



Ag Súgradh le Chéile



Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

Ag Súgradh le Chéile Evaluation

Final Report

Ulster University
Sport & Exercise Science
Research Institute



Contents

Acknowledgements	3
Glossary	4
Executive Summary	5
Background & Objectives	8
Literature Review	10
<i>Overweight and Obesity</i>	10
<i>The Benefits of Physical Activity</i>	11
<i>Prevalence of Physical Activity and Sedentary Behaviour</i>	11
Physical Activity	11
Sedentary Behaviour	13
<i>Promoting physical activity in younger children</i>	15
<i>The Role of Schools</i>	16
<i>The Role of the Family</i>	17
<i>Conclusions</i>	19
Methodology	20
<i>Protocol</i>	20
7-day Family Activities and Food Diary	20
Pre-workshop Survey	21
Observations	21
Focus Groups & Interview	21
<i>Additional Evaluations</i>	21
Think, Draw and Write Exercise	21
Post-Workshop Survey	22
<i>Data Analysis</i>	22



Ag Sùgradh le Chéile

Results	23
<i>7-day Family Activities and Food Diary</i>	23
Section 1: Baseline Data	23
<i>Physical Activity</i>	23
<i>Sedentary Behaviour</i>	27
Section 2: Baseline + Follow-up Data	32
Nutrition	33
<i>Pre-Workshop Survey</i>	34
<i>Observations</i>	35
Physical Activity Levels	35
Interactions	35
<i>Focus Groups & Interview</i>	37
Key Point 1: Ethos and understanding of the programme	37
Key Point 2: Activities being delivered and interaction level	38
Key Point 3: The programme as a vehicle to effect change	39
<i>SurveyMonkey Questionnaire</i>	40
<i>Additional Evaluation: Think, Draw and Write</i>	41
<i>Additional Evaluation: Post-Workshop Survey</i>	
- <i>Intervention Schools</i>	48
Parents	48
Tutors	52
Schools	52
- <i>Additional Schools</i>	53
Parents	53
Tutors	54
Schools	55
Conclusions	56
<i>Parental Involvement</i>	56
<i>Healthy Behaviours</i>	56
Physical Activity and Sedentary Behaviour	57
Nutrition	58
Family Interaction	58
<i>The ASLC Workshop</i>	59
<i>Children's Perspective</i>	60
<i>Limitations</i>	61
Recommendations	62
References	64
Appendices	68

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Glossary

ASLC	Ag S�gradh le Ch�ile
BMI	Body Mass Index
COSI	Childhood Obesity Surveillance Initiative
CSPPA	Children's Sport Participation and Physical Activity
DEIS	Delivering Equality of Opportunity in Schools
DSP	Donegal Sports Partnership
FMS	Fundamental Movement Skills
FoM	Fundamentals of Movement
HSE	Health Service Executive
HSE West	Health Service Executive West
MVPA	Moderate to vigorous physical activity
PA	Physical Activity
PE	Physical Education
SB	Sedentary Behaviour
SPHE	Social, Personal and Health Education
WHO	World Health Organization

Executive Summary

The prevention and management of obesity is now a major public health priority due to the dramatic increase in the prevalence of both overweight and obesity in recent decades. The role of regular physical activity in weight maintenance and health improvement is now well recognised. Despite this, the majority of children on the island of Ireland are failing to meet current physical activity guidelines. To assist in reversing this trend, there is a need for physical activity interventions designed to specifically target this population. While children can engage in numerous forms of activity, 'active play' has been shown to be effective at increasing levels of physical activity. However, providing opportunities for parental involvement is a key mediator to increasing children's physical activity, particularly during their preschool and primary school years.

