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Title: An Investigation into Teachers and Parents' Perspectives
of the Introduction of Active Homework in Primary Schools.

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Declaration

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Abstract

The purpose of this study is to explore parents and teachers' perceptions of the implementation of active homework in primary schools. Physical inactivity has been recognised as a leading risk factor for global mortality and it is estimated this results in more than two million deaths each year. In Ireland, one in four children are classified as being obese. Given these obesity rates and the matter of schools being identified as primary sites for promoting physical activity, only limited research has been conducted in relation to active homework.

A qualitative approach was used during this investigation where data was gathered using questionnaires. Two separate groups of participants were used during this research which included eighty-four parents and fourteen teachers. The data was analysed using thematic analysis. The study found that 17% of children participated in no physical activity after school and only 12% of children met the recommended 60 minutes of physical activity per day. The findings suggest that 80% of parents and 86% of teachers are in favour of implementing active homework in their schools. The participants cited the development of skills, creation of healthy habits and improving physical and mental health as benefits to active homework. In addition, parents and teachers acknowledged challenges to the implementation of active homework which included the poor recognition of physical education (PE), difficulties in monitoring homework completion, busy schedules and lack of interest. Teachers also reported "lacking experience in the area". Finally, 83% of parents stated they would participate in active homework with their children and 100% of teachers expressed their belief that parents should participate in active homework due to their influential role in children's lives.

The study concludes that active homework is strongly supported by both parents and teachers alike, with mutual recognition of its global health benefits. However, there is a need for continuous professional development for teachers to increase their understanding of active homework and their ability to implement it into their teaching. Finally, further research should be conducted on a larger scale to pinpoint how to best implement active homework and the benefits associated with its completion.

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Abbreviations

ASF	Active Schools Flag
BERA	British Ethical Research Association
BMI	Body Mass Index
CPD	Continuous Professional Development
DES	Department of Education and Skills
FMS	Fundamental Movement Skills
HSE	Health Service Executive
MVPA	Moderate to Vigorous Physical Activity
NCCA	National Council of Curriculum and Assessment
PA	Physical Activity
PE	Physical Education
SDT	Self Determination Theory
TIP	Teachers' Involve Parents
WHO	World Health Organisation

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Chapter One: Introduction

The aim of this research dissertation is to determine the teachers and parents' perceptions of the introduction of active homework into primary schools. In this chapter, the background of the study, the research rationale, the motivation for carrying out this investigation and an outline of each chapter will be given.

Background of this Study

Recent developments in the sporting industry has highlighted the importance of physical activity (PA) in people's lives. PA is defined as a bodily movement that is completed by the contraction of skeletal muscle and in turn increases energy expenditure (World Health Organisation [WHO], 2019). Active homework incorporates PA, educating children to be active outside school and often includes activities from their Physical Education (PE) curriculum (Rink, Hall & Williams, 2010).

Ireland has the eighth highest childhood obesity rate in Europe (Abarca-Gómez et al., 2017) with, one in six children aged 6-12 classified as obese (Bel et al., 2017). Obese children are at higher risk of cardiovascular disease, cancer and premature death (Llewellyn, Simmonds, Owen & Woolacott, 2016). Little research has been conducted regarding the implementation of active homework in primary schools, despite homework being recognised as a vital learning tool and an invaluable method of bridging connections between school and home life (Bembenutty, 2011). PA is considered crucial in children's physical and mental development, and as such active homework is an area in desperate need of further study. The benefits of regular PA have been well documented; namely in the prevention of diabetes, colon and breast cancer and cardiovascular disease (WHO, 2010). Only 13% of Irish children report meeting the PA guidelines of sixty minutes of moderate to vigorous physical activity (MVPA) in 2018, a figure that has decreased by 6% since 2010 (Woods et al., 2019). Research shows that Irish primary school children engage in 5.1 hours of sedentary time per day (Woods et al., 2019), which includes any waking behaviour while in a sitting or reclined position with concurrent low energy expenditure (Tremblay, 2017).

The Irish Department of Health have identified a global need to increase PA, with a lack of PA classified as the fourth leading risk factor for global mortality (Kohl et al., 2012). Schools have been highlighted as primary sites for promoting PA, identifying active homework is a valuable tool to increase this PA and reduce sedentary behaviour time amongst children (WHO, 2008). Research conducted in Switzerland revealed an increase in MVPA among first and fifth graders when active homework was implemented (Kriemler et al., 2010). This highlights the necessity for educators to implement active homework in primary schools. Evidence suggests significant benefits associated with increased PA, primarily children being increasingly engaged in classroom content (Stylianou, Kulinna, & Naiman, 2016).

Schools have been well recognised as playing a crucial role in young people's wellbeing and development. In 2018, the Department of Education and Skills (DES) published a wellbeing policy statement and framework for practice, to ensure that children's experience in schools enhances, promotes and values their wellbeing. This statement highlighted the most beneficial method of promoting wellbeing is as a whole school approach (Department of Education and Skills [DES], 2018). Research has demonstrated that PA enhances mood, self-esteem and quality of life, and plays a crucial role in the wellbeing of children (Woods, Moyna, Quinlan, Tannehill & Walsh 2010). Thus, the implementation of active homework and the resulting increase in PA levels, would directly enhance the physical and mental wellbeing of children. A minority of schools in Ireland have implemented active homework in small numbers on a trial basis, forming part of their application for active school flag (ASF) status, an initiative run by DES (Active Schools, n.d.). The implementation of this programme was found to reduce the gap in PA levels amongst boys and girls, as boys were more likely to meet the PA guidelines in non-ASF schools (Woods et al., 2019).

Rationale for this Study

The main reasons for choosing this topic is of both personal and professional interest. My interest in PA began with direct exposure during my college education. During my school years, I had very little understanding and experience of regular PA, and it's benefits with both physical and mental wellbeing. It became clear the lengthy amount of time children spends participating in sedentary behaviours and their lack of exposure to daily PA. It was my experience during placement that has driven this research, when I learned of one class doing it as part of their ASF. The health of children is of paramount importance and as a student teacher I aspire to encourage increased PA levels and hence decrease sedentary behaviours among children outside of school hours. It is my opinion the children of Ireland would greatly benefit from the implementation of active homework for every student throughout their primary education.

The overall goal of this study is to gain deeper insight into teachers and parents' perceptions of the feasibility and benefits of implementing active homework in primary schools. One aim of this project is to fill what we as researchers have experienced as a current absence of quality research that adequately outlines the use and implementation of active homework in Irish primary schools. The majority of the available research is outdated and conducted outside Ireland in countries such as the United States, thus making its application difficult. I hope to make recommendations that will address issues highlighted by the findings of this study and inform future research in this area. Worldwide there is a clear need for an increase in children's PA level and active homework can make a valuable contribution towards children meeting their recommended sixty minutes of daily PA. The information presented in this paper will be useful in increasing educator's awareness of active homework and the universal health benefits it brings.

Chapters Outline

The overall structure of this study takes the form of five chapters, which includes the introductory chapter. Chapter two will examine the literature used by the researcher to gain an understanding of current use of active homework and the PA of children in Ireland. Literature from both national and international sources will be discussed. The third chapter will discuss the methodology used for this study with an outline of the aims and objectives of this investigation. The design of the qualitative questionnaire used, the data analysis process, the limitations of this study and the ethical considerations will be discussed. Chapter four analyses the results of the questionnaires. The findings focus on six key themes that emerged from the data analysis. The findings are discussed, and the results are presented on visual charts. In chapter five, the researcher will give a brief summary of the key findings and recommendations drawn from this investigation.

Chapter Two: Literature Review

This dissertation examines teachers and parents' perspectives on the introduction of active homework in PE and the benefits and challenges which are associated with it. Active homework is defined as assigning homework that will require the students be physically active for a period of time after school hours (American Heart Association, 2019). There is existing research relating to the use of PA for school homework however, there appears to be a paucity of research on the use of PA as an element of homework for primary school children in Ireland. This highlights a gap in research regarding the use of PA as homework, therefore providing a deficit in the literature that this research study will aim at addressing.

The aim was to reference research from the past ten years (2009-2019), however it became evident that literature in this area is scarce. Of the available research, studies show how PE can be an important vessel in the promotion of knowledge of PA. Previous research has indicated that active homework can be either structured or unstructured. Structured active homework can include a variety of exercises from the PE curriculum. These activities may consist of practicing skills learned in class, completing cardiovascular exercises or participating in electronic games that promote PA (Rink et al., 2010). Unstructured active homework is not only less restrictive for children, but the increased freedom may increase their enjoyment and likelihood of compliance (Smith & Claxton, 2003).

The concept of homework is commonplace across the world, utilised as a vital educational activity in many cultures, age groups and levels of ability (Warton, 2001). The debate of the efficacy of homework is contentious worldwide (Bembenutty, 2011). Most adults and educators view homework as an important element of academic learning, essential for the development of skills and attributes such as responsibility and learning autonomy (Van Voorhis, 2011).

Children's views are conflicted, often feeling they are completing homework to appease parents and teachers (Warton, 2001). This belief is underpinned by Skinner's Behaviourist Theory of Operant Conditioning. This theory states Operant Conditioning occurs when behaviour is reinforced by rewards or punishment which undermine the child's independence (Flood, 2013). In contrast, some children perceive homework as an opportunity to learn or revise and are intrinsically motivated (Warton, 2001). In general, it is important for children to believe homework is beneficial which can be overlooked by some educators. Homework is completed in many other subjects yet rarely as part of the PE curriculum. Research has shown homework is a significant contributor to learning and achievement (Pantanowitz, 2011). Homework is one of the most direct links between school and everyday life, therefore can deliver benefits in regards to PA in the children's lives (Mitchell, Barton, & Stanne, 2000b). The literature in this chapter is discussed under the following headings: Increase in physical activity time, promotion of physical activity, motor and skill development, parental involvement and attitudes towards physical education.

Increase in Physical Activity time.

The National Council for Curriculum and Assessment (NCCA, 2016) recommend one hour of PE for children throughout the week. The World Health Organisation (WHO) (2019) recommend that children aged five to seventeen years should receive one hour of MVPA per day. The national curriculum framework only allocates time for one seventh of the recommended weekly PA for children, which is grossly inadequate. Research has found that majority of primary pupils do not receive their allocated time of PE and on average receive only 46 minutes of PE weekly (Woods et al., 2010) The curriculum is thought to be already loaded, with teachers unable to avail extra time for PE (NCCA, 2010).

In 2010, studies revealed that 35% of primary students received the minimum time of one hour of PE per week and in 2018, only 17% of children met the minimum PA recommendations (Woods et al., 2010, 2019). Active homework provides additional time to meet the PA national standards and has a significant impact on the child's development and physical fitness (Loomis, 2005), leading to a decrease in the amount of sedentary activity. In 2019, Woods et al. revealed that primary school children spend on average 5.1 hours per day engaged in sedentary time, with research showing early sedentary habits tend to be more difficult to change late in life (Hill, 2009).

Physical inactivity is said to be the cause of two million deaths each year (Woods et al., 2010). PA plays a crucial role in a child's fundamental health development (Strong et al., 2005), with the decline in PA being recognised by the HSE as a major contributor to the obesity epidemic (Royal College of Physicians of Ireland [RCPI], 2016). Research shows Irish boys and girls of age seven have been ranked as having the fifth and third highest international Body Mass Index (BMI) respectively (Jennings, O'Brien, & O'Shea, 2018). Furthermore, data reveals that one in four Irish children are obese, significantly increasing their "risk of developing diabetes, respiratory, cardiovascular and orthopaedic problems" (RCPI, 2016, p.6). This highlights that children's inactivity directly affects their physical health, with potential adverse psychological effects (Woods et al., 2010). Recent evidence indicates that obese children are more likely to be bullied, experience lower self-esteem and be absent from school (Jennings et al., 2018). Physical inactivity could have a significant economic impact, as it is estimated people's inactivity will cost the Irish economy one point five billion per year (Healthy Ireland, 2016). Implementing active homework for children could be an effective strategy to reduce long term economic costs to society.

In today's society there is a growing emphasis on children taking part in PA, although this can be challenging with the growth and attraction of digital technology (Johnson & Christie, 2009). In turn, this can affect participation numbers in children's sporting clubs, particularly in rural areas. Recent evidence suggests a decrease in participation among post-primary pupils in extra-curricular activities (Woods et al., 2010). Research conducted by the National Youth Risk Behaviour Survey from 2008 to 2009, discovered that 25% of youth surveyed used a computer for three or more hours, and a third watch television for three or more hours per day (Centres for Disease Control and Prevention, 2010). Therefore, it is vital to encourage children to learn the value of exercise as an essential activity and active homework has the potential to accomplish this (Loomis, 2005).

A recent study showed students reported an increase in PA when active homework was introduced (Fairclough et al., 2013). This study consisted of the implementation of a programme called "The Change" which included lesson plans, homework tasks and a key message of 'Move More Sit Less'. The principal aim of this programme was to increase PA, promote healthy eating and a reduction in sedentary time. This study performed subgroup analysis and discovered that both girls and obese students appeared to benefit the most from the intervention (Fairclough et al., 2013).

Promotion of Physical Activity

"Promoting lifelong PA is a primary goal of PE programs" (Corbin, 2002, p.128). Teachers often have difficulty engaging children to participate in PA. Research has suggested that the best method of encouraging PA in the classroom is the use of active homework (Hill, 2018a). When teachers apply elements of fun into the children's PA homework, they enhance the children's interest in the subject, subsequently improving their motivation to partake and adhere to the program (Docheff, 2013).

