent and the cost of sports/PA clubs.

It is extremely important for coaches, clubs, sporting bodies and government agencies to understand children's motives and barriers to sports participation so that measures can be put in place to promote sports participation and stem the dropout rates that often occur during the teenage years; particularly among girls. Given the significant impact sport and physical activity can have on children's physical and mental health this is an area worth investing time, money and resources in.

Recommendations for community based sports clubs

The following recommendations are made for sports and physical activity clubs and organisations:

- 93.3% of children believed that fun was very important to them. It is therefore vital that sports clubs' harness this and create environments centred around fun and enjoyment for the child. The primary aim in each club should be for children to enjoy themselves through sports participation rather than having a sole focus on winning.
- It is evident from the findings in this study that teamwork and being part of a team is particularly important to children. Clubs should have positive social environments that encourages children to work together, as well as having fun with new and existing friends.
- Learning new skills was another key motive for children's participation in sports and physical activities outside of school hours. Clubs should make investments in their coaching staff and volunteers in order that they can upskill and provide children with the best coaching so that the children can continue to learn and apply new skills.
- Importance of creating and developing a link between community based sports and the school. The introduction of community based coaching in schools such

as those offered by the GAA would promote a link between the school and local community sports.

- Freeing up children's lives to make sure there is time for sport.

Recommendations for future research

The following recommendations are made for future research:

- A larger pupil sample size should be used in future research in order to make more generalizable findings from the research.
- The children need to be more aware of the physical activity guidelines so that they can make informed judgements about their own activity levels, particularly when filling out self-report physical activity questionnaires, such as the PACE+ questionnaire.
- Studies on sports clubs should be carried out to assess whether or not, or to what extent clubs cater to the children's motives (i.e. fun, teamwork and learning new skills). This would give clubs an indication as to what they are doing well and what areas could be improved upon.

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Appendices

Appendix I: Ethical Submission

Application for Ethical Approval of Research Proposals

Title of Research

Factors that influence primary school children's participation in extra-school sport.

Research Reference Number[1]

N/A

Researcher's Name

Orlaith Duff

Email Address

oduffpme17@momail.mie.ie

Category of Proposer (please tick)

Student ✓ **Principal Investigator (Staff)**

If you are a student, please complete the following: Student Number:

17342903

Course of Study: B.Ed.___ B.Sc.___ PME __X__ MES ___

OTHER: ___

Please indicate the level of approval required (see accompanying notes).

Level 0	Level 1	Level 2
☐	☐	☒

[1] Please leave blank

1. Please give a structured abstract of the proposed research, including the methods you intend to use (approx. 300 words).

Introduction: Physical activity provides children with a number of health benefits, improving physical and mental wellbeing. However, in Ireland only 19% of 10-12 year old children (5th and 6th class) reached the recommended physical activity guidelines of 60 minutes of moderate-vigorous physical activity per day (Woods et al., 2010). This project will examine extra-school sport as means for children to be physically active. An understanding of the factors that influence participation in extra-school sport is important so that structures can be put in place to stem the withdrawal of young people, particularly girls from sport during their teenage years.

Methods: This study will use a cross-sectional research design using mixed methods. A questionnaire comprised of questions about children's participation in extra-school sports and their motivations (Participation Motivation Questionnaire (Gill, Gross and Huddleston, 1983)) and barriers (Barriers to Physical Activity Quiz (Center for Disease Control and Prevention, 2001)) to participation will be administered to fifth and sixth class Primary school pupils. Urban and rural primary school will be targeted for inclusion. A minimum sample size of 60 pupils is proposed for questionnaire completion. The questionnaire will take no more than 15 minutes to complete. For the qualitative element of the study, a convenience sample of students will take part in focus groups. The focus groups will be semi-structured in nature, with questions based on Social Cognitive Theory (Bandura, 1989). Each focus group will last for no more than 45 minutes and there will be a maximum of six focus groups.

Results: The questionnaire data will be inputted into SPSS. Descriptive statistics will be used to describe the data set. The data set will be checked for normality. Tests for correlation and regression will also be performed if and when appropriate. The focus groups will be audio-recorded and transcribed verbatim. The data will be analysed using content analysis (Neuendorf, 2016).
Conclusion: It is hoped that by determining the factors that influence participation this will help teachers, coaches and sports clubs understand children reasons for participation so that structures can be put in place to support children's physical activity choices.