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The 'Ag Súgradh le Chéile' (ASLC) physical activity workshop is an initiative by the Health Service Executive (HSE) West to encourage parents/guardians to engage in active play with their children. The workshop, which is delivered by trained tutors during a one-off session, in the school setting, aims to provide parents/guardians with an opportunity to participate in a variety of activities and traditional games with their children. In addition to the activity session, parents/guardians are provided with key health promotion messages. While evaluative work conducted by the HSE West has shown that the workshops are well received by schools and parents/guardians, there is limited evidence on the impact of the workshop on subsequent physical activity levels and health behaviours of participating families.

This evaluation sought to investigate the current ASLC format and the impact of participating in the ASLC workshop on physical activity levels, activity and healthy lifestyle behaviours and levels of interaction between parents and their children. This involved the assessment of: (1) physical activity, sedentary behaviour and nutrition using self-report diaries before and (2 weeks and 3 months) after the workshop; (2) parental knowledge of current key health promotion messages and the aim of the ASLC workshop; (3) observations of activities and interactions during the workshop; (4) parent, tutor and key stakeholders' opinion of the current ASLC workshop format and (5) children's opinion of the ASLC workshop and healthy behaviours through a Think, Draw and Write activity.

Key findings:

Parental Involvement

Parental involvement was vital to the success of ASLC. A child's level of engagement in physical activity and active play is dependent on the opportunities provided to them by their parent/guardian. It is therefore essential that parents/guardians are aware of, and knowledgeable about, ways to engage their children in healthy behaviour. Only 18% of parents/guardians in this evaluation could correctly identify the PA Guidelines for Children. However, 73% of parents/guardians were interested in receiving further training, particularly around healthy eating and nutrition, closely followed by physical activity and play. Parental interaction was also very important from the children's perspective and a key aspect of the ASLC workshop was having the opportunity for children to interact and play with their parent.

Healthy Behaviours

Prior to participation in the ASLC workshop, only 40% of parents and 4% of children were achieving the recommended levels of physical activity. The workshop had no effect on subsequent physical activity levels for parents, however 2 weeks and 3 months post workshop, the number of children achieving guidelines increased to 21% and 12%, respectively. Before the workshop, children's consumption of fruit and vegetables was, on average, 3 portions per day. There was a slight increase to 4 portions per day, 2 weeks after the workshop, but this was not maintained at 3 months. Children consumed more fizzy drinks 3 months following the workshop than they had before the workshop, but this is possibly due to data collection falling during the summer months when children were no longer in school.

The ASLC Workshop

Observation of the ASLC workshop in four schools saw a variety of games and interactions occurring between parents, children and the tutor. The activity levels were predominantly low, with short bursts of moderate -to-vigorous activity observed during the games which involved running, such as 'Fruit Salad'. Participants spent over 50% of the time standing during the workshop. This may present an opportunity to focus more on fundamental movement skills and the fundamentals of movement (balance, coordination and agility) by the tutors in the programme or possible review and change some of the static games included in the session. From the children's perspective, parental interaction was very important and a key aspect of the workshop was having the opportunity to interact and play with their parent.

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Conclusion

There are many positive aspects of the ASLC workshop in its present form and the programme, as a whole, was considered to be of real value for all concerned. All schools were interested in hosting a follow-up workshop. As a result of this evaluation there are several recommendations that may enhance the programme further:

1. It was evident that an intervention of this nature (one-off 90-minute workshop) is not able to impact on healthy behaviour change in the long term and there is a requirement for an extension of this programme. This may involve a more frequent delivery and additional workshops for parents.
2. Continued and more detailed evaluation of the programme is necessary to evidence the efficacy of the programme.
3. Parental involvement in the ASLC programme is fundamental to its success and should be maintained. A stronger focus on 'active play' may further enhance the programme outcomes as its effects transitions from the school to the home environment. An expanded resource that parents can take home may assist with this.
4. There is a need to review the games and activities that are currently being delivered to the participants during the workshop, and how there can be more one-to-one activities, games of higher intensity and activities that place a greater focusing on the core Fundamentals of Movement (FoM).