Research carried out in New Zealand, discovered that students logged remarkably more pedometer steps with a school-based programme that included completing activity logs as active homework (Duncan, 2011). PA tracking devices or logs can engage students in completing exercise and provide evidence of completion, as previous studies have highlighted teachers concerns of their ability to monitor PA (Mitchell et al., 2000b). Recent research suggests that owning and using a PA tracking device is associated with increased likelihood of meeting PA guidelines (Wood et al., 2018).

Jackson (2005) claims that active homework is a convenient method to further engage a child's mind and fuel future interest in activities learned in class. Children become more competent in their physical skills by practicing them, and with this increased familiarity and comfort level, the more likely they are to practice skills in everyday life (Williams & Hannon, 2013). A significant motivating factor is the sense of achievement upon completion, and fosters new interest in sports, making their PA intriguing and exciting (Hart, 2001). With increasing student satisfaction comes the willingness to participate with friends and family, hence having the added benefit to others.

According to previous studies, physically and aerobically fit children perform better in school due to improved cognitive processing and brain structure, not seen in those who are inactive and unfit (Hillman et al., 2012). This stark contrast between the two groups is thought provoking to say the least, and should motivate educators worldwide. The promotion of fitness and PA would allow students to capitalise further on their wider education. Some teachers have implemented exercise breaks to improve the student's focus, behaviour and readiness to learn. There are, however, some educators that still believe there is a lack of research and resources available in this area (Lotta, 2015).

A decline in motivation in PE is often seen as children progress through school years. The Self-Determination Theory (SDT) is a key theoretical framework used to explain motivation towards PA, PE and extracurricular activities in school (Ntoumanis & Standage, 2009). The SDT states humans have three innate needs that must be fulfilled to achieve self-regulation, motivation and personal wellbeing. These three needs include relatedness, competence and autonomy (Deci & Ryan, 1985). Social situations that satisfy these three needs promote the SDT (Deci & Ryan, 1985). It is important that teachers consider these three needs during the structure of PE class, especially when assigning unsupervised active homework.

A Children's Sport Participation and Physical Activity (CSPPA) study was carried out in 2010 in Ireland among children and teenagers. Data was collected from children and people who provide opportunities for children's participation. What is noteworthy from this data is that PE had a positive effect on young males participating in extracurricular sport, whilst it did not affect girl's participation (Woods et al., 2010).

Motor and Skill Development

Homework is a vital part of education as it allows children to develop their fundamental movement skills (FMS) outside the class. Children are assigned Maths, English and Irish homework to practice their skills taught at school. Homework in PE would encourage children to develop physical skills learned in class, allowing them to further develop confidence to participate in exercise lifelong (Willams & Hannon, 2013; Hill, 2009).

When children's FMS are underdeveloped, it can negatively affect their PA. FMS includes object control, throwing and catching, along with locomotor skills such as running and hopping (Stodden & Goodway, 2007). The underdevelopment of FMS can affect children's PA throughout adolescence and result in them developing a negative mindset towards PA. Children with underdeveloped skills may see themselves as having little motor competence, actively choosing not to engage in PA. Assisting a child to be better at FMS will be a critical factor in their motivation for constant growth and improvement (Rink et al., 2010). A more substantial PA divide will be evident once when children begin to enter adolescence. Children who have

developed actual FMS competence will be more likely to participate in PA, relating the activity to enjoyment and satisfaction, nurturing a positive spiral of engagement (Fisher, Reilly, Montgomery, Williamson & Patron, 2005).

Educators should recognise the important role PE plays in educating the body, giving knowledge about movements along with skills needed to participate and encourage enjoyment in different activities. PE has an often under recognised responsibility in preparing humans for participation in PA throughout their lives (Stodden & Goodway, 2007). As many families are now living in apartment blocks that contain lift access, some children don't even have the FMS to climb stairs. This places increased pressure on the class teacher to develop students' FMS within the time allocated each week, which would be near on impossible. If children receive twenty minutes of active homework daily, this would significantly aid the development of their FMS.

Parental Involvement

As people's lives become increasingly demanding, many families have both parents' working, resulting in increased utilisation of after school clubs. The majority of children complete their homework in this setting, making parents less informed and involved in their child's education. Implementing active homework, (which could potentially be completed with family members at home or outside school) would guide parents as to what skills are being learned during PE class. Active homework could enhance family relationships and in turn this may lead to increase communication and quality time spent with their children, and enables parents to feel more involved in their child's education. During a study completed in a school in North Carolina, students participated in a nine-week programme in which they kept daily records of their PA (Smith & Claxton, 2003). The students were split into two groups, with one group tasked to complete active homework with a parent or guardian. When the programme was finished the participants submitted a questionnaire. Parents had an overall positive response towards PA at home and 75% were in favour of the program, citing reasons such as improvement in their child's health and activity levels. The students also mirrored the positive experience and enjoyed having their parents involved (Smith & Claxton, 2003).

When introducing active homework, the participation of parents and other family members is important for its success (Robert, Raymond & Cheung, 2013). Articles often refer to using the 'Teachers involve Parents in schoolwork' (TIPS) method when speaking about active homework (Burt, 2017). Family involvement is encouraged with this method as it enables participants a clear understanding of the learning objectives. In previous studies, teachers using the TIPS method displayed a marked increase in rates of student adherence and family involvement. Research into an active lifestyle has shown that parental support is one of the best methods of encouraging children to adopt PA as a lifelong habit (Hart, 2001). The children were found to invest more time in the PA homework, and reported higher rates of enjoyment when their parents are involved (Burt, 2017). Concomitantly, this will increase the whole family's PA time, encouraging a healthy lifestyle.

Parents have been noted to be the single most influential factor on the child's development, and subsequent PA levels (Brustard & Partridge, 2002). Research has discovered a positive correlation in families with increased PA levels, highlighting that parents play a vital role in the development of their children's health behaviours (Troost et al., 2003). This raises the question as to why teachers do not harness this to their advantage, however, numerous barriers have been identified. Firstly, a lack of understanding of the benefits, secondly how to assign it and finally what it should include (Burt, 2017). Parental involvement should be recognised as a key priority in assigning active homework as it provides children with numerous learning opportunities from their parents (Hoover-Dempsey et al., 2001).

Attitudes towards Physical Education

Children and adults can often have preformed negative perceptions of PE. Parents value PE lower than other subjects such as Maths and English. This may be as a result of educators not being in the position to assess PE due to a lack of time and large class sizes (Willams, McGladrey & Hannon, 2013). Smith & Madden (2014) claims students made negative comments such as “homework in gym is stupid” when monitoring completion rates of homework in PE. Researchers in similar studies also shared comparable responses that PE was “not a real class and that homework is unreasonable for such a class”(Kinchen & O’ Sullivan, 2003, p.257). During this study the students occasionally simply refused to complete the homework whilst others completed it before class with little effort (Kinchen & O’ Sullivan, 2003).

The negative perceptions of PE are not newly develeoped, and many would argue have existed for many years. This may have derived from the marginalisation of the subject, resulting in the overshadowing of the unique contribution that PE can make to childrens lives (Sheehy, 2011). The marginalisation of PE has been caused by many factors including poor facilities, lack of equipment, or the lack of communication and information parents receive regarding the subject (James, 2011). Researchers referenced potential solutions. These include appropriately assigned homework to target reinforcing skills learned in class, making a connection between the classroom and real life application as methods to reversing this marginalisation (St.Ours & Scrabis-Fletcher, 2013). Literature suggests that teachers need to be more proactive and take responsibility for maintaining regular meaningful communication with parents about PE, in order to change the parents perception of the subject (Willams & Hannon, 2013).

A number of completed studies found that, after parents and students had participated in active homework, their was a positive attitude change. In Hong Kong 74% of parents and 52% of children reported that PE homework was benefical (Robert et al., 2013). A Israli study found that participants expressed feelings of enjoyment from completing active homework and their results demonstrated how PE homework increased their knowledge of PA, leading to an increase in PA during leisure time (Pantanowitz, 2011).

Collectively these studies outline a critical role for the implementation of active homework in changing the perceptions and attitudes of PE for children.

Conclusion

Physically active and, aerobically fit children have been seen to perform better in school as their cognitive function and brain structure is different from children who are inactive (Hillman, et al., 2012). The question that needs to be asked is, are parents and educators aware of this, and if not why is this the case? There are strong recommendations that student's participation in PA is increased significantly for a variety of evidence-based reasons (Woods et al., 2019). Children who have higher PA levels have been linked to performing better academically, have increased concentration and, attention and perform better in class assessments (Castelli, Centerio & Hwang, 2014). It is essential to remember that physical, social, emotional, intellectual, communication and speech (P.I.L.E.S) development are all inherently linked and the undevelopment of a single area can have significant impact on all other areas (Smith, Cowie & Blades, 2015).

This chapter outlined the current literature on childrens' PA levels and the implementation of active homework in schools. The reasons for the necessity of active homework and the best methods of implementing it in schools for it to be successful are clear. Our evolving obesity crisis, the decline in global PA time and the challenges which exist within PE in today's society were highlighted. The lack of research into active homework and the undeniable importance of the topic highlights the need for further research in the area.

Chapter Three: Methodology

In this chapter the design and methodology chosen to conduct this research will be discussed. Firstly, the aim of the study and the researcher's positionality will be outlined. Secondly, the researcher will then examine the research instrument employed, ethical considerations and the sampling strategy which was applied to choose the participants for the investigation. The discussion will move on to address how the data was collected and analysed to inform the key findings of this research. Finally, the reliability, validity and limitations encountered during this research process will be presented.

Aims and Objectives

The central aim of this investigation was to gain an insight into teachers and parents' perspectives of the introduction of active homework in primary schools. This study seeks to obtain data which will help address these research gaps in the education field. The researcher identified objectives at the beginning of the study to conduct more specific research. This research seeks to address the following:

- To collect information on teachers and parent's attitudes towards active homework and parental involvement in the completion of active homework.
- To identify possible benefits and challenges of receiving active homework.
- To determine the types of active homework parents would like to see their child receive.

Positionality

As a child who received written homework throughout their education, the researcher has no experience in receiving active homework. However, whilst on teaching practice, the researcher gained first-hand experience in setting active homework once per week for the students. This provided an insight into the variety of activities which can be assigned as active homework. Time did not permit the questioning children regarding their participation in active homework, their opinion of various activities or to identify any perceived benefits or challenges of active homework.

Strategy of Inquiry

The researcher examined a number of methodologies and it was evident that a qualitative approach would be best suited to this study. Qualitative research is defined as “a multifaceted approach that investigates culture, society and behaviour through an analysis and synthesis of people’s words and actions” (Hogan, Dolan & Donnelly, 2009, p.3). During qualitative research the information may be collected from different sources such as questionnaires, interview transcripts or observational research (Opie, 2004). Qualitative methods offer an effective way to investigate meanings, emotions and human practices that develop through interactions and interdependencies between other (Hogan et al., 2009). The survey has been chosen as an appropriate strategy for this investigation which can be identified as both qualitative and quantitative research.

The type of survey which was applied during this research was questionnaires. Questionnaires are “written surveys that contain items that address the goal of the project” (Leong & Austin, 2006, p.115). Questionnaires are the most widely used procedure for obtaining information as location is irrelevant, anonymity can be guaranteed and questions can be written for specific purposes (Opie, 2004). During this investigation the questionnaire is defined as a qualitative instrument, as it consisted of mainly open-ended questions (Zohrabi, 2013). This meets the aspiration of qualitative research as in-depth answers are encouraged (McGuirk & O'Neill, 2016). Questionnaires enabled the researcher to receive responses from a larger number of

respondents in a timely and co-ordinated manner (Opie, 2004). Another advantage of using questionnaires is anonymity, encouraging greater honesty from the respondents, with an aim to increase the accuracy of the study (Denscombe, 2010).

However, there are certain limitations associated with the use of questionnaires. Questionnaires require a pilot study to be completed prior, to ensure the accuracy, applicability and appropriateness of the questions included. The main disadvantage of the questionnaire method is that the researcher is not present to answer any queries respondents may have which can result in questions being answered not as they were intended to be asked (Cohen, Manion & Morrison, 2007). Other disadvantages of questionnaires include the respondent's incorrect interpretation of the questions or completing the questionnaire abruptly, thus not ensuring a sufficiently detailed or accurate response rate.

Pilot Study

A pilot survey is a questionnaire that duplicates all the intended questionnaire phases to a small number of respondents (European Commission [EC], 2017). Piloting enables the researcher to check the clarity of instructions, to eliminate any ambiguities in wording, receive feedback on the appearance and layout of the questionnaire (Cohen et al., 2007). One other crucial element that the researcher analyses during piloting is ensuring the questionnaire collects the relevant data needed to achieve the analytic objectives of the investigation (Eurostat, 2006). The two questionnaires used during this study were piloted separately with groups of parents and teachers, with all questions raised by the participants noted. When the pilot questionnaire was completed a debriefing session with the respondents occurred to receive feedback on the research instrument (EC, 2017). The pilot study allowed the questions to be altered and redefined to ensure accessibility and appropriateness to the respondent, with the researcher gaining an insight into the time required to complete the questionnaire. Reducing the inconvenience to the respondent is a key factor to improve both response rate, and the accuracy of the responses (Marshall, 2005).

Ethical Consideration

Ethical Consideration was given priority during this research. Prior to commencing this study ethical clearance was sought from 'Marino Ethics in Research Committee' (MERC) and the study protocol and consent procedure was approved. British Educational Research Association (BERA) have composed a set of guidelines for researchers undertaking educational research. These guidelines were constructed to support researchers in meeting the highest ethical standards, to inform them of their responsibilities and to promote respect for all the participants of the study (BERA, 2018). The researcher met with both principals and written consent was given to carry out the study in the two schools in accordance with ethical guidelines. The researcher ensured that parents were informed of their anonymity and their ability to withdraw from this research at the start of the study (Cohen et al., 2007). Each questionnaire had a unique serial number attached in which the researcher could use to identify a questionnaire and remove it from the investigation if needed.