2. Please answer the following questions in relation to your proposed research. Questions (b), (c) or (d) will require detailed explanations if answered 'yes' and will be referred for additional scrutiny by the MERC. Answering 'Yes' to (e) will require a separate application to the relevant HSE REC.	**Please tick**	
	Yes	**No**
a. Does the research involve work with children (under-18) or vulnerable adults?	✓	
If 'Yes', has appropriate Garda clearance (or equivalent) been obtained (include details)?	✓	
Please provide the date of issue on the Certificate of Garda Vetting.	14/08/2017	
b. Could any aspect of the research give rise to any form of harm to participants, including the researcher(s)?		✓

c. Could any aspect of the research produce information that could lead to criminal prosecution of the participants or others?		✓
d. Is deception of the participants planned in any aspect of the research? If yes, provide details.		✓
e. Does any aspect of the research involve patients (or their relatives or carers) or other users of health and social care services, the premises or facilities of such services, access to personal records or the participation of health or social care staff?		✓

3. (a) Who are the proposed participants, e.g. teachers; students?
Fifth and sixth class primary school pupils.

(b) What is your relationship with them? (If you are in a position of authority, for example, indicate how you will deal with the potential influences of such a relationship.)

I will be on school placement during the data collection phase. Therefore I will have taught or will be due to teach some potential participants of my study. I have considered the implications of this and the impact it may potentially have on my study. I will ensure that all pupils are treated equally and that under no circumstance will they be put under any pressure to participate in the study.

I

4. (a) How will you recruit participants?
Participants will be recruited from 5th and 6th class primary schools. A letter detailing the research project will be sent to the school principal and board of management requesting the school's permission to participate in the study. Once the school agrees to participate in the study, a letter detailing the study will be sent to parents/guardians of children in 5th and 6th class. If the parents/guardians agree for their children to participate then they will be given an informed consent sheet to read and sign. Before taking part in the questionnaire or focus groups, the children will also be asked to sign an assent to participate form.

(b) Please detail any ethical aspects that must be considered, including the proposed use of any incentives.

No incentives will be used in the recruitment of participants.

5. (a) What is the location(s) at which the data collection will be undertaken?
Urban and rural primary schools.

(b) Describe any circumstances that might give rise to security concerns for participants or researchers?

All participant data will remain strictly confidential. However, if during the focus group interviews any child protection concerns arise, I cannot keep this information confidential and will relay the information to the designated liaison person in the school.

(c) Describe any conflicts of interest where data might be critical of working practices, people etc. or disclosure of illegal activities?

N/A

6. Please indicate how informed consent of all participants will be gained. For participants under the age of 18, indicate how the informed consent of both the participant and the participant's parent/guardian will be gained. (Draft consent forms MUST be attached – see question 8 for guidance.)
Each parent/guardian will receive an information form and informed consent form which will detail the components of the study. If they agree to their child participating in the project then they will sign the bottom of the informed consent form and return it to their child's class teacher.
The children will be asked to sign an assent form just before they begin the questionnaire/focus group, to ensure that they still wish to participate.

7. (a) Please indicate how the participants' rights to privacy (inc. confidentiality and anonymity) and the privacy of their data will be protected. Highlight potential limitations of confidentiality in the ethics form and information sheets for participants (e.g. for small samples or insider research and how this will be addressed).

The children's information from the questionnaire and focus group will be assigned a unique code which will protect their identity. All information will be stored securely and saved in a password protected file in a computer. The children's identity or personal information will not be revealed or published.

The study findings will be presented in a thesis and may be presented at scientific meetings and published in a scientific journal, but the children's identity will not be divulged and only presented as part of a group. The confidentiality of information provided can only be protected within the limitations of the law. It is possible for data to be subject to subpoena, freedom of information claim or mandated reporting by some professions.

(b) Please also indicate how the data will be stored (and ultimately destroyed as appropriate).

All questionnaire data will be anonymous. Data from the questionnaire and the focus groups will be assigned a unique code which all will protect participants identity. All information will be stored securely and saved in a password protected computer. After a 13-month period all data will be destroyed in accordance with Marino policy.