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The 'Ag Súgradh le Chéile' (ASLC) programme is an initiative by the Health Service Executive (HSE) West to encourage parents/guardians to engage in active play with their children
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Background & Objectives

Ag Súgradh le Chéile

Ag Súgradh le Chéile (ASLC) was developed by the Health Service Executive West (HSE West) with the aim of promoting active play as being vital for a child's healthy development; physical, emotional, social and intellectual, with specific focus on engagement between parent/guardian and child. The programme is jointly managed by Health Promotion

and Improvement, HSE West and the Donegal Sports Partnership (DSP), and is delivered in schools across Donegal, particularly those that have been designated disadvantaged under the Delivering Equality of Opportunity in Schools (DEIS) scheme. ASLC targets children in the junior infant class through to second class (aged 4 - 8 years) and their parents, and is hosted by the school for a period of 90 minutes. School promotional materials, including an information leaflet for parents, are distributed to all primary schools at the start of each academic year. A school can request a workshop by completing the booking form; available tutors are then appointed to the workshop and teachers are asked to complete the workshop checklist. The workshop would normally be delivered during the school day, either in the morning or afternoon to ensure parental engagement (drop off or pick up times). During the 90-minute workshop, the emphasis is on teaching and encouraging parents to play actively with their child/children and for parents to encourage their child/children to play actively on their own. Parents participate with their children in a variety of activities including ball games, music and rhyme and traditional games. At the end of the ASLC workshop, several key health promotion and improvement messages, including healthy eating and physical activity literature, are disseminated to the adult who accompanies the child at the workshop. There is also an opportunity for discussion with tutors. The workshop is facilitated by trained tutors who have experience in both working with children and parents and also active play or physical activity. Continued support is provided for tutors and regular contact takes place between the programme co-ordinator and tutors. Tutors attend refresher training in the first school term each year. Since September 2010 to June 2015, 5341 children and 4652 parents have attended and participated in the programme with 364 workshops held in County Donegal during this period.

To set the context of the importance of such initiatives and how they can have a positive influence on changing the current behavior of the population, an understanding of the current issues of inactivity must be addressed. A summary of the scientific evidence presented by Blair (2009) concluded that physical inactivity is one of the biggest public health issues of the 21st century. The World Health Organization (WHO) encourages countries to develop and implement policies and interventions aimed at increasing physical activity, yet the results for physical activity-related health education and community environmental support have been mixed, indicating that more is needed to determine the effectiveness of physical activity policies in those areas (Pate et al. 2011).

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The Lancet Global Health series on Physical Activity (2012), concluded that “in view of the prevalence, global reach, and health effect of physical inactivity, the issue should be appropriately described as pandemic, with far-reaching health, economic, environmental, and social consequences” (Das and Horton, 2012). This, combined with limited parental knowledge of practical physical activity games and the lack of safe play environments, provides a just rationale for the ASLC programme.

The ASLC programme objectives are:

- To increase the active play levels of children through the promotion of active play with parents.
- To support family based activity by promoting parents’ involvement in their children’s development through active play.
- To raise parental awareness of the National Physical Activity Guidelines for young children – at least 60 minutes every day of moderate-vigorous physical activity.
- To raise awareness of the National Physical Activity Guidelines for adults – at least 30 minutes a day of moderate activity on 5 days a week (or 150 minutes a week).
- To act as a vehicle to link key messages from National Campaigns such as the current “Let’s Take on Childhood Obesity, One Step at a Time”, from *Safefood*.
- To revive many of the traditional games that are no longer played by children.
- To support schools to work in partnership with parents.
- To promote healthy eating, particularly regarding snacks and link with the School Policy on Healthy Eating.

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Children’s PA interventions should be delivered in partnership with schools, families and communities
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Aim of this Evaluation

This evaluation of ‘Ag Súgradh le Chéile’, commissioned by HSE West, will look to establish the impact (or otherwise) of such an intervention programme in developing:

- a) Increased physical activity in all environments
- b) Positive behaviour change towards activity and healthy lifestyle
- c) Interaction between parent-child and child-parent

Additionally, we aim to examine children’s perceptions of active play as well as the experiences of parents/guardians (referred to as parents herein), tutors and key stakeholders participating in the ASLC workshop. The evaluation focuses on the delivery of ASLC in schools within County Donegal only.