Design of Questionnaire

The researcher designed two separate questionnaires, in order to receive a snapshot of parents and teachers' perspectives towards implementing active homework in primary schools. It was critical to keep the research objective in mind throughout the planning and writing of the questionnaires. Both questionnaires consisted of open and closed questions. Open-ended questions are beneficial for this research as the responses received are more likely "to reflect the full richness and complexity of the views held by the respondent" (Denscombe, 2010, p.165). These questions demand more time of respondents which can reduce their enthusiasm to participate. Although, closed questions can be frustrating for the respondent preventing them from supplying answers which reflect their real opinions (Denscombe, 2010).

Questionnaire layout. “A fundamental skill of good research is tight organisation and nowhere is this needed more than the use of the questionnaire survey” (Denscombe, 2010, p.15). Careful consideration was given to the layout and presentation of the questionnaire. It was important that the questionnaire was aesthetically pleasing, whilst provoking interest for the respondents to engage with the questions, and allowing plenty of space for their answers (Cohen et al., 2007). Page numbers and PTO (please turn over) instructions was included at the bottom of each sheet to ensure completion of the questionnaire. Clear instructions such as ‘Please put a tick in the box’ were provided at the beginning of the questionnaire to provide clarity.

Secondly, the sequencing and wording of questions on the questionnaire was important as this may influence both the responses themselves and the total response rate. Therefore, the researcher began the questionnaire with easier and non-threatening questions aimed at setting the tone of the questionnaire. Any potentially sensitive questions were included towards the end of the questionnaire. It was deemed important that the questionnaire be ‘user-friendly’, including only understandable language and minimising the use of jargon to prevent confusion or frustration amongst respondents (Marshall, 2005).

Finally, the researcher carefully planned a cover letter to precede the questionnaire. BERA (2018) recommends that researchers do everything they can to ensure participants understand what the study involves. The purpose of the cover letter was to inform the target sample audience of the aim of the research, their right to withdraw consent at any time, the importance of the questionnaire and to provide assurance of the respondent’s anonymity. The cover letter also set out clear instructions on how to return the questionnaire, the date it should be returned by and contact details for the researcher if any questions were to arise.

Questionnaire 1. Firstly, the parents' questionnaire consisted of ten questions. The first three questions were closed tick the box questions to provide background information on the homework received by the children. The following six questions contained a yes/no element whilst also asking for more lengthy responses of the parents in order to gain an insight into their opinion of active homework and how active their children currently were. It was requested the parents state the activity their children participate in, if they would like to see their children receive active homework, the types of active homework they believe would be suitable, as well as the benefits and challenges of completing active homework.

Questionnaire 2. Secondly, the teachers' questionnaire had nine questions. The first two questions provided the teachers background of the homework they assign. The third question explored the percentage of the class the teacher believed completed sixty minutes of PA per day. Similar to the parents' questionnaire the next six questions were open ended questions. These questions investigated if the teachers agree with PA homework, if they assign it, the challenges of assigning PA homework and if it would have a positive influence on the children in their class.

Sampling Strategy

Sampling is the "process of selecting some elements from a population to represent the population" (Ayiro, 2012, p.159). There are numerous different methods in which samples can be drawn from a population. The participants for this study will be chosen using 'Cluster Sampling', a method of "restricting one's selection to a particular subgroup" (Opie, 2004, p.104). During this study, parents and teachers from two local schools were chosen as a sample. Cluster sampling is a popular method of sampling in small scale research. However, it is important not to build bias during research, when the method of cluster sampling is being utilised (Cohen et al., 2007).

Data Collection

Data was collected from the parents and teachers in the form of a hard copy questionnaire. Questionnaires were distributed to the oldest child in each family from second to sixth class and subsequently given to parents. It was agreed that each child who returned a completed questionnaire received an incentive which was a homework pass. This choice of incentive was given careful consideration in accordance with BERA (2018) guidelines which state that incentives should not impinge on the free decision to participate in the study. The researcher hoped this incentive would help maximise response rates. Class teachers in both schools were informed of a 'drop off box' in the secretary's office where they would place completed questionnaires. A two-week time scale was given to complete the questionnaires.

The researcher met with the teachers in both schools A and B. The teachers were informed of the aim of the study, their right to withdraw consent and importance of the research. The researcher thanked the teachers for their co-operation.

Data Analysis

A thematic analysis of the questionnaire data was conducted using the six phases set out by Braun and Clarke (2006). This type of analysis has been recognised as the foundational method for analysing qualitative data and the themes are used to capture important information within the data. "Thematic analysis is a method for identifying, analysing and reporting patterns within the data" (Braun & Clarke, 2006, p.4). The researcher believed this was a suitable method as it provided the opportunity to examine each individual piece of the data. Initially, the researcher began phase one by reading through the data to familiarise themselves with the information the respondents had provided. The data was transcribed using Microsoft Excel. Two documents were created to record the parents and teachers' data separately. In phase two, the researcher generated codes to identify pieces of the data which appeared interesting or thought provoking. A Microsoft document was used to record the frequency of the occurrence of the codes to aid the extraction of themes from the data (see Appendix E). In phase three, the codes were recorded on a mind map, grouping similar codes together and organising the codes into

themes (see Appendix F). Subsequently in phase four the themes were reviewed and refined, some codes were discarded due to the lack of data to support them and other themes or sub themes were created (see Appendix G). During phase five the researcher finalised and named the themes and subthemes; six main themes were generated (see Appendix H). Finally, in phase six, the researcher began the descriptive analysis of the data (Braun & Clarke, 2006).

Validity

“Validity is an essential criterion for evaluating the quality and acceptability of research” (Burns, 1999, p.160). Validity refers to whether the research is believable and the accuracy of the data (Zohrabi, 2013). One of the potential limitations of this study is the selection bias of participants. Having picked two schools with a high number of EAL (English as an additional language) students, the researcher had to ensure the language used in the questionnaire was appropriate for the respondents. The researcher ensured all questions met the three distinct standards of content, cognitive and usability during the pilot study (Grove et al., 2009).

A second potential impediment in this investigation was the sample size of teachers available to the researcher among the two schools. The researcher is aware that a small sample can skew data and that the results only reflects a small percentage of teachers (Cohen et al., 2007). The researcher was mindful of personal biases and tried to remain impartial and non-judgmental while analysing and interpreting the data (Zohrabi, 2013). The intention was to collect data from reliable sources whilst keeping these validity considerations in mind.

Reliability

A good level of reliability ensures the researcher's approach is consistent across different projects (Gibbs, 2007). If the investigation was repeated any variation in results would be as result of the variation of the outcome, not due to sampling bias (Denscombe, 2010). Analysis of the pilot study results allowed the researcher to refine the questionnaire to ensure greater reproducibility. The cover letter reminded the respondents that their data would be de-identified and they remain anonymous and requested that all answers to the questions be as truthful as possible (Cohen et al., 2013).

Limitations

A limitation which was encountered during this investigation was the short time frame which was provided to carry out the research. This in turn restricted the sample size that was available to the researcher for this investigation as it would not have been feasible to conduct this research with a larger number of participants.

In addition to this, the short time frame also hindered the response rate of the investigation. It was difficult for the researcher to maximise the response rate among the children of school B during the school intervals, as the researcher was physically present in another school.

Chapter Four: Findings, Analysis & Discussion

In this chapter the data collected during this investigation will be discussed, starting with the questionnaires response rate. The aim of this study was to use a qualitative instrument to investigate teachers and parents' honest opinions on the implementation of active homework in primary schools. The researcher used a thematic approach to analyse the data, utilising themes to organise the key findings for comparison and discussion. The qualitative findings generated six main themes:

- Children's Physical Activity,
- Parents and Teachers' Perceptions of Active Homework
- Benefits of Active Homework
- Challenges of Active Homework
- Parental Involvement in Active Homework
- Types of Active Homework.

Amongst some of these themes arose subthemes (see Appendix I). The findings will be analysed and discussed below, referring to literature previously reviewed in chapter two alongside other relevant literature.

Questionnaire Response Rate

The hardcopy questionnaires were distributed to 147 pupils in two separate schools from second to sixth class. Overall, 84 completed questionnaires were returned resulting in a 57% response rate among the parents. This is just above the average response rate to research questionnaires which is 52.7% (Baruch & Haltom, 2008). Secondly, 17 teacher questionnaires were administered and the researcher received 14 completed questionnaires from the respondents. This produces an 82% response rate among the teacher participants which was perceived as a strong response rate (Baruch & Haltom, 2008). These questionnaires were labelled A to N.

Finding One: Children's Physical Activity

Initially, the questionnaire sought to establish how many children participated in PA after school and how many children relied solely on PE during school hours for PA. From figure 1 below, we can identify that a total of 17% of the respondent's children do not participate in any PA after school. However, it was a positive finding from the dataset that 83% of children participate in some degree of PA after school. There are very firm similarities between this result and the findings released by the CSPPA (2018) study that stated 20% of children do not participate in any after school/extracurricular activities (Woods et al., 2019).

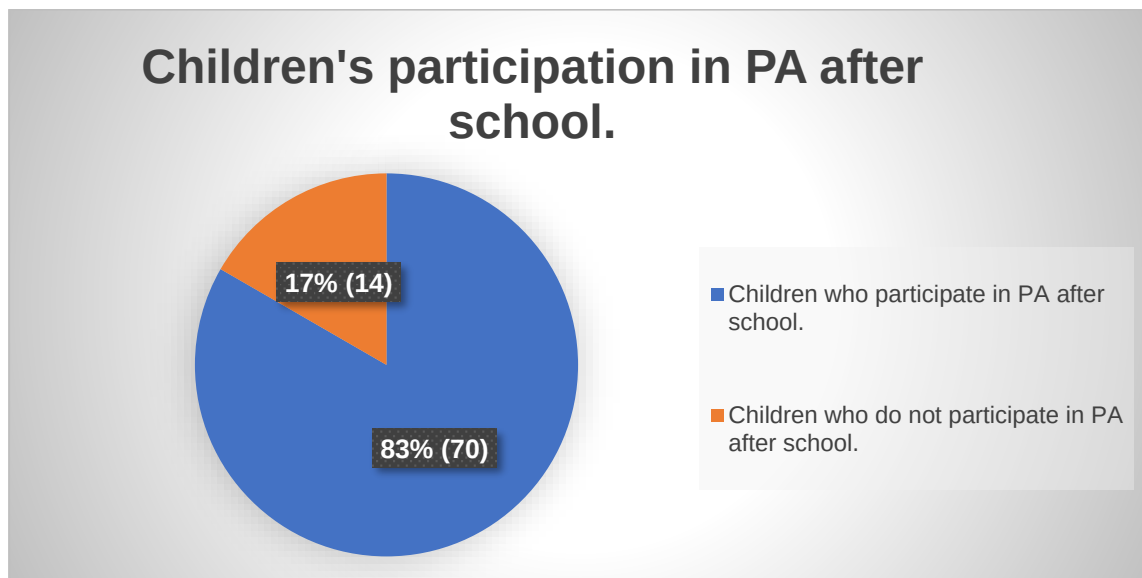


Figure 1: Time children spend participating in PA after school.

Children's average PA time. The questionnaire sought to find how many of the respondents' children meet the recommended PA. From figure 2 below, it can be seen that only 12% of 66 children participate in 60 minutes of PA per day. It is apparent from this chart the majority of children engage in between one and four hours of PA per week. These results are consistent with previous research in the area which suggest that "17% of primary children meet Children PA recommendations" (Woods et al., 2019, p.10). As previously mentioned in the literature review the WHO (2019) recommends that children aged five to seventeen years should receive one hour of MVPA per day. These findings are rather disappointing as PA produces a wide variety of direct and indirect health benefits (Woods et al., 2010). The PA levels of Irish children are similar to international standards, with 23% of Australian children and 22% of English children meeting the recommended PA guidelines (Australian Institute of Health, 2020; Scholes, 2016). However, only a small quantity (7%) of Canadian children participate in 60 minutes of PA daily (Statistics Canada, 2015).

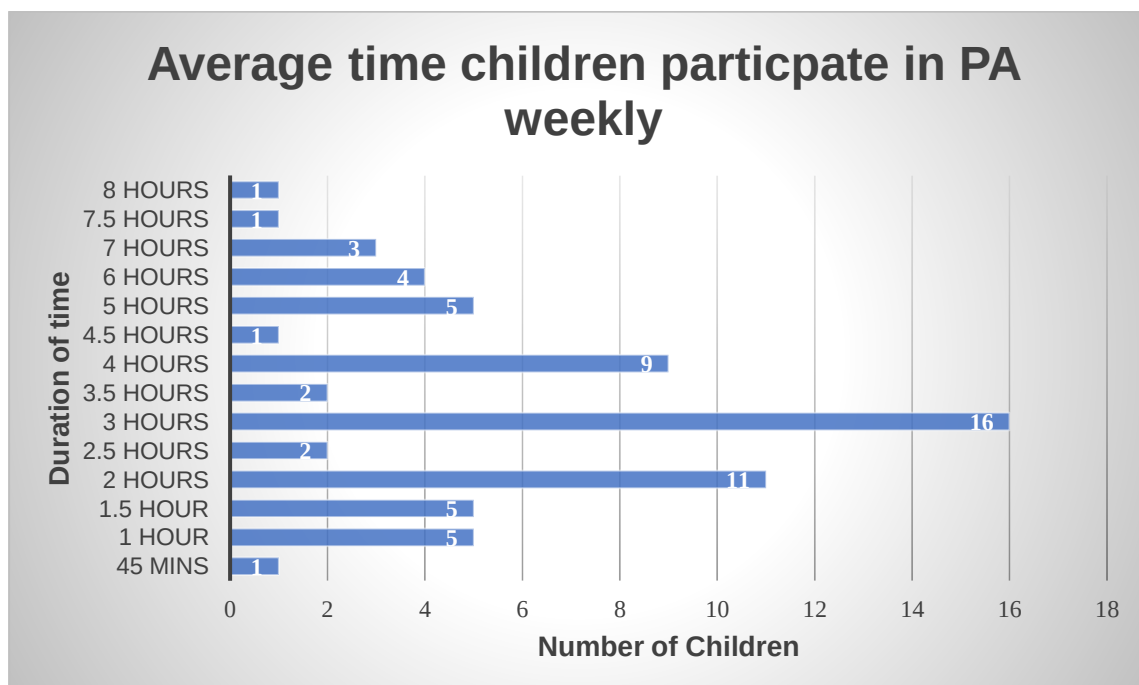


Figure 2: Average time children spend participating in PA weekly

Finding Two: Parents and Teachers Perceptions of Active Homework.