8. Please complete the checklist below to confirm you have considered all ethical aspects of consent. **(Note that the consent forms that must accompany this application; any omission or inadequacy in detail will result in a request for amendments).**	**Please tick**
I have attached (an) appropriate consent form(s) which include the freedom to withdraw at any stage without having to offer a reason.	✓
Each consent form has full contact details of the researcher to enable prospective participants to make follow-up inquiries	✓
Each consent form has full details, in plain non-technical language, of the purpose of the research and the proposed role of the person being invited to participate	✓
Each consent form has full details of the purposes to which the data (in all their forms: text, oral, video, imagery etc.) will be put, including for research dissemination purposes	✓
Each consent form explains how the privacy of the participants and their data will be protected, including the storage and ultimate destruction of the data as appropriate	✓
Each consent form gives assurances that the data collection (questionnaires, interviews, tests etc.) will be carried out in a sensitive and non-stressful manner, and that the participant has the right to cease participation at any time and without the need to provide a reason	✓
Please include here any other comments you wish to make about the consent form(s)	

Has your proposal been submitted to any other Research Ethics Committee? No

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Declaration by All Proposers:
I have read and understood Marino Institute of Education's policy on ethics in educational research: and the Trinity College Dublin Good Research Practice Policies: I declare that the details above reflect accurately my research proposal and I undertake to seek updated approval if substantive changes are proposed after this submission. I have consulted an authoritative set of educational research guidelines.
Signed: Date

(Students Only) My proposals are based on consultation with my supervisor(s).
Signed: Date

Supervisor's Signature: (**Student Proposal Only**, first supervisor only if there are two)
Signed: Date

In instances where supervisors feel that their specialised expertise may be important information for the MERC to take into account (e.g.in relation in researching highly sensitive areas such as trauma/abuse), please submit an additional page with any relevant information.

Final Approval Signed-Off by Research Ethics Committee
Signed: Date

Appendix 3
LIST OF RESEARCH METHODS THAT DO NOT TYPICALLY REQUIRE ETHICS APPROVAL

- Historical research in education
- Research that uses pre-existing data in the public domain (e.g. data from the Growing up in Ireland study)
- Review of literature or research
- Document analysis

Appendix 4
BIBLIOGRAPHY AND USEFUL READING RE. ETHICS IN RESEARCH

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Appendix II: Principal/Board of Management Letter, Plain Language Statement, Informed Consent and Children's Assent Form

Principal/Board of Management Letter

December 2018

Dear Parent/Guardian,

My name is Orlaith Duff and I am a final year Professional Master of Education student in Marino Institute of Education. As part of my final year I have to conduct a research study. Your child's school principal has agreed to the school participating in my research study to determine the factors that influence primary school children's participation in extra-school sport. For the purpose of this study, extra-school sport has been defined as any sport or physical activities your child participates in outside of school.

As part of their participation in the study, your child will be asked to fill out a short 15-minute questionnaire about their motivations and barriers to participation in extra-school sport. Your child may also be asked to participate in a focus group (45-minute max) with other children in the school, to provide additional information about their reasons for participating or not participating in extra-school sport. I am requesting your consent to allow your child to complete the questionnaire as part of the study and to take part in the focus group if selected.

If you agree to allow your child to complete the questionnaire, your child's identity will remain completely confidential. His or her name will not be attached to any information I collect nor, will the questionnaire be used by anyone other than qualified researchers working on this study. The focus group will be audio recorded so that the data can be analysed after the focus group. If you agree to allow your child to participate in the focus group, your child's identity will remain completely confidential. If at any point your child wishes to cease his/her participation in the study, that is not a problem. Your child is under no obligation to stay involved if they do not wish to.

For more information about the study please do not hesitate to contact me via email at oduffpme17@momail.mie.ie.

This study has been considered from an ethical perspective by the Marino ethics in research committee. Should you have any questions or concerns about the ethical approval or conduct of this study, please contact MERC@mie.ie

Yours sincerely,

Orlaith Duff

Please complete **one** of the two options below:

1. ___ I **do** consent to allow my child _____ participating in the
(Print child's name)
questionnaire and being audio recorded during the focus group (if selected to participate).