Literature Review

Overweight and Obesity

The prevention and management of obesity is now a major public health priority due to the dramatic increase in the prevalence of both overweight and obesity in recent decades (WHO, 2015). Data from the WHO Global Health Observatory show that, on average, 57.4% of European adults aged ≥ 20 years are overweight or obese (WHO, 2015) and projections suggest this figure is set to rise by 2025 (*NCD-RisC*, 2016). Furthermore, overweight and obesity are highly prevalent among children and adolescents. The WHO European Childhood Obesity Surveillance Initiative (COSI; 2009–2010) reported that, on average, one in every three children aged six to nine years in participating countries (including Ireland) was overweight or obese. The prevalence of overweight (including obesity) ranged from 18% to 57% among boys and from 18% to 50% among girls (Wijnhoven et al. 2014a).

On the island of Ireland, 1 in 4 children are currently classed as overweight or obese (Department of Health, 2016; Woods et al. 2010). The 2009 report from *Growing Up in Ireland* - a National Government-funded longitudinal study taking place over seven years - found that, in nine-year-old children, 19% are overweight and 7% are obese (Williams et al. 2009). Furthermore, girls were more likely than boys to be overweight or obese (30% compared with 22%). The 2012 report (4-year follow-up) found that 20% and 6% of 13-year olds were overweight and obese, respectively (*Growing Up in Ireland*, 2012). Evidence also suggest that the prevalence of excess weight is beginning earlier in childhood (National Pre-School Nutrition Survey, 2012). Since overweight and obesity tends to track from childhood into adulthood (i.e. adults are more likely to be overweight if they were overweight in childhood; Herman et al. 2009), interventions targeting health promotion in the early years and in childhood are a priority.

Promisingly, a study by the National Nutrition Surveillance Centre, comprising 12,236 children's measurements in 163 schools collected in 2008, 2010 and again in 2012 shows that rates of overweight and obesity in Ireland have shown decreases at age 7, and stabilisation at age 9 (WHO, 2016a). However, the observed reduction or stabilisation is not happening in DEIS or disadvantaged schools, and more needs to be done to achieve targets set out in the Department of Health's (2016b) *A Healthy Weight for Ireland*, Obesity Policy and Action Plan 2016-2025 (a sustained downward trend (i.e. a sustained downward trend averaging 0.5% per annum in the level of excess weight in children and an increase by 6% in the number of children with a healthy weight (as measured by COSI) by 2019).

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The Benefits of Physical Activity

The role of regular physical activity (PA) in healthy weight maintenance is now well recognised. An extensive amount of cross-sectional evidence suggests an inverse relationship between body weight or body mass index (BMI) and PA in adults (Donnelly et al. 2009). Furthermore, both cross-sectional and longitudinal observational studies indicate that children who participate in relatively high levels of PA have lower body fat than less active children (Strong et al. 2005).

In addition to the benefits of regular PA for weight management, participation in PA is associated with a multitude of other health benefits for children and adolescents (Strong et al. 2005; Hallal et al. 2006; Chalkley et al. 2015). PA in childhood has been positively associated with a number of physiological outcomes, including bone health, muscular strength, cardio-metabolic health and cardiorespiratory fitness (Chalkley et al. 2015; Schools for Health, 2013). Furthermore, regularly participating in PA has been positively associated with psychological and social health outcomes, including confidence, peer acceptance, academic achievement, cognitive functioning, self-esteem (Chalkley et al. 2015) and motivation (Schools for Health, 2013).