Respondents were asked to indicate if they would like to see their child receiving active homework. Figure 3 below shows that 80% of the parents are in agreement with active homework. In this study one parent who believed active homework was a good idea commented it would be “good for movement breaks during homework” while one quarter of parents referred to active homework as a method of reducing screen and indoor time. Teachers were also asked to share their view on assigning active homework. The majority of respondents stated they agreed with PA homework however, 14% of teachers did not believe in assigning PA homework (fig.4). Teacher ‘A’ commented “It is part of the curriculum therefore children should be reinforcing the skills they have learned in school” while teacher ‘F’ stated “Teachers lack experience in the area”. This data coincides with that of Smith & Claxton’s (2003) finding which found that 75% of parents believed that homework in PE would be a good idea. The comments made by teacher ‘F’ mirror findings from previous studies stating that primary school teachers receive inadequate time allocation within their teacher training to feel prepared to teach PE (Hardman, 2006).

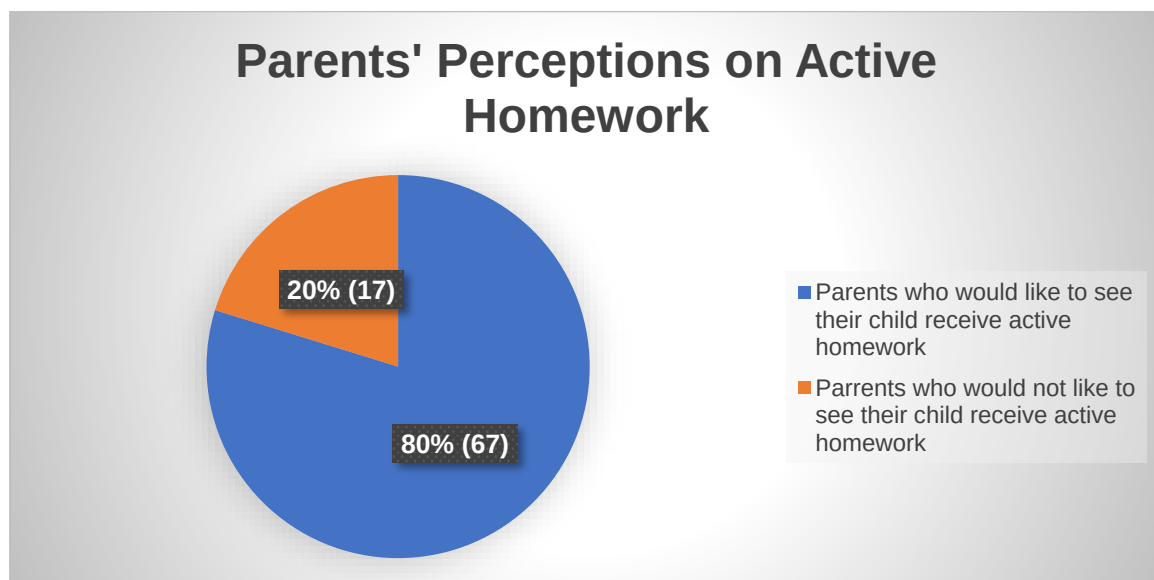


Figure 3: Parents' opinions on their child receiving active homework.

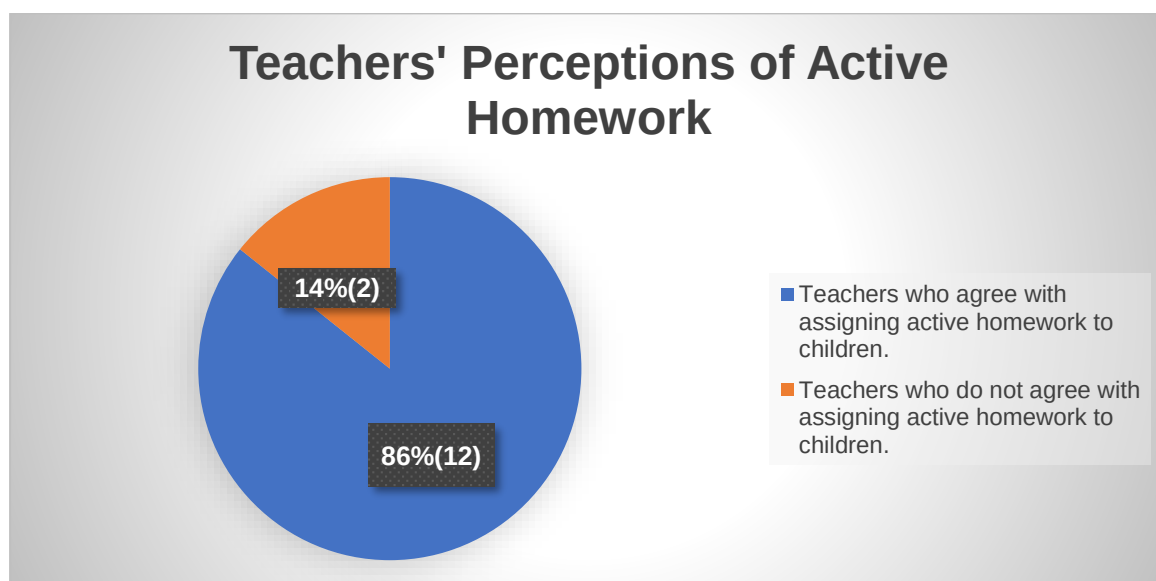


Figure 4: Teachers' Opinions on assigning active homework to children.

Finding Three: Benefits of Active Homework

The two questionnaires which were distributed were aimed at identifying teachers and parents' perceived benefits of the implementation of active homework in primary schools. Both questionnaires contained open-ended questions therefore, allowing the researcher to combine the responses into codes and created themes from them. The key findings will be discussed below.

Development of skills. The issue of skill development was identified throughout the questionnaires. Firstly, parents perceived active homework as an opportunity for children to develop their skills one parent noted "My child could practice different skills she learned in PE" and another commented that "My child could develop their important skills". When asked what type of active homework parents would like their children to receive, many referred to activities based on skill development such as throwing, catching and running. Secondly, teachers also commented on the subject of skill development. Teacher D stated that "Active homework should be used for reinforcing the skills they learn in school". Another important point made by teacher L was "It is obvious in PE how underdeveloped children's basic fundamental skills are". Self-confidence and skill competencies are important determinants in participation in PA and sport. Research shows that if children do not acquire the skills to participate in an activity, they will choose not to take part in that activity. Due to lack of exposure to activities lack of participation

will follow in that particular activity (Daley, 2002). Skill development has been recognised as a critical motivator in children participating in PA (Rink et al., 2010). Curriculum research indicates that PE programmes are not allocated sufficient time to meet the goals of motor and skill development (Mitchell, Stanne & Barton, 2000a; Rink et al., 2010), a problem that could be overcome with the introduction of active homework.

Creation of healthy habits. A recurrent theme in responses of both parent and teachers' questionnaires was a belief that the introduction of active homework would encourage the children to create a routine including PA. Teacher F stated "Active homework increases the chance of PA becoming a habit" while teacher B noted "Active homework encourages children to see PA as part of their daily life". Parents shared similar opinions reporting "This might encourage them to go outside every day" and "They might begin to enjoy PA". This evidence highlights that both parents and teachers are enthusiastic for children to be physically active. During this research parents held the opinion that active homework "encourages the children to use skills learned in other subjects eg. S.E.S.E." and with one parent believing "It would show my child he can use skills learned at school throughout his life". Research suggests that the ability for children to establish links between school work and life beyond school encourages children to make it a lifelong habit. This conclusion has been noted as an important goal for homework across all subjects (Mitchell et al., 2000b). These findings further support the idea of children developing the habit of making the cognitive, affective and psychomotor aspects of PA an integral part of their lives (Mitchell et al., 2000b). It is important parents encourage children to be physically active at a young age, sedentary habits formed in childhood tend to be difficult to change late in life. Research has highlighted that children in Ireland spend a significant portion of their leisure time in detrimental sedentary habits (Hill, 2009; Woods et al, 2010).

Physical and mental health. A frequent theme throughout the questionnaire responses was parents and teachers' beliefs about the benefits active homework would have on children's physical and mental health. One parent proclaimed that active homework would "help my child blow off steam after school" and 50% of parents made reference to active homework benefiting children's mental health. Other responses included "It would make them stronger", "It would help my child sleep better" and "My child would feel more energised". From this feedback, it can be understood that parents believe active homework would benefit the children's physical and mental health in a variety of positive ways. Similarly, teachers made positive comments in relation to active homework benefiting the mental and physical health of their students. Teacher B described active homework as "Good for children's health and wellbeing" and 80% of teachers believed that active homework would help reduce the ever-growing risk of obesity amongst children. One unexpected comment from a teacher was that "Active homework brings wrong attention to an overweight child damaging their self-esteem". In reviewing literature, no data was found on the association of attention being brought to an overweight child through active homework, or made references to negative mental health connections associated with regular exercise. Recent literature has highlighted the significance regular PA plays in a child's physical and mental health development. Firstly, it reduces the risk of obesity and the harmful metabolic diseases that may arise (Woods et al, 2010). Secondly, PA has been found to reduce depression and symptoms of anxiety, promote a positive mood, boost creativity and self-esteem (Paluska & Schwenk, 2000).

Finding Four: Challenges of Active Homework

It cannot be denied that the data produced from these questionnaires identified important benefits associated with the introduction of active homework. However, parents and teachers were asked to report any perceived challenges they might have with regards to the introduction of active homework. 100% of the teachers responded and 87% of parents responded to this question. The two groups of respondents offered a wide range of challenges that must not be overlooked.

Recognition of PE. During this investigation a reoccurring theme of negative perceptions of the PE curriculum became apparent from the data collected. Parents responses included “They do not believe it is important” and “Prefers written homework”. Teacher responses were similar, with teacher C stating “It is not recognised as proper homework” and teacher I noting that “The children would be reluctant to do it”. However, teacher J believed that active homework was important as it “encourages children to see PE as a subject”. These responses highlight the challenge both parents and teachers would encounter in attempting to engage children to complete active homework. As mentioned in the literature review, a significant problem for the PE curriculum is the marginalisation of the subject which has developed over many years. The data mirrored, previous research, demonstrating that many children believe that homework did not belong in PE and documented comments such as “PE is not a real class” (Barney & Strand, 2008; Hill, 2018a).

Monitoring completion. This study found that ‘monitoring completion’ was a common apprehension amongst both parents and teachers. Parents statements included “How would I show my child completed it” with another listing “Providing evidence of completion” as a challenge. It was noted that 50% of teachers suggested monitoring if the children had completed the homework would also pose a significant hurdle, with teacher E stating “How would the children in the class show they completed it”. These opinions correlate with previous literature which reported that “Teachers express a concern with legal liability, monitoring and validating that students have actually completed the physical work that they claim to have completed” (Mitchell et al., 2000a, p.144).

Busy schedules/Lack of interest. There was a recurring theme of lack of time and interest/motivation throughout the dataset. It was discovered that, 55% of parents reported insufficient time as a barrier to completing active homework with the children. Interestingly, this response was received mostly from parents whose children already participated in PA outside of school. One parent reported “My child is already active; we would have no time”. A different parent stated, “I have three children, it is hard to find time to do homework with all of them”. Mirroring this sentiment, teachers recognised parents’ busy schedules as a challenge to completing active homework with their children. Teacher C commented that parental participation was “Unlikely to happen due to busy lifestyles”. These findings are supported by Woods et al., (2010) who reported that time pressure was one of the main barriers to students not participating in PA. A study investigating the implementation of active homework in a North Carolina school involving parental participation revealed similar findings of a lack of parental participation due to time constraints (Smith & Claxton, 2003).

Secondly, a common view among respondents was that a lack of motivation amongst the children to complete active homework would be a challenging factor. One respondent stated, “I don’t know how I would motivate them to do it in the evenings”, and another participant “does not believe it is important”. Over half of teachers expressed the belief that the students would be reluctant to complete the active homework. Motivating children to engage in regular PA has been recognised as one of the most formidable challenges faced by both teachers and parents, however it is also identified as a key factor in adherence to PA programs (Hill, 2018a; Sun et al., 2017). Research suggests that children’s confidence in their physical body and skills is a crucial motivator for children sustaining a physically active life (Woods et al., 2010).