2.___ I do **not** wish my child _____ participating in the
(Print child's name)
questionnaire and being audio recorded during the focus group (if selected to participate).

Parent/Guardian Signature: _____

Plain Language Statement

MARINO INSTITUTE OF EDUCATION

Study Title

Factors that influence Primary School Children's Participation in Extra-School Sport.

Principal Investigator: Orlaith Duff, final year Master of Education Student in Marino Institute of Education.

Details of what involvement in the Research Study will require
Involvement in this study would require your child to complete a short 15-minute questionnaire about their motivators and barriers to participation in extra-school sports. Following this, your child may be asked to take part in a focus group with a member of the research team. The focus group will be audio recorded and will last approximately 45 minutes. As part of this focus group your child will be asked for their opinions and views on the factors that influence their participation in extra-school sports and physical activities. The focus group will be audio recorded so that the responses can be analysed afterwards. All data will be strictly confidential, and no names will be attached to the data.

Potential risks to participants from involvement in the Research Study (if greater than that encountered in everyday life)
There are no risks with this project above those of normal everyday living.

Benefits (direct or indirect) to participants from involvement in the Research Study
This study will provide your child with the opportunity to be involved in a research project. Following completion of the study, the results of the research will be provided to the school, so that your child can be informed about the results.

Advice as to arrangements to be made to protect confidentiality of data, including that confidentiality of information provided is subject to legal limitations
Confidentiality is an important issue during data collection. Participant's identity, or other personal information, will not be revealed or published. Questionnaires are anonymous. All data will have names removed and a code attached to them. All data will be dealt with in a strictly confidential basis. All raw data will only be available to the research team.

Advice as to whether or not data is to be destroyed after a minimum period
After a 13-month period all data will be destroyed in accordance with Marino policy.

Statement that involvement in the Research Study is voluntary
If at any point during your participation in the study your child feels as if he/she wishes to withdraw, this is not a problem. Your child is under no obligation to stay involved if they do not wish to. In the focus group, please note that once the audio recording starts your child's input cannot be removed from the recording. Please make sure to contact the investigators if your child is unable or unwilling to continue in the project so as we can address any issues within the project.

If participants have concerns about this study and wish to contact an independent person, please contact:
Marino Ethics in Research Committee: *MERC@mie.ie*

Informed Consent Form

I. Research Study Title

Factors that influence Primary School Children's Participation in Extra-School Sport.

Principal Investigator: Orlaith Duff, final year Master of Education Student in Marino Institute of Education.

II. Clarification of the purpose of the research

The overall aim of this research project is to determine the factors that influence primary school children's participation in extra-school sport. For the purpose of this research project extra-school sport will be defined as any sport or physical activities a child participates in outside of school (e.g. local GAA club, athletics club). A questionnaire will be used to ascertain children's motivators and barriers to participation. This will be followed with focus groups which will provide a more in-depth view as to why children choose to participate or not to participate in extra-school sports and physical activities. It is hoped that by determining the factors that influence participation this will help teachers, coaches and sports clubs understand children's reasons for participation, so that structures can be put in place to support children's physical activity choices.

III. Confirmation of particular requirements as highlighted in the Plain Language Statement

Participant – please complete the following (Circle Yes or No for each question)
Have you read or had read to you the Plain Language Statement
Yes/No
Do you understand the information provided?
Yes/No
Have you had an opportunity to ask questions and discuss this study?
Yes/No
Have you received satisfactory answers to all your questions?
Yes/No
Are you aware that your interview will be audiotaped?
Yes/No

IV. Confirmation that involvement in the Research Study is voluntary

If at any point during your child's participation, you feel as if your child wishes to withdraw from the study, this is not a problem. Your child is under no obligation to stay involved if they do not wish to. In the focus group, please note that once the audio recording starts your child's input cannot be removed from the recording. Make sure to contact the investigators if your child is unable or unwilling to continue in the project so as we can address any issues within the project.

V. Advice as to arrangements to be made to protect confidentiality of data, including that confidentiality of information provided is subject to legal limitations

All questionnaire data will be anonymous. Your child's information in the focus group will be assigned a unique code which all will protect his/her identity. All information will be stored securely and saved in a password protected file in a computer. Your child's identity or personal information will not be revealed or published.