Prevalence of Physical Activity and Sedentary Behaviour

The National Guidelines on Physical Activity for Ireland state that “all children and young people (aged 2 – 18 years) should be active, at a moderate to vigorous level, for at least 60 minutes every day. This should include muscle-strengthening, flexibility and bone-strengthening exercises 3 times a week” (Department of Health and Children, Health Service Executive, 2009). Healthy Ireland population group (children aged 0-18 years) targets include:

- Increase by 1% per annum in the proportion of children undertaking at least 60 minutes of moderate-to-vigorous physical activity (MVPA) every day.
- Decrease by 0.5% per annum in the proportion of children who do not take any weekly physical activity

Physical Activity

A systematic review exploring the PA levels of over 10,000 preschool children (aged 2 – 6 years) across 7 countries found that only 54% of participants were achieving the recommended 60 minutes per day of MVPA (Tucker, 2008). The Health Behaviour in School-aged Children (HBSC) study, which is an international survey of 45 countries (including Ireland), reports that 25% of 11-year-old children are achieving the guidelines (WHO, 2016b). Furthermore, according to Northern Ireland’s Young Persons Behaviour and Attitudes Survey 2013, only 14% of young people (aged 11–17 years) reach the recommended physical activity levels. In all of these publications, and consistent with trends in later childhood and adolescence, boys were found to be more active than girls (Tucker, 2008; WHO, 2016b; Mallon, 2014).

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The National Guidelines on Physical Activity for Ireland state that “all children and young people (aged 2 – 18 years) should be active, at a moderate to vigorous level, for at least 60 minutes every day”

The British Heart Foundation (Townsend et al. 2015) reported the percentage of children, aged between 5 and 7 years, meeting the UK PA guidelines in 2012 (Figure 1; self-report data). There were no data available for Northern Ireland. Similarly, there is limited nationally representative evidence on the PA levels of preschool/primary school children in Ireland. The Children’s Sport Participation and Physical Activity (CSPPA) study sampled older primary school children (10-12 years) and found only 19% of this age group were meeting the minimum recommendation of 60 minutes of MVPA per day (Woods et al. 2010). In addition, the survey found that 25% of children sampled were overweight/obese, had elevated blood pressure and had poor levels of aerobic fitness (Woods et al. 2010). Data from the *Growing Up in Ireland* surveys suggest that only one in four 9 year olds are physically active, and that boys were more likely than girls to meet PA guidelines (29% compared with 21%, respectively) (Williams et al. 2009). The most recent data from the HBSC study shows that 45% of 11-year-old boys and 31% of 11-year old girls in Ireland achieve 60 minutes of MVPA daily (WHO, 2016b). Commensurate with other evidence (Townsend et al. 2015; Department of Health, 2015) PA level appears to decline with increasing age (Figure 2). Finally, recent data from *Safefood* (2015) reported that, quite alarmingly, 80% of children in the Republic of Ireland were failing to achieve the recommended 60 minutes of MVPA per day.