Finding Five: Parental Involvement in Active Homework

Parents opinion on completing active homework. Respondents were asked to indicate whether they would complete active homework with their child or not. Strong evidence of willingness from parents to complete active homework with their children was reported as 83% of respondents said they would participate in active homework. 13% of parents stated they would not complete active homework with their children. Parents were asked to note any challenges, they believed would be encountered in completing active homework. Some participants expressed the belief that “their child would be fitter than them” and “I would be too unfit”. A minority of respondents indicated that they would encounter no challenges while participating in active homework with their children. The findings of this current study are consistent with those of Smith and Claxton (2003) who stated that during their research of PA homework they found “the only negative comments made by parents were in regard to the parent being physically unable to participate” and “their time constraints” (p.29). These results are encouraging as literature suggests parents have a key role to play in influencing their children’s PA levels and health behaviours through direct modelling, positive reinforcement and guidance at home (Sheehy, 2011; Hoover-Dempsey et al., 2001).

Teachers’ perceptions of parental involvement in active homework. The final section of the teacher’s questionnaire sought to determine teachers’ beliefs regarding parents’ participation in active homework with their children. 100% of the respondents indicated that they believed parents should partake in active homework with their children with a wide variety of reasons provided. Teacher N stated “Parents should be involved as they are primary educators of their children when it comes to lifestyle” while two other respondents believe that it was “Parents duty of care to their children”. One unexpected opinion from teacher H was “yes as homework that is completed with parents is much more valuable”. Other responses reflected how parent modelling influences children and “increases the chance of it becoming a habit” with an “active parent means active child”. These responses mirrored literature which reported a positive correlation between PA levels of parents and children (Troost et al., 2003). Parents involvement in

active homework provided children with the opportunity to observe and learn from their parents, with direct acquisition of skills, physical knowledge and positive attitudes. It has been discovered that parental involvement in homework has been related to improved student achievement (Hoover-Dempsey, 2001).

Finding Six: Types of Active Homework

In the final section of the questionnaire parents were asked to share the different types of active homework they would like to see their children complete. Figure 5 below presents the responses received from the parents. The majority of respondents listed cardiovascular based exercises such as running, walking, cycling and swimming as their main preference. Other suggested exercises included strength and skill development activities. In contrast, teachers believed "Active homework should include the topic that is being covered on the curriculum". There is currently no theoretical model to describe the types of active homework that would be suitable for children (Mitchell et al., 2000a) with different literature suggesting various types of active homework. Some researchers believe that active homework should be structured and relevant to content covered in class (Mitchell et al., 2000b), whilst others believe it is critical that it is unstructured and the children should be encouraged to choose their own activities as much as possible (Smith & Claxton, 2003). The WHO (2010) recommends that children aged between five and seventeen should participate in aerobic exercises such as walking, running and swimming at least three times per week. These guidelines also propose that these children engage in resistance exercises such as squats, push-ups and sit-ups to enhance muscular strength three times a week. However, a predominance of literature suggests that homework activities should be enjoyable, fun and tailored to each individual student, to maximise the chances that children make PA a permanent and positive habit (Smith & Claxton, 2003; Willams & Hannon, 2013).

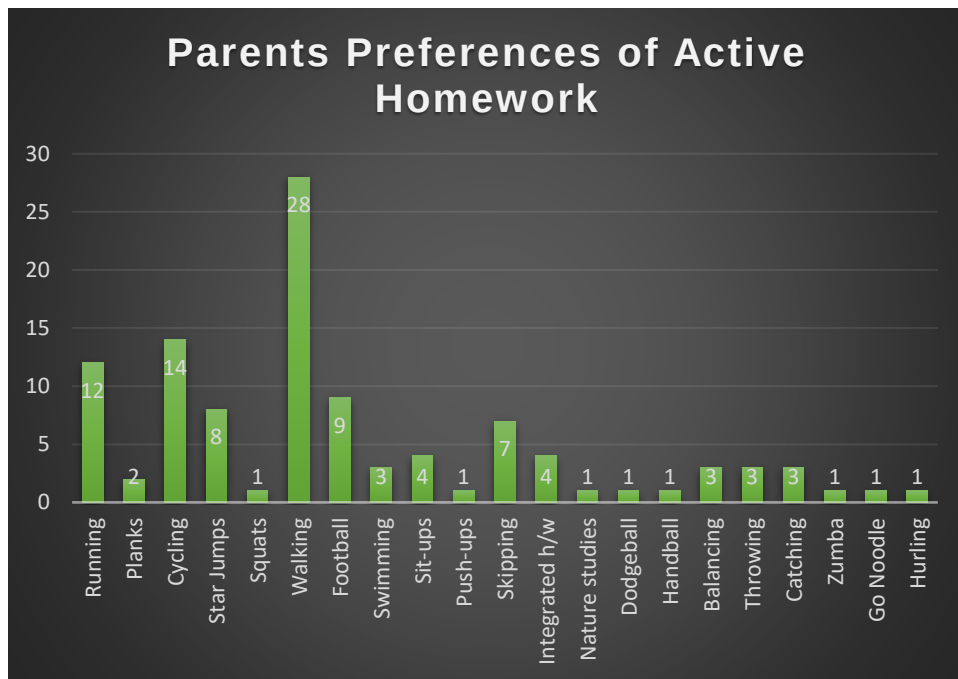


Figure 5: Parents' preferences of active homework.

Chapter Five: Conclusions and Recommendations

Conclusions

The main goal of this study was to determine parents and teachers' perceptions of the introduction of active homework into primary schools. In this chapter, the key findings from this investigation will be discussed along with recommendations that arose from the study's findings.

Conclusion One: Children are not meeting the recommended PA guidelines. Overall, this study found that a significant number of children are not participating in sixty minutes of MVPA per day as recommended by the WHO (2019). The results of this study highlights that only 12% of children are meeting the national PA standards. Therefore, children are not receiving the benefits that regular PA can bring and are at increased risk of developing life-threatening diseases, relating to both their physical and mental health. The results of this study indicate that physical inactivity will have significant implications on the future of public health if drastic change is not made.

Conclusion Two: Positive perceptions of active homework. In summary the findings suggest that the majority of parents and teachers believe that introducing active homework into primary schools is a favourable idea and would bring substantial benefits to children's lives. 80% of parents and 86% of teachers were in favour of the initiation of active homework into the curriculum.

Conclusion Three: Teachers lack confidence in assigning active homework. The current study found that teachers do not feel confident in assigning active homework. These findings echo prior research findings, highlighting that teachers do not receive adequate training to feel confident teaching PE (Hardman, 2006). Previous research has revealed that a teacher's lack of confidence can be a significant in the willingness to implement and eagerness to implement sustained change into their teaching (Stylianou, Kulinna & Naiman, 2016).

Conclusion Four: Benefits of active homework. This study supports established findings and contributes additional evidence in support of the numerous benefits that can arise from the introduction of active homework. Common benefits identified by both parents and teachers during this investigation included an increase in PA time, further development of FMS for children, development of healthy habits and life routines for students, as well as improved mental and physical health. Previous research suggests that PA has been identified as playing a significant role in improving academic performance. Participation in PA increases an individual's "arousal through an increase of neural activity in the reticular formation of the brain, in turn a moderate increase of arousal is likely to increase attention and facilitate learning" (Trudeau & Shephard, 2010, p.140). Studies have observed that increased PA has resulted in the achievement of significantly higher results in reading assessment as well as having an academic benefit in maths subjects. It has also been noted that increased PA time did not have any negative affect academic results (Carlson et al., 2008).

Recommendations

As a result of this investigation, a number of recommendations have been formulated based on the findings from the data.

Recommendation One: Introduce continuous professional development (CPD) courses based on active homework. A key finding throughout this investigation was the teachers lack of confidence and preparedness in the area of PE and active homework. It is evident that more training and support would greatly benefit teachers, allowing them to feel better equipped to assign and regulate active homework. CPD courses would increase teachers' knowledge of the PE curriculum and their ability to apply particular areas of the curriculum to active homework. An increase in the teachers' knowledge would aid their understanding of the direct and indirect benefits children could gain from expanded PA time. This recommendation is further supported by Guskey's (2002) model of teacher change, which states that continued follow up of initial training is critical to encourage teachers to implement permanent change in their classroom. This model also suggests that improvement in pupil learning outcomes is associated with a positive

change to teachers' attitudes and beliefs. Previous studies have reported that teachers are more likely to assign active homework if they are confident in their training and are provided with instruction and resources (Thom & Yun, 2012).

Recommendation Two: Introduce active homework in schools. Secondly, the researcher recommends implementing active homework for students in primary schools as a method of increasing pupil's PA time, encouraging them to become healthier and develop a greater level of fitness (Smith & Claxton, 2003). The researcher makes this recommendation based on the ASF initiative which was found to reduce the PA gap between males and females in primary schools (Woods et al., 2019). The introduction of active homework would require a whole united school approach. Initially, schools would be advised to make active homework part of their school policy and designate time at staff meetings to discuss the topic. Staff should participate in a professional collaborative review programme watching each other teach PE, and how homework is assigned based on the lesson content. This enables interprofessional learning and the development of a united supportive culture among the staff (Active Schools, n.d.). Teachers and students should be encouraged to regularly evaluate active homework, be able to provide constant open feedback, and give opinions on different activities that may be able to be added to the program. Finally, the school should organise a united school initiative, providing every student a goal to work towards by the end of the school year. In summary, "Active homework in PE is an idea whose time has to come" (Smith & Claxton, 2003, p.32).

Recommendation Three: Create a positive perspective for active homework. The literature highlights that the word 'homework' often, derives emotions and feelings of fear, rage and despair from students (Kidwell, 2004). Children often associate homework with an unpleasant portion of their evening. Therefore, the researcher recommends relabelling active homework as 'active fun' or 'home fun' to prevent children developing negative attitudes towards PA homework (Rink et al., 2010). A new positive label would encourage student participation, and assist in changing perceptions of PA, with the aim to achieve integration of regular PA as part of their daily life.

Recommendation Four: Review of policies and curricular content. Considering the high number of children not meeting the minimum PA guidelines and that schools are primary sites for encouraging PA it is recommended that DES review the wellbeing policy statement. This statement should include increasing children's PA levels as a high-level action policy and promote active homework as a method of achieving this (WHO, 2008; DES, 2018). Additionally, the NCCA (2020) published a draft primary curriculum framework for reviewing and redeveloping the primary curriculum. Fostering wellbeing is one of the key competencies outlined as having a vital role in children's learning and should be embedded across all curriculum areas. Another key advantage of an active homework program would be the integration and transference of skills learned at school into life outside of it. Implementing active homework into primary schools supports the children's wellbeing and allows meaningful connection of the PE curriculum to student's lives (NCCA, 2020).

Recommendations for Future Research

Overall, from carrying out this investigation further research is warranted in the area of active homework, as there are significant gaps in the literature and theory for educators. Further research should assess the impact that active homework has on children's PA levels. The sample size used throughout this investigation was small and therefore caution must be applied as the findings might not be applicable to a larger population. Future research could utilise a larger sample sizes in schools, and recruit students, parents and teachers from a wider range of areas to increase the generalisability of the findings.

Reference List

- Abarca-Gómez, L., Abdeen, Z. A., Hamid, Z. A., Abu-Rmeileh, N. M., Acosta-Cazares, B., Acuin, C., ... & Agyemang, C. (2017). *Worldwide Trends in Body-Mass Index, Underweight, Overweight, and Obesity from 1975 to 2016: A Pooled Analysis of 2416 Population-Based Measurement Studies in 128· 9 Million Children, Adolescents and Adults*, 390(10113), 2627-2642. doi: [https://doi.org/10.1016/S0140-6736\(17\)32129-3](https://doi.org/10.1016/S0140-6736(17)32129-3)
- Active Schools. (n.d.). *Case Studies & Videos*. Retrieved from: <https://activeschoolflag.ie/index.php/active-schools/>
- Active Schools. (n.d.). *Sample Improvements- Physical Education*. Retrieved from: <https://activeschoolflag.ie/index.php/sample-improvements/>
- American Heart Association. (2019). *Physical Activity 'Homework'*. Retrieved from https://www.heart.org/idc/groups/heart-public/@wcm/@fc/documents/downloadable/ucm_451973.pdf
- Australian Institute of Health. (2020). Australia's Children. *Australian Institute of Health and Welfare*. Retrieved from <https://www.aihw.gov.au/reports/children-youth/australias-children/contents/health/physical-activity>
- Ayiro, L. P. (2012). *A Functional Approach to Educational Research Methods and Statistics: Qualitative, Quantitative and Mixed Methods Approaches*. New York: Edwin Mellen Press.
- Barney, D., & Strand, B. (2008). Do high school students know what practices are appropriate in physical education. *High School Journal*, 92(1), 33-40. Retrieved from <https://www.jstor.org/stable/40660785>
- Baruch, Y., & Holtom, B. C. (2008). Survey response rate levels and trends in organizational research. *Human Relations*, 61(8), 1139-1160. doi: <https://doi.org/10.1177/0018726708094863>

- Bel-Serrat, S., Heinen, M., M., Murrin, C., Daly, L., Mehegan, J., Concannon, M.,
 ...Kelleher, C. (2017). *The childhood obesity surveillance initiative (COSI) in the Republic of Ireland. Findings from 2008, 2010, 2012 and 2015*. Dublin: Health Service Executive Retrieved from
<https://www.hse.ie/eng/about/who/healthwellbeing/our-priority-programmes/heal/childhood-obesity-surveillance-initiativecosi/>
- Bembenutty, H. (2011). The last word: An interview with Harris Cooper- Research, policies, tips, and current perspectives on homework. *Journal of Advanced Academics*, 22(2), 340-255. doi: <https://doi.org/10.1177/1932202X1102200201>
- British Educational Research association (BERA). (2018). *Educational Guidelines for Educational Research*. London: Author. Retrieved from:
<https://www.bera.ac.uk/publication/ethical-guidelines-for-educational-research-2018>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. doi:
<https://doi.org/10.1191/1478088706qp063oa>
- Burns, A. (1999). *Collaborative Action Research for English Language Teachers*. Cambridge: CUP
- Burt, D. J. (2017). Using the TIPS method to implement homework in physical education. *Strategies*, 30(1) 43-46. doi: <https://doi.org/10.1080/08924562.2017.1253369>
- Brustad, R.J. & Partridge, J.A. (2002). Parental and peer influence on children's psychological development through sport. In F.L. Smoll & R.E. Smith (Eds.), *Children and Youth in Sport: A Biopsychosocial Approach* (2nd ed., pp. 187-210). Dubuque, IA: Kendall/ Hunt Publishing.