The study findings will form part of a final year thesis. The data from the study may be presented at scientific meetings and published in a scientific journal, but your child's identity will not be divulged and only presented as part of a group. The confidentiality of information provided can only be protected within the limitations of the law. It is possible for data to be subject to subpoena, freedom of information claim or mandated reporting by some professions.

If you have questions about the research project, you are free to call Orlaith Duff on 087-2023830.

VI. Signature

I have read and understood the information in this form. My questions and concerns have been answered by the researchers, and I have a copy of this consent form. Therefore, I consent for my child to take part in this research project.

Parent/Guardian Signature: _____

Name in Block Capitals: _____

Witness: _____

Date: _____

Children's Assent Form

Project Title: Factors that influence primary-school children's participation in extra-school sport.

Investigator: Orlaith Duff

I am doing a research study about why children do and do not participate in sport outside of school (e.g. Gaelic football clubs/athletics clubs).
If you decide that you want to be part of this study, you will be asked to answer a short questionnaire (15-minutes) about why you participate in sport (motivators) and why you do not participate (barriers).
Later, you may be asked to take part in a focus group. This is a group interview with four-six children from your school, where I will ask you some more questions about why you do or do not take part in sport and physical activity outside of school.
When we are finished with this study I will write a report about what was learned. This report will not include your name or that you were in the study. You do not have to be in this study if you do not want to be. If you decide to stop after we begin, that's okay too. Your parents know about the study too and have agreed for you to participate if you would like to.

If you decide you want to be in this study, please sign your name.

I, _____, want to be in this research study.

_____ _____
(Sign your name here) (Date)

Appendix III: Questionnaire

Factors that Influence Primary School Children's Participation in Physical Activity Outside of School Hours

Background Details:

Please read and circle **YES** or **NO** to each of the following statements

1. I gave the permission form to my parents/guardian. YES NO
2. My parents/guardian have talked to me about taking part in this research project.

   YES NO
3. I have been told that taking part in this research project will involve filling out a

   questionnaire. YES NO
4. I know that I am free to decide not to take part in the study or change my mind if I wish.

   YES NO

Signed:_____ Date: _____

Please PRINT all information in CAPITALS

1. First Name: _____ Surname:_____
2. Are you a Boy ☐ Girl ☐
3. Age: _____
4. Date of Birth: ___/____/_____ (dd/mm/year)
5. What is the name of your school?

   _____
6. Do you have a physical disability, a learning or sensory disability or a special education need which affects your ability to be physically active?

   No ☐ Yes ☐
   If yes, please specify or describe _____

Section 1:

Physical activity is any body movement.

It can be done at different levels of effort:

Moderate effort makes your heart rate and breathing rate faster than normal. You may also sweat a little. Brisk walking and jogging are good examples.
Vigorous effort makes your heart rate much faster and you have to breathe deeper and faster than normal. You will probably sweat. Playing football or tennis are good examples.

Physical activity includes:

Exercise = Running, dancing, etc.

Sports = Basketball. Football, athletics, swimming, etc.

General = Brisk walking, washing the car, walking or cycling to school, etc.

Please try to think carefully and be as accurate as possible with your answers. For these next two questions, add up all the time you spend in physical activity each day.

Only include activities of either MODERATE or VIGOROUS effort.

1. Over the **past 7 days**, on how many days were you physically active for a total of at least 60 minutes per day? Please circle one number.

   0 days 1 2 3 4 5 6 7 days

2. Over **a typical or usual week**, on how many days are you physically active for a total of at least 60 minutes per day? Please circle one number.

   0 days 1 2 3 4 5 6 7 days

SECTION 2: This section is about the sports and physical activities which you might participate in outside of school hours, that are not school clubs.

Q1. Please tick any sports/activities you have played with a club, which is not a school club, since the beginning of this school year in each of the following situations

(a) Played each sport/activity in a club **at least once** since the beginning of this school year
(b) Played each sport/activity in a club **at least once a week** since the beginning of this school year

Since the beginning of the school year I have...	(a) Played in a club at least once	(b) Played in a club at least once a week
1. Adventure activities*	❑	❑
* This includes orienteering, canoeing, abseiling and mountaineering		
2. Aerobics	❑	❑
3. Athletics	❑	❑
4. Badminton	❑	❑
5. Baseball or Rounders	❑	❑
6. Basketball	❑	❑
7. Camogie	❑	❑
8. Cross country running	❑	❑
9. Dance	❑	❑
10. Gaelic Football	❑	❑
11. Gymnastics	❑	❑
12. Handball	❑	❑
13. Hockey	❑	❑
14. Horse riding	❑	❑
15. Hurling	❑	❑
16. Martial Arts	❑	❑
17. Rugby	❑	❑
18. Soccer	❑	❑
19. Squash	❑	❑
20. Swimming	❑	❑
21. Tennis	❑	❑
22. Weight training	❑	❑
23. Any other sport	❑	❑
24. I did not play any sport/activity in a club	❑	

Q2. How often do you take part in sports and physical activities with a sports club, which is not a school club? Please tick (✓) one box only.

4 or more days a week..... ☐

2-3 days a week..... ☐

One day a week..... ☐

2-3 days a month..... ☐

One day a month..... ☐

Less often ..... ☐

Never..... ☐

Q3. Have you had any coaching at your club to help you get better at any of these sports?

Please tick (✓) one box only.
NO ..... ☐

YES ..... ☐

I don't play sports in a club..... ☐

Q4. How often do you go to a sports field/ground or sports/leisure centre to take part in some form of sports or physical activity? Please tick (✓) one box only.

4 or more days a week..... ☐

2-3 days a week..... ☐

One day a week..... ☐

2-3 days a month..... ☐

One day a month..... ☐

Less often ..... ☐

Never..... ☐

Section 3: What keeps you from being more active outside of school hours?

Directions: Listed below are reasons that people give to describe why they **do not** get as much physical activity as they should. Please read each statement and indicate how likely you are to say each of the following statements. (Circle the applicable number for each statement)

How likely are you to say?	Very likely	Somewhat likely	Somewhat unlikely	Very unlikely
My day is so busy now, I just don't think I can make the time to include physical activity in my regular schedule.	3	2	1	0
None of my family members or friends like to do anything active, so I don't have a chance to be physically active.	3	2	1	0
I'm just too tired after school to be active.	3	2	1	0
I've been thinking about becoming more physically active, but I just can't seem to start.	3	2	1	0
Participating in physical activities can be risky.	3	2	1	0
I don't get enough exercise because I have never learned the skills for any one sport.	3	2	1	0
I don't have access to jogging trails, swimming pools, bike paths, etc.	3	2	1	0
Physical activity takes too much time away from other commitments - like school work, family, etc.	3	2	1	0
I'm embarrassed about how I will look when I participate in physical activity with others.	3	2	1	0
I don't get enough sleep as it is. I just couldn't get up early or stay up late to be physically active.	3	2	1	0
It's easier for me to find excuse not to be active that to go out and do something.	3	2	1	0
I know of too many people who have hurt themselves by overdoing it when they are physically active.	3	2	1	0
I really can't see myself learning a new sport.	3	2	1	0
It's just too expensive. You have to take a class or join a club or buy the right equipment.	3	2	1	0
My free times during the day are too short to include physical activity.	3	2	1	0
My usual social activities with family or friends do not include physical activities.	3	2	1	0
I'm too tired during the week and I need the weekend to catch up on my rest.	3	2	1	0
I want to be more physically active, but I just can't seem to make myself stick to anything.	3	2	1	0
I'm afraid I might injure myself.	3	2	1	0
I'm not good enough at any physical activity to make it fun.	3	2	1	0
If we have exercise facilities and showers at school, then I would be more likely to be physically active.	3	2	1	0

Section 4: What are the reasons that you take part in physical activities/sport outside of school hours?

Directions: Listed below are reasons that people give to describe why they take part in physical activity. Please read each statement and circle the answer that best applies to you. 1 - very important, 2 - somewhat important and 3 - not at all important.