- Carlson, S. A., Fulton, J. E., Lee, S. M., Maynard, L. M., Brown, D. R., Kohl III, H. W., & Dietz, W. H. (2008). Physical education and academic achievement in elementary school: data from the early childhood longitudinal study. *American Journal of Public Health*, 98(4), 721-727. doi: <https://doi.org/10.2105/AJPH.2007.117176>
- Castelli, D.M., Centeio, E.E., Hwang, J., Barcelona, J. M., Glowacki, E. M., Calvert, H. G. & Nicksic, H. M. (2014) The history of physical activity and academic performance research: Informing the future. *Monographs of the Society for Research in Child Development*, 79(4):119-148.
doi: <https://doi.org/10.1111/mono.12133>
- Centres for Disease Control and Prevention. (2010). *Youth Risk Behavior Surveillance*. United States: Centres for Disease Control and Prevention. Retrieved from <https://www.cdc.gov/mmwr/preview/mmwrhtml/ss5905a1.htm>
- Cohen, L., Manion, L. & Morrison, K. (2007). *Research Methods in Education*. (7th ed) London: Taylor & Francis LTD.
- Cooper, H., Robinson, J.C., & Patall, E. A. (2006). Does homework improve academic achievement? A synthesis of research, 1987-2003. *Review of Educational Research*, 76(1), 1-62. doi: <https://doi.org/10.3102/00346543076001001>.
- Corbin, C. B. (2002). Physical Activity for everyone: What every physical educator should know about promoting lifelong physical activity. *Journal of Teaching in Physical Education*, 21(2), 128-144. doi: <https://doi.org/10.1123/jtpe.21.2.128>
- Creswell, J.W. (2014). *Research Design: Qualitative, Quantitative & Mixed Method Approaches*. United States: SAGE Publications.
- Daley, A.J. (2002). Extra-Curricular Physical Activities and Physical Self-Perceptions in British 14-15-Year-Old Male and Female Adolescents. *European Physical Education Review*, 8(1), 37-49. doi: <https://doi.org/10.1177/1356336X020081003>

- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic Motivation and Self-Determination in Human Behavior*. New York: Plenum
- Denscombe, M. (2010). *The Good Research Guide* (4th ed.). Buckingham: Open University Press.
- Department of Education and Science. (2003). *Junior Cycle Physical Education*. Dublin: The Stationary office. Retrieved from:
http://doras.dcu.ie/21335/1/CCLSP_Study_Report1.pdf
- Department of Education and Skills. (2018). *Wellbeing Policy Statement and Framework for Practice*. Dublin: Author. Retrieved from:
<https://www.education.ie/en/Schools-Colleges/Information/wellbeingineducation/>
- Department of Health & Healthy Ireland. (2019). *Get Ireland Active; National activity plan for Ireland*. Dublin: Author. Retrieved from <https://www.gov.ie/en/policy-information/b60202-national-physical-activity/>
- Docheff, D. (2013). Homeowrk...in physical education. *Strategies; A Journal for Physical and Sport Educators*, 4(1), 10-14.
doi:<https://doi.org/10.1080/08924562.1990.10591754>
- Duncan, S. M. (2011). Efficacy of a compulsory homework programme for increasing physical activity and healthy eating in children: the healthy homework pilot study. *International Journal of Behavioral Nutrition and Physical Activity*, 8(127). doi:
<https://doi.org/10.1186/1479-5868-8-127>
- European Commission. (2017). *Qualitative methodologies for questionnaire assessment*. Luxembourg: Author Retrieved from <https://circabc.europa.eu/sd/a/7f617c55-1b01-41a5-96a4-966394f28b32/Methodological%20document%20-%20qualitative%20methods%20for%20pretesting.pdf>

- Eurostat. (2006). *Handbook of Recommended Practices for Questionnaire Development and Testing in the European Statistical System*. Retrieved from:
<http://epp.eurostat.ec.europa.eu/portal/page/portal/quality/documents/RPSQDET27062006.pdf>
- Fairclough, S. J., Hackett, A. F., Davies, J. G., Gobbi, R., Mackintosh, K. A., Warburton, G. L., & ...Boody, L. M. (2013). Promoting healthy weight in primary school children through physical activity and nutrition education: a pragmatic evaluation of the CHANGE! randomised intervention study. *BMC Public Health*, 13(626). doi: <https://doi.org/10.1186/1471-2458-13-626>
- Fisher, A., Reilly, J., Montgomery, C., Willamson, A., & Paton, J. (2005). Fundamental movement skills and habitual physical. *Medicine & Science in Sports & Exercise*, 37(4), 684-688. doi: <https://doi.org/10.1249/01.MSS.0000159138.48107.7D>
- Flood, E. (2013). *Child Development*. Dublin: Gill Education
- Fraenkel, J. R. & Wallen, N. E. (2003). *How to Design and Evaluate Research in Education*. (5th ed.). New York: McGraw-Hill
- Gibbs, G., R. (2007). *Analyzing Qualitative Data*. United Kingdom: Taylor & Francis.
- Grove R., M., Fowler F., Couper, M. P., Lepkowski, J. M., Singer, E., Tourangeau, R. (2009) *Survey Methodology* (2nd ed.). United States: John Wiley & Sons, Inc
- Guskey, T., R. (2002). Professional development and teacher change. *Teachers and Teaching: Theory and Practice*, 83(3/4), 381-391. doi: <https://doi.org/10.1080/135406002100000512>
- Hardman, K. (2006). *Current Situation and Prospects for Physical Education in the European Union*. Retrieved from:
<http://www.europarl.europa.eu/activities/committees/studies/download.do?file=16041>.

- Hart, S. (2001). Homework in physical education: Strategies for promoting healthy lifestyles through supplementary home tasks. *Strategies; A Journal for Physical and Sport Educators* 15(1), 30-32. doi: <https://doi.org/10.1080/08924562.2001.10591520>
- Healthy Ireland. (2016). *Get Ireland Active: National Physical Activity Plan for Ireland*. Healthy Ireland. Retrieved from: <https://www.getirelandactive.ie/Professionals/National-PA-Plan.pdf>
- Hill, G. (2009). Motivating students to be active outside of class. *Journal of Physical Education, Recreation & Dance*, 80(1), 25-30 doi: <https://doi.org/10.1080/07303084.2009.10598264>
- Hill, K. (2018a). Homework in physical education? A review of physical education homework literature. *Journal of Physical Education, Recreation & Dance*, 89(5), 58-63. doi: <https://doi.org/10.1080/07303084.2018.1440263>
- Hill, K. (2018b). *The Efficacy of using Homework in Physical Education as a Learning Tool* (Jackson State University, United States). Retrieved from <http://www.jsu.edu/kinesiology/docs/Kory%20PE%20Docs/HW%20in%20PE%20-%20review%20of%20lit.pdf>
- Hillman, C. H., Pontifex, M. B., Motl, R. W., O'Leary, K., Johnson, C. R., & Scudder, M. R. (2012). From ERPs to academics. *Developmental Cognitive Neuroscience*, 2(1), 90-98. doi: <https://doi.org/10.1016/j.dcn.2011.07.004>
- Hogan, J., Dolan, P. & Donnelly, P. (2009). Introduction. In J. Hogan, P. Dolan and P. Donnelly (Eds.), *Approaches to Qualitative Research: Theory and its Practical* (pp. 1-18). Cork: Oak Tree Press.

- Hoover-Dempsey, K. V., Battiato, A. C., Walker, J. M., Reed, R. P., DeJong, J. M., & Jones, K. P. (2001). Parental involvement in homework. *Educational Psychologist*, 36(3), 195-209. doi: https://doi.org/10.1207/S15326985EP3603_5
- Jackson, D. (2005). Should physical educators make greater use of homework. *Journal of Physical Education, Recreation & Dance*, 76(2), 15-18. doi: <https://doi.org/10.1080/07303084.2005.10607328>
- James, A. R. (2011). The marginalization of physical education: Problems and solutions, Part 1--Introduction. *Journal of Physical Education, Recreation & Dance*, 82(6), 15-16. Retrieved from <https://eric.ed.gov/?q=The+Marginalization+of+Physical+Education%3a+Problems+and+Solutions%2c++Part+1--Introduction&id=EJ965295>
- Jennings , P., O'Brien, S., & O'Shea, D. (2018). *Tackling Childhood Obesity*. Health, Safety and Enviroment. Retrieved from: https://data.oireachtas.ie/ie/oireachtas/committee/dail/32/joint_committee_on_children_and_youth_affairs/submissions/2018/2018-08-22_submission-health-service-executive_en.pdf
- Johnson, J.E. & Christie, J., F. (2009). Play and digital media. *Computers in School*, 26 (4), 284-289. doi: <https://doi.org/10.1080/07380560903360202>
- Kidwell, V. (2004). *Homework: Classmates Series*. London: A & C Black
- Kinchin, G., & O'Sullivan, M. (2003). Incidences of student support for and resistance to a curricular innovation in high school physical education. *Journal of Teaching in Physical Education*, 22(3), 245-260. Retrieved from: <http://hdl.handle.net/10344/3187>

Kohl 3rd, H. W., Craig, C. L., Lambert, E. V., Inoue, S., Alkandari, J. R., Leetongin, G., ... & Lancet Physical Activity Series Working Group. (2012). The pandemic of physical inactivity: global action for public health. *The Lancet*, 380(9838), 294-305. doi: [https://doi.org/10.1016/S0140-6736\(12\)60898-8](https://doi.org/10.1016/S0140-6736(12)60898-8).

Kriemler, S., Zahner, L., Schindler, C., Meyer, U., Hartmann, T., Hebestreit, H., ... & Puder, J. J. (2010). Effect of school based physical activity programme (KISS) on fitness and adiposity in primary schoolchildren: cluster randomised controlled trial. *BMJ*, 340(785). doi: <https://doi.org/10.1136/bmj.c785>

Leong, F. T., & Austin, J. T. (2006). *The Psychology Research Handbook: A Guide for Graduate Students and Research Assistants*. United States: Sage.

Llewellyn, A., Simmonds, M., Owen, C.G., Woolacott N. (2016). Childhood obesity as a predictor of morbidity in adulthood: a systematic review and meta-analysis. *Obesity Reviews*, 17(1):56–67 doi: <https://doi.org/10.1111/obr.12316>

Loomis, A. (2005). Should physical educators make greater use of homework? *Journal of Physical Education, Recreation & Dance*, 76(2), 15-18. doi: <https://doi.org/10.1080/07303084.2005.10607328>

Lotta, B. (2015). *Gonoodle Movement Breaks in the Classroom*. (Thesis: The College at Brockport: State University of New York). Retrieved from: https://digitalcommons.brockport.edu/cgi/viewcontent.cgi?article=1595&context=ehd_theses

Marshall, G. (2005). The purpose, design and administration of a questionnaire for data collection. *Radiography*, 11(2), 131-136. doi: <https://doi.org/10.1016/j.radi.2004.09.002>

- Mitchell, M., Stanne, K., & Barton, G. V. (2000a). Attitudes and behaviours of physical educators regarding homework. *Physical Educator*, 57(3), 136. Retrieved from <https://search.proquest.com/docview/233006667/fulltextPDF/700B084F3CAC438DPQ/1?accountid=15753>
- Mitchell, M., Barton, G. V. & Stanne, K. (2000b). The role of homework in helping students meet physical education goals. *Journal of Physical Education, Recreation & Dance*, 71(5), 30-34. doi: <https://doi.org/10.1080/07303084.2000.10605142>
- McGuirk, P. M., & O'Neill, P. (2016). Using questionnaires in qualitative human geography. *Qualitative Research Methods in Human Geography* (pp. 246-273). Canada: Oxford University Press.
- Scholes, S. (2016). Health survey for England 2015 physical activity in children. *National Health Service*. Retrieved from <http://healthsurvey.hscic.gov.uk/media/37752/hse2015-child-phy-act.pdf>
- National Council for Curriculum and Assessment. (2010). *Curriculum Overload in Primary Schools: An Overview of National and International Experiences*. Retrieved from National Council for Curriculum and Assessment: https://ncca.ie/media/2052/curriculum_overload_in_primary_schools_an_overview_of_national_and_international_experiences.pdf
- National Council for Curriculum and Assessment. (2016). *Proposals for structure and time allocation in a redeveloped primary curriculum: For consultation*. Retrieved from: National Council for Curriculum and Assessment: https://www.ncca.ie/media/1349/exec_summary_proposals_structure_and_time.pdf
- National Council for Curriculum and Assessment. (2020). *Draft Primary Curriculum Framework*. Retrieved from: National Council for Curriculum and Assessment: <https://ncca.ie/en/primary/primary-developments/consultation-on-the-draft-primary-curriculum-framework/draft-primary-curriculum-framework>