Reasons	Very Important	Somewhat Important	Not at all Important
I want to improve my skills.	1	2	3
I want to be with my friends.	1	2	3
I like to win.	1	2	3
I want to get rid of energy.	1	2	3
I like to travel.	1	2	3
I want to stay in shape.	1	2	3
I like the excitement.	1	2	3
I like the teamwork.	1	2	3
My parents or close friends want me to play.	1	2	3
I want to learn new skills.	1	2	3
I like to meet new friends.	1	2	3
I like to do something I'm good at.	1	2	3
I want to release tension.	1	2	3
I like the rewards.	1	2	3
I like to get exercise.	1	2	3
I like to have something to do.	1	2	3
I like the action.	1	2	3
I like the team spirit.	1	2	3
I like to get out of the house.	1	2	3

Reasons	Very Important	Somewhat Important	Not at all Important
I like to compete.	1	2	3
I like to feel important.	1	2	3
I like being on a team.	1	2	3
I want to go on to a higher level.	1	2	3
I want to be physically fit.	1	2	3
I want to be popular.	1	2	3
I like the challenge.	1	2	3
I like the coaches or instructors.	1	2	3
I want to gain status or recognition.	1	2	3
I like to have fun.	1	2	3
I like to use the equipment or facilities.	1	2	3

You are finished! Thank you for completing this questionnaire ☺

Appendix IV: Development of the Focus Group Script using Bandura's SCT

SCT Construct	Construct Explanation*	Focus Group Questions
Self-efficacy	Belief that one can produce the desired effect through one's actions. 1. Perceived self-efficacy 2. Self-efficacy beliefs Influenced by: - Personal accomplishment or mastery - Vicarious experiences - Verbal persuasion by other - Emotional Arousal	**General Self-Efficacy:** Do you believe you have the ability to be physical active after school? Why/why not? **Personal accomplishment or mastery:** Have you experienced any achievements in sport or physical activity? How did this make you feel? (proud?) Do you think it is important to achieve something in sport or physical activity e.g. winning a match? **Vicarious experiences:** Are any of your friends/ family physically active? If so, how does it make you feel? Do you take part in sport/ physical activity because your friends/family do? Why/why not? **Verbal persuasion:** -Do you receive praise for being physically active? If so, from who? -What affect does this have on you? -Do your family member/friends/ teachers encourage you to be physically active outside of school hours? **Emotional arousal:** -How do you feel when you are physically active? -How do you feel when you are not active? -Do you feel confident in your ability to be active after school? Why/why not?

Outcome expectations (physical)	Pleasurable and aversive effect, which result in material losses or benefits. Physical outcome expectations, such as expectations of discomfort or disease symptoms, refer to the anticipation of what will be experienced after behaviour change takes place. These include both the short- and long-term effects of behaviour change.	How do you feel when you participate in physical activity? Are you active because of the way it makes you feel? Do you participate in physical activity/sports outside of school hours because you want to look/feel a certain way? What are the benefits of being active? (physical, social, emotional etc.) Do you think there are any disadvantages to participating in physical activity outside of school hours?
Outcome expectations (Social)	Social outcome expectancies refer to anticipated social responses after behaviour change.	Do your family/friends take an interest in whether you are physically active or not? Why/why not? Do your family/friends want you to be physically active outside school hours? Why/why not? Do you think you would be more active if your family/friends encouraged you to be? Why/why not? Does it matter to you if your family/friends/teacher are interested in your physical activity? Why/why not?
Outcome expectations (Self-evaluative)	Self-evaluative outcome expectations refer to the anticipation of experiences, such as being ashamed, being proud of oneself, or satisfied, due to internal standards.	How does participating in physical activities/sport outside of school hours make you feel? Do you think it is important to be physically active, outside of school hours? Why/why not? Are you proud of yourself/ satisfied with yourself when you do some activity? Why/why not?

		If not, how does being active make you feel?
Sociostructural factors - Facilitators	Societal/personal Sociostructural factors that facilitate engagement in a given behaviour (e.g. physical activity).	Are there opportunities in your local community to be physically active outside of school hours? Do you engage in physical activities because the facilities are available in your local community? E.g. local football club. Do you think you would be more active outside of school hours if better facilities available? Why/why not?
Sociostructural factors - Impediments	Sociostructural factors that impede/are barriers to engaging in a particular behaviour (e.g. physical activity).	What makes it difficult for you to participate in physical activity/sport outside of school hours?
Goals	Long/short term goals that are in line with an individual's value system provide motivation. Long-term goals set the course of personal change, but these distal goals cannot control current behaviour because there are too many competing influences. Short term goals guide action in the current moment.	Have you ever set any goals regarding physical activity/sport? What kind of goals do you set? Are they short term goals (3-4 weeks) or long-term goals (4-6 months)? Do you think it's important to set physical activity goals? Why/why not?