- Ntoumanis, N., & Standage, M. (2009). Motivation in physical education classes: A self-determination theory perspective. *Theory and Research in Education*, 7, 194–202.
doi: <https://doi.org/10.1177/1477878509104324>
- Opie, C. (2004). Research procedures. *Doing Educational Research*. (pp. 95-115).
London: SAGE Publications.
- Paluska, S. A., & Schwenk, T. L. (2000). Physical activity and mental health. *Sports Medicine*, 29(3), 167-180. doi: <https://doi.org/10.2165/00007256-200029030-00003>
- Pantanowitz, M. (2011). The use of homework assignments in physical education among high school students. *Journal of Research*, 6(1), 48-53. Retrieved from:
<https://files.eric.ed.gov/fulltext/EJ936020.pdf>
- Richards, J. C. & Schmidt, R. (2002). Longman Dictionary of Language Teaching and Applied Linguistics. (3rd ed). London: Longman
- Rink, J., Hall, T. J. & Williams, L. H. (2010). Quality elementary physical education. *Schoolwide Physical Activity: A Comprehensive Guide to Designing and Conducting Programs*. [e-book] (pp.47-133). United States: Human Kinetics.
Retrieved from
https://books.google.ie/books?id=psJ7w5eL_bQC&dq=Quality+Elementary+Physical+Education.+Schoolwide+Physical+Activity:+A+Comprehensive+Guide+to+Designing+and+Conducting+Programs&lr=&source=gbs_navlinks_s
- Robert, S. K., Raymond, K. W., & Cheung, S. (2013). *The implementation of active homework assignment in a Hong Kong elementary school –A Pilot Study*.
Retrieved from: http://www.pooikei.edu.hk/CustomPage/48/2-2014/Action%20Research_The%20Implementation%20of%20PE%20Homework%20in%20Primary%20Schools.pdf

Royal College of Physicians of Ireland. (2016). *Physical Activity: A Prescription for a Wonder Drug*. HSE. Retrieved from:

<https://www.hse.ie/eng/about/who/healthwellbeing/healthy-ireland/publications/physical-activity-a-wonder-drug-the-evidence.pdf>

Ryan, G. W. & Bernard, H. R. (2003). Techniques to identify themes. *Field Methods*, 15(1), 85-109. doi: <https://doi.org/10.1177/1525822X02239569>

Sheehy, D. A. (2011). Addressing parents' perceptions in the marginalization of physical education. *Journal of Physical Education, Recreation & Dance*, 82(7), 42-56. doi: <https://doi.org/10.1080/07303084.2011.10598657>

Smith, M. A., & Claxton, D. B. (2003). Using active homework in physical education. *Journal of Physical Education, Recreation & Dance*, 74(5), 28-32. doi: <https://doi.org/10.1080/07303084.2003.10608482>

Smith, M., & Madden, M. (2014). Middle school students' reactions to the implementation of active homework in physical education. *The Global Journal of Health and Physical Education Pedagogy*, 3(2). Retrieved from <http://connection.ebscohost.com/c/articles/96098760/middle-school-students-reactions-implementation-active-homework-physical-education>

Smith, P. K., Cowie, H., & Blades, M. (2015). *Understanding children's development*. New Jersey: Hoboken

Stodden, D., & Goodway, J. D. (2007). The dynamic association between motor skill development and physical activity. *Journal of Physical Education, Recreation & Dance*, 78(8), 33-49. doi: <https://doi.org/10.1080/07303084.2007.10598077>

St. Ours, E., & Scrabis-Fletcher, K. A. (2013). Implementing active homework in secondary physical education. *Strategies*, 26(6), 23-27. doi: <https://doi.org/10.1080/08924562.2013.839433>

Statistics Canada. (2015). Physical activity levels of Canadian children and youth.

Statistics Canada. Retrieved from <https://www150.statcan.gc.ca/n1/pub/82-625-x/2011001/article/11553-eng.htm>

Strong, W. B., Malina, R. M., Blimkie, C. J., Daniels, S. R., Dishman, R. K., Gutin, B....

Trudeau, F. (2005). Evidence based physical activity for school-age youth. *Journal of Pediatrics*, 146(6), 732-737.

doi: <https://doi.org/10.1016/j.jpeds.2005.01.05>

Stylianou, M., Kulinna, P. H., & Naiman, T. (2016). '... because there's nobody who can just sit that long' Teacher perceptions of classroom-based physical activity and related management issues. *European Physical Education Review*, 22(3), 390-408.

doi: <https://doi.org/10.1177/1356336X15613968>

Sun, H., Li, W., & Shen, B. (2017). Learning in physical education: A self-determination theory perspective. *Journal of Teaching in Physical Education*, 36(3), 277-291.

doi: <https://doi.org/10.1123/jtpe.2017-0067>

Thom, S.C., & Yun, J. (2012). Factors affecting physical educators assigning physical Educators' assigning physical education homework. *Research Quarterly for Exercise and Sport*, 83(1), 65-66. Retrieved from

<https://www.tandfonline.com/doi/full/10.1080/07303084.2018.1440263>

Tremblay, M. S., Aubert, S., Barnes, J.D., Saunders, T.J., Carson, V., Latimer- Cheung, A.E., ...Chinapaw, M. (2017). Sedentary Behavior Research Network (SBRN) - Terminology Consensus Project process and outcome. *The International Journal of Behavioral Nutrition and Physical Activity*, 14(1), 75. doi:

<https://doi.org/10.1186/s12966-017-0525-8>

Trost, S., Sallis, J., Pate, R., Freedson, P., Taylor, W., & Dowda, M. (2003). Evaluating a model of parental influence on youth physical activity. *American Journal of Preventive Medicine*, 25(4), 277-282. doi: [https://doi.org/10.1016/s0749-3797\(03\)00217-4](https://doi.org/10.1016/s0749-3797(03)00217-4)

- Trudeau, F., & Shephard, R. J. (2010). Relationships of physical activity to brain health and the academic performance of schoolchildren. *American Journal of Lifestyle Medicine*, 4(2), 138-150. doi: <https://doi.org/10.1177/1559827609351133>
- Trost, S. G., Sallis, J. F., Pate, R. R., Freedson, P. S., Taylor, W. C., & Dowda, M. (2003). Evaluating a model of parental influence on youth physical activity. *American Journal of Preventive Medicine*, 25(4), 277-282. doi: [https://doi.org/10.1016/s0749-3797\(03\)00217-4](https://doi.org/10.1016/s0749-3797(03)00217-4)
- Van Voorhis, F.L. (2011). Costs and benefits of family involvement in homework. *Journal of Advanced Academics*, 22(2), 220-249, 354. doi: <https://doi.org/10.1177/1932202X1102200203>
- Warton, P. M. (2001). The forgotten voices in homework: Views of Students. *Educational Psychologist*, 36(3), 155-165. doi: https://doi.org/10.1207/S15326985EP3603_2
- World Health Organization. (2019). *Global Strategy on Diet, Physical Activity and Health*. Retrieved from https://www.who.int/dietphysicalactivity/factsheet_young_people/en/
- World Health Organization. (2010). *Global Recommendations on Physical Activity for Health*. Geneva: World Health Organization. Retrieved from: <https://www.who.int/dietphysicalactivity/publications/9789241599979/en/>
- World Health Organization. (2008). *School Policy Framework: Implementation of the WHO Global Strategy on Diet, Physical Activity and Health*. Switzerland: World Health Organization. Retrieved from: <https://apps.who.int/iris/handle/10665/43923>
- Williams, S. M., & Hannon, J. C. (2013). Physical education homework that involves the family. *Strategies*, 26(3), 3-8. doi: <https://doi.org/10.1080/08924562.2013.779848>

- Willams, S. M., McGladrey, B. W., Silva, A., & Hannon, J. C. (2013). Comparson of classroom instruction versus use of homework assignments on cognitive knowledge acquisition in physical education. *The Physical Educator*, 70(2), 206-220. Retrieved from <https://js.sagamorepub.com/pe/article/view/3113>
- Woods, C., B., Moyna, N., Quinlan, A., Tannehill, D., Walsh, J. (2010). *The Children's Sport Participation and Physical Activity Study (CSPPA Study)*. Dublin: Irish Sports Council. Retrieved from:
<http://www.ucd.ie/issda/static/documentation/csppa/csppa-report1.pdf>
- Woods, C., Powell, C., Saunders, J. A., O'Brien, W., Murphy, M. H., Duff, C., ... & Belton, S. (2019). *The Children's Sport Participation and Physical Activity Study 2018 (CSPPA 2018)*. Dublin: Sport Ireland. Retrieved from:
https://pure.ulster.ac.uk/ws/files/77672771/CSPPA_Final_Report.pdf
- Zohrabi, M. (2013). Mixed Method Research: Instruments, Validity, Reliability and Reporting Findings. *Theory & practice in language studies*, 3(2), 254-262. doi:
<https://doi.org/10.4304/tpls.3.2.254-262>

Appendix A

Consent Forms for Parents



Dear Parents/ Guardians,

I am currently carrying out research as part of my Masters of Teaching in Marino Institute of Education. As part of this study I will undertake research in the school. This project aims to examine teachers and parents' perspectives on the introduction of physical activity homework for children in primary school. I hope that the findings of the study will inform Educating professionals about the introduction of Physical Activity homework.

I am writing to you to ask you to complete a short questionnaire. It will take between 8 and 10 minutes to answer. The purpose of the questionnaire is to collect data and information from parents/ guardians regarding their perceptions of active homework being introduced. You are under no obligation to complete the questionnaire, or to answer all questions presented in it. If you come to a question they do not wish to answer, they can simply skip it. When the questionnaires are completed, please deposit the questionnaire into a box at the front reception.

All participation will remain strictly confidential. Names will not be attached to any of the data you provide. Participants are welcome to discontinue participation in the study at any time, should they wish to do so. There are no risks or direct benefits in completing the questionnaire. All questionnaires will be only be accessible by the researcher and all information will be disposed of after the research is complete.

Your participation in this project is sincerely appreciated. I would be grateful if you could return the completed questionnaire by the 5th of March.

Thank you for volunteering to participate in this research. This study has been considered from an ethical perspective by the Marino ethics in research committee. Should you have any questions regarding your participation or concerns about the ethical approval, please do not hesitate to contact me at the school.

Yours faithfully,

Tara Ronayne

Appendix B

Consent Forms for Principals



Dear Principal,

I, Tara Ronayne, request your permission to carry out a small-scale action research project in your school as part of my Masters of Education study with Marino Institute of Education. This project aims to examine teachers and parents' perspectives on the introduction of physical activity homework for children in the primary school. I hope that the findings of this study will inform Educating Professionals about the introduction of Physical Activity homework.

This consists study of two separate questionnaires one for parents and one for teachers. In total it takes between 8 and 10 minutes to complete the questionnaire. The participants are under no obligation to complete the questionnaire, or to answer all questions presented in it. If they come to a question they do not wish to answer, they can simply skip it. When the questionnaires are completed, the parents will be asked to please return them in a sealed envelope. A box will be available in the school reception for them to be deposited.

I would be very grateful to be given the opportunity to conduct this research in your school as the questionnaires are a valued part of the study.

All participation will remain strictly confidential. Names will not be attached to any of the data you provide. Participants are welcome to discontinue participation in the study at any time, should they wish to do so. There are no risks or direct benefits in completing the questionnaire. You will be asked to sign forms (below) indicating agreement to participate in the different parts of the study. The data will be used to complete this research and will therefore be destroyed afterwards.

Your participation in this project is greatly appreciated. I understand that your time and your teachers time is valuable.

Thank you for volunteering to participate in this research. Should you have any questions regarding your participation, please do not hesitate to contact me. You may also contact my advisor for the project, Laura Harrison. *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 faithfully,

Tara Ronayne

You will be given a copy of this information to keep for your records.

Statement of Consent:

Please read the questions below and indicate whether or not you would be willing to participate in the study as described.

Do you consent to participate in the study by completing the questionnaire described above?	Yes	No
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Do you consent for questionnaires as described above to be distributed to parents?	Yes	No
--	-----	----

Signature: _____	Date: _____
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Signature of Investigator: _____	Date: _____
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Appendix C

Questionnaire for Parents

An investigation into teachers and parents' perceptions of the introduction of active homework in primary schools.

- Please take time to read each question carefully.
- Questionnaire response sheets will be read by the researcher only.
- Anonymity and confidentiality is assured.
- Please tick (✓) the box beside the relevant answer.

1. How many times a week does your child receive homework?

Three (3) times a week ☐

Four (4) times a week ☐

Never ☐

2. How long does your child spend completing their homework?

Half an hour ☐

One hour ☐

One to Two hours ☐

Other – Please specify in the box below:

3. Does your child receive active homework?

Yes ☐

No ☐

4. Does your child participate in physical activity after school? If you tick yes below please specify how many times a week your child participates in this activity and for how long does this activity last.

Yes ☐

No ☐

5. Would you like to see your child receiving active homework? Please give reason for your answer.

Yes

☐

No

☐

6. If your child receives active homework do they complete it in full? If no please specify a reason for your answer in the box below.

Yes

☐

No

☐

7. Would you participate in active homework with your child?

Yes

☐

No

☐

8. In your opinion what would be the challenges if you had to complete active homework with your child?

9. What types of active homework would you like to see your child complete? Please provide examples below.

10. What benefits would do you believe your child get from completing active homework?

Appendix D

Questionnaire for Teachers

An investigation into teachers and parents' perception of the introduction of active homework in primary schools.

- Please take time to read each question carefully.
- Questionnaire response sheets will be read by the researcher only.
- Anonymity and confidentiality is assured.
- Please tick (✓) the box beside the relevant answer.