Appendix V: Focus Group Results Summary

SCT Construct	SCT Construct influenced by:	Key Themes
Self-efficacy	General self-efficacy	Confidence to engage in physical activity (PA) comes from: • The sport/PA is fun to engage in • If the child has had positive past sporting experiences • Sport/PA becomes part of a routine
	Personal accomplishment/mastery	• Achievements can be big or small - bigger achievements are seen as competitions and matches, while smaller achievements may be learning a new skill or improving a skill • Winning is not the be all and end all • Proud of sporting/PA achievements • Achievements motivate children to continue to improve and progress
	Vicarious experience	• Most children are part of active families. This influenced some children to be active • If family/friends are doing well in their sports this provides the children with motivation to progress in their own sports • Take up a sport due to family or friends' involvement in the sport • Don't just engage in physical activity because friends/family do it - must have their own level of interest in the sport • Others join a sport because they enjoy or have an interest in the sport
	Verbal persuasion	• Family members, friends and coaches provide praise and encouragement to children • Some children acknowledged that teachers would encourage children to be active outside of school hours • Praise viewed a s a form of encouragement • Praise as a motivating tool • Children appear to link praise to a form of feedback • Children are proud and happy when they receive praise • Children also receive feedback on their performance from family members and coaches

	Emotional arousal	Feelings that arise from participation in physical activity: - Happy - Proud - Feel good about one's self - Helps to clear the mind and alleviate school pressures. Negative feelings when cannot engage in physical activity: - Guilty - Lazy - Bored
Outcome expectations (physical)		• Sport/PA is good for physical and mental health • Children believed that it was good for them to get out in the fresh air. • Sport/PA keeps you fit and healthy • Sport/PA helps to clear the mind and relax. Some groups believed that engaging in sport/PA relieves the pressure of school • Children do not take part in physical activity/sport for health reasons - The fact that participating in sport is good for your health is a bonus, not a priority for children • Children were adamant that they do not participate in sport to look a certain way. Only one child out of the 6 focus groups said that she had once engaged in sport in order to change her physical appearance
Outcome expectations (social)		• Family and friends take an interest in children's physical activity/sport. • Nice to get support from family and feel like they care • Family more so than friends take an interest in their activity and provide encouragement • Self-motivation to participate is most important - the child has to be interested in the sport • Family encourage children to be active, not to be sitting inside all day • A lot of children started a sport due to a family member or friend playing the sport • One group made the point that children do not want to be pushed or forced into doing activity/sport

		• Many children were part of very active families.
Outcome expectations (self-evaluative)		• Letting yourself down, not others - sorry for mistakes • Frustrated/angry when you can't pick up a skill straight away • Satisfied with one's self for engaging in PA/sport • Feel good when participating in sport/pa • Guilty for stay indoors • Children can be hard on themselves
Sociostructural factors - Facilitators		• Huge range of clubs and facilities in the local community • These facilities make it easier for children to participate in sports/PA • However, distance is not an issue as the children would be willing to travel in order to participate in sport/PA • One group suggested more active living facilities e.g. outdoor gym, swimming pool • One group strongly believed that it is very important to have friendly, supportive coaches in the club
Sociostructural factors - Impediments		• Lack of motivation - can feel tired after a long day • Busy schedule - hard to fit in everything • Difficult to learn a new skill, particularly start out in a new sport/PA - child can feel like he/she is not good enough • Cost of sport/PA can be a barrier to participation. However, one group believed that money was an issue for parents and should not concern children
Goals		• Most children said they set goals • Those who did not set goals played their sport solely for fun and to play with friends. • Goals were set relating to their skills and aspects of performance • Goals used as a motivating tool - something to work towards • Short term goals relating to skills • Set short and long term goals