1. How many times a week do you assign homework?

Three (3) times a week ☐

Four (4) times a week ☐

Never ☐

2. How long do you believe on average this homework takes to complete?

Half an hour ☐

One hour ☐

One to Two hours ☐

Other – Please specify in the box below:

3. What percentage of your class do you believe completes sixty minutes of physical activity per day?

4. Do you agree with physical activity homework? Please give reason for your answer.

Yes ☐

No ☐

5. Do you assign physical activity homework? If you tick yes below please state how often you assign this homework and what kind of physical activity homework you assign.

Yes ☐

No ☐

6. In your opinion what would be/ are the challenges of assigning physical activity homework?

7. Do you believe you could integrate physical activity homework with homework in other subjects? Eg. Maths/ Gaeilge

Yes ☐

No ☐

8. Do you believe physical activity homework would have a positive influence on your class?
Please give reason for your answer.

Yes ☐

No ☐

9. Do you believe that parents should participate in physical activity home with their child/ children?

Yes ☐

No ☐

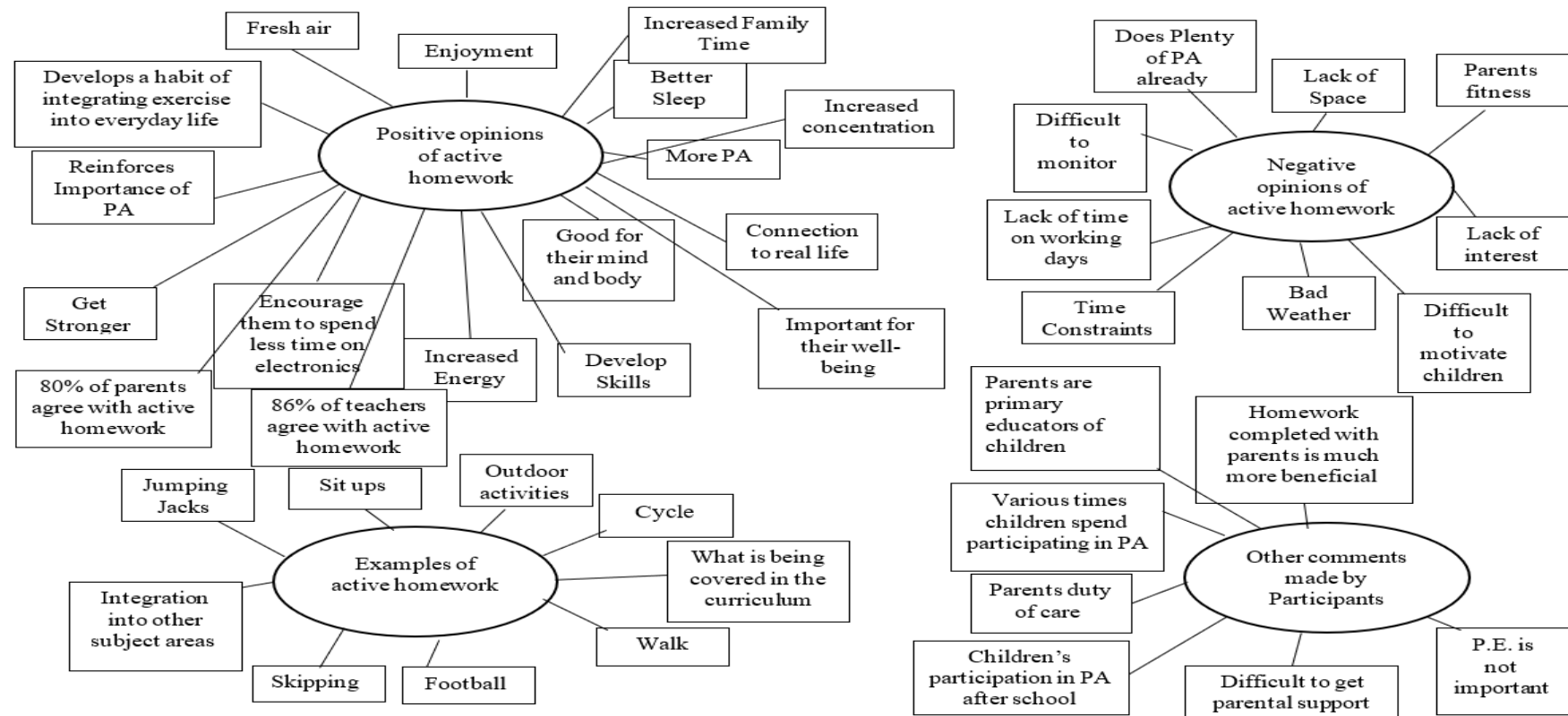
Appendix E

Questionnaire Results Summary

Codes	Frequency of code in data
Agree with active homework	79
Children's PA times	66
Type of exercise preferred for homework	60
Lack of Time	39
Mental Health	37
Physical health	37
Creation of healthy habits	34
Motivating children to complete	32
Monitoring it	31
Lack of Interest	20
Disagreed with active homework	19
Skill development	15
Influential Role of parents	14
Screen time	13
Already very active	10
Improved concentration	7
Weather	5
Movement Break	5
Improved Sleep	5
Parents fitness	4
Space	3

Appendix F

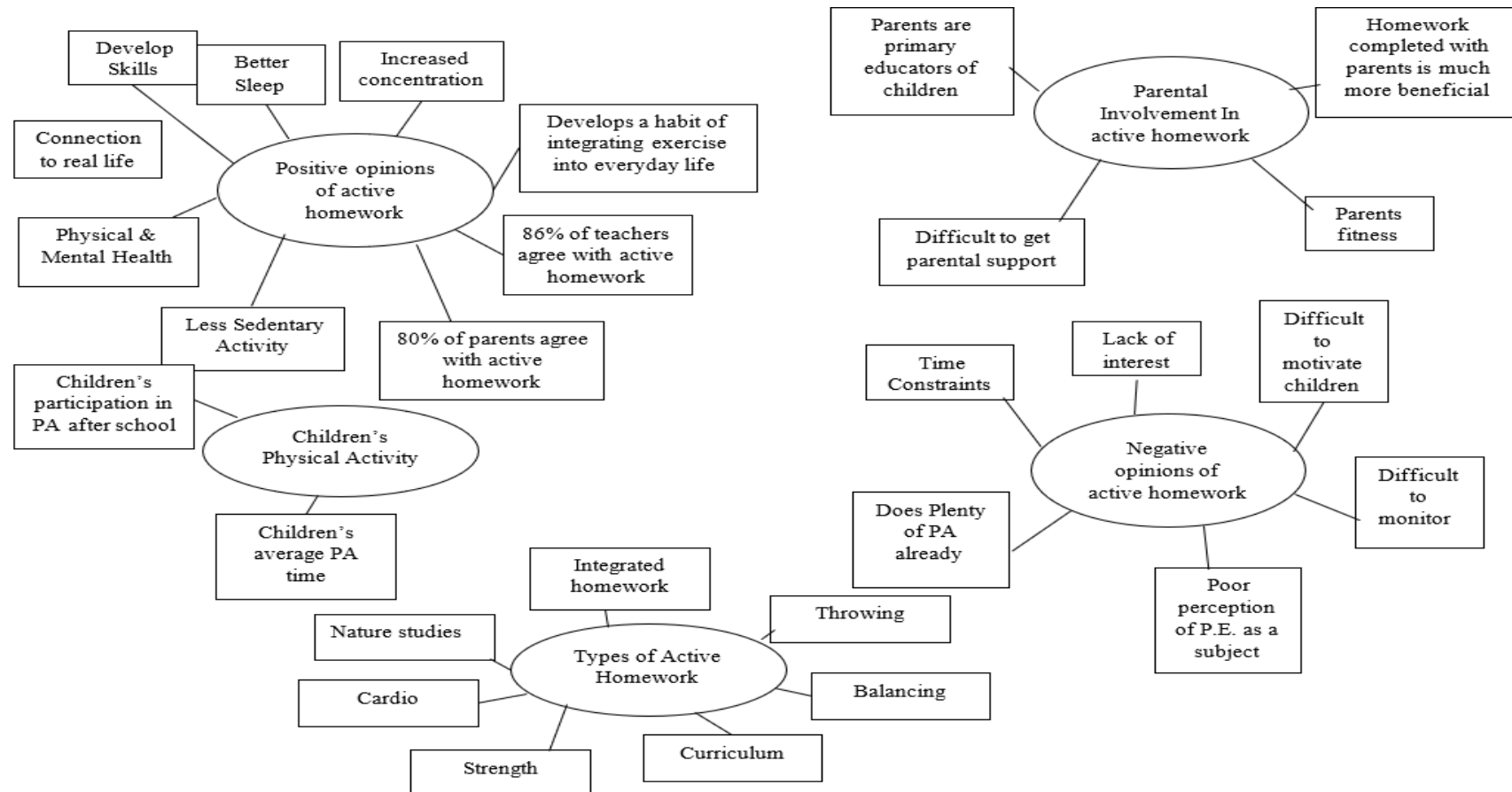
Data Analysis Phase 3



Initial Thematic Map: Phase 3 of Braun & Clarke's Thematic analysis process.

Appendix G

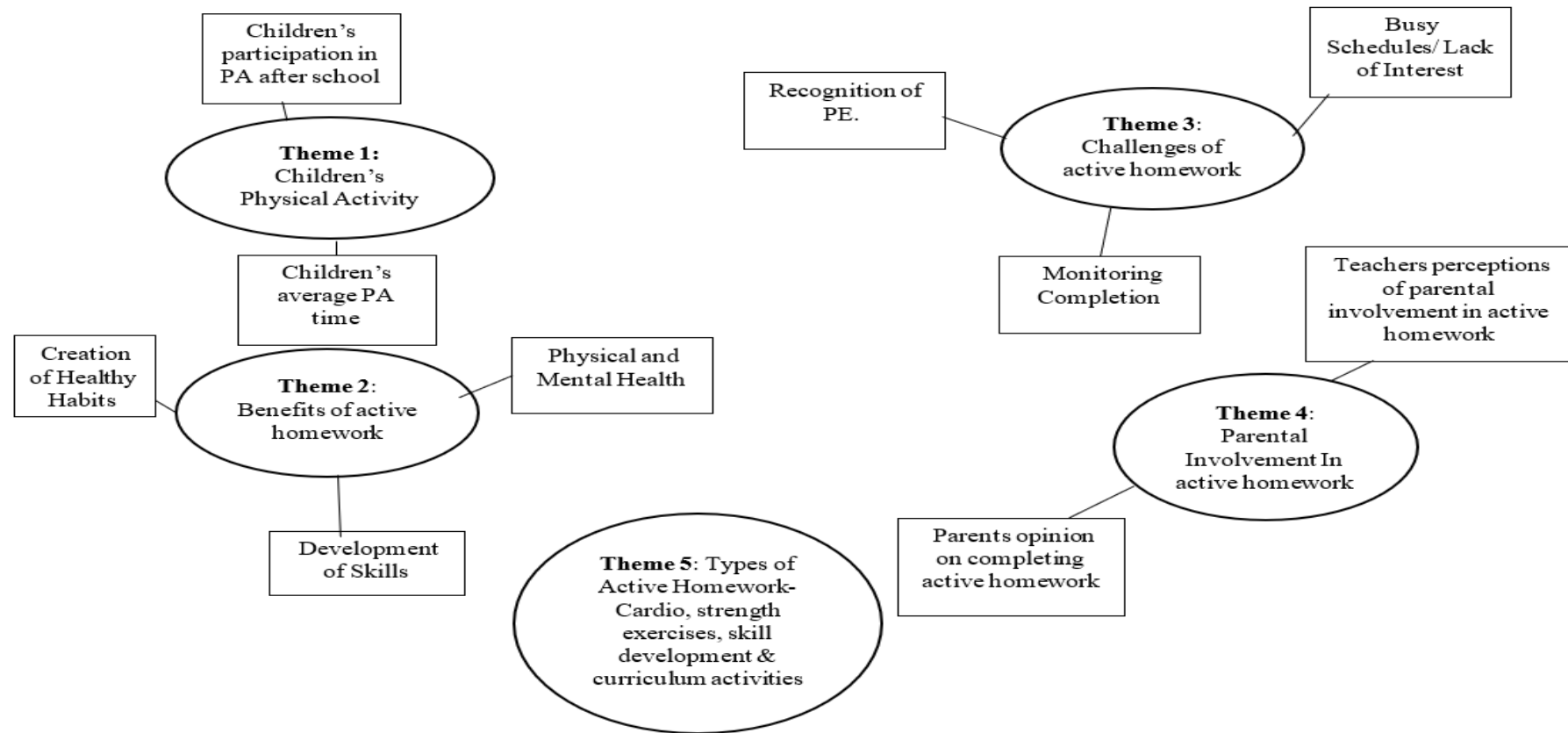
Data Analysis Phase 4



Developed Thematic Map: Highlights phases four of the data analysis process showing five main themes.

Appendix H

Data Analysis Phase 5



Final Thematic Map: Showing five main themes and representing phase five of the data analysis process.

Appendix I

Themes and Subthemes

Themes	Subthemes
Children's Physical Activity	Children's average PA Time
Parents and Teachers' Perceptions of Active homework	
Benefits of Active Homework	- Development of Skills - Creation of Healthy Habits - Physical and Mental Health
Challenges of Active Homework	- Recognition of PE - Monitoring Completion - Busy Schedules/ Lack of Interest
Parental Involvement in Active Homework	- Parents' opinion on completing active homework - Teachers' perceptions of parental involvement in active homework
Types of Active Homework	