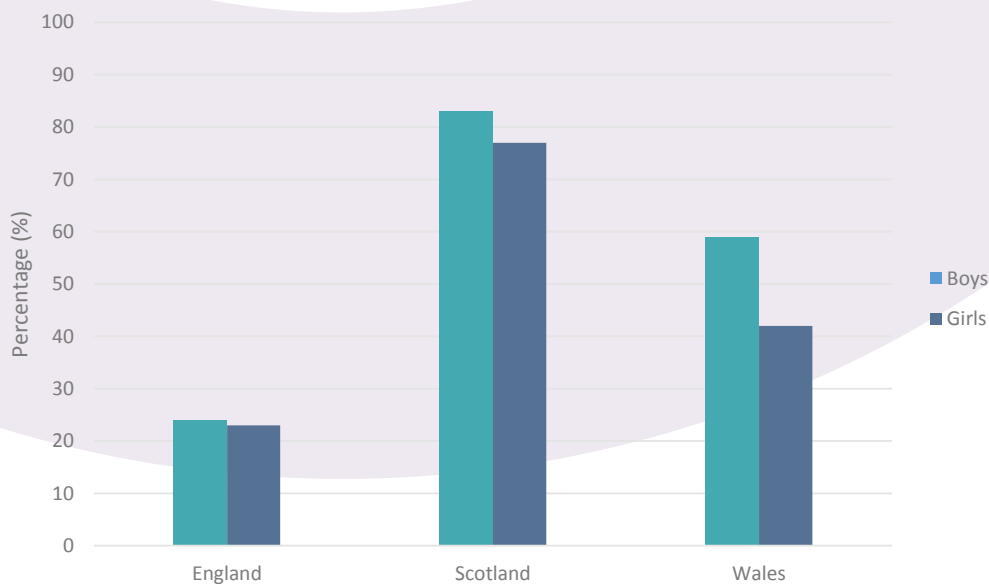


Figure 1. Percentage of boys and girls, aged 5-7 years, meeting the current physical activity guidelines. No data available for Northern Ireland. Adapted from Townsend et al. (2015).

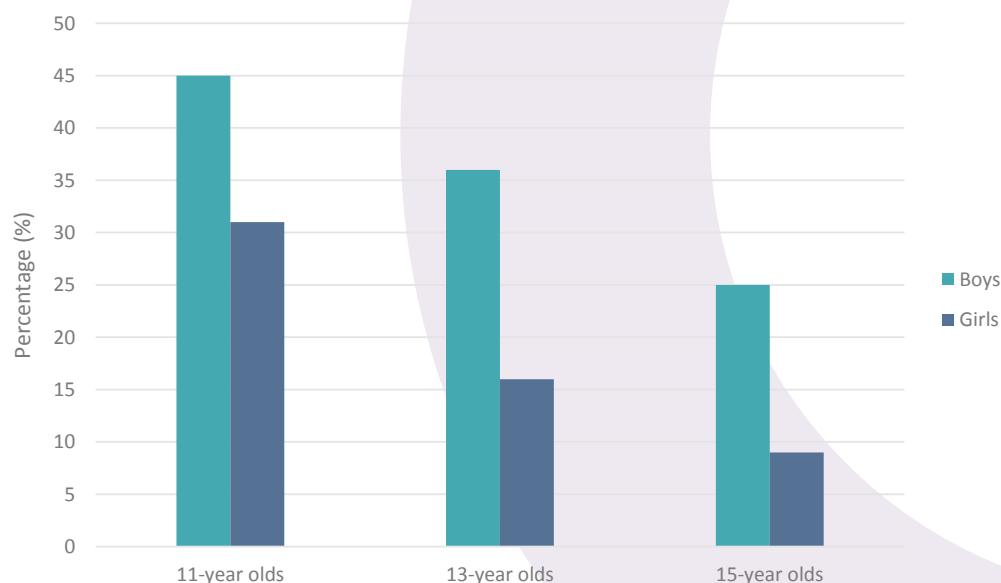


Figure 2. HBSC Survey Results 2013/2014. Percentage of children, in Ireland, who reported at least 60 minutes of MVPA daily. Adapted from WHO (2016b).

There is some evidence that PA tracks from childhood into adolescence and further into adulthood with inactive young people becoming inactive adults (Hallal et al. 2006; Telama, 2009). Therefore, establishing healthy PA behaviour in early childhood is of great importance to maximise health benefits in later life.

Sedentary Behaviour

Sedentary behaviour (SB) is defined as “any waking activity characterised by an energy expenditure < 1.5 metabolic equivalents and a sitting or reclining posture” (SBRN, 2012). In recent decades, advances in modern technology, increases in passive transportation and shifts in leisure time activities have all contributed to the increasing amount of time both adults and children spend engaged in sedentary behaviours. Uninterrupted sedentary time is increasingly recognised as a distinct health risk behaviour (Healy et al. 2011). In children, sedentary time is positively associated with weight status (Prentice-Dunn and Prentice-Dunn, 2012) and obesity (Katzmarzyk et al. 2015). Specific sedentary behaviours such as TV viewing are associated with lower fitness, lower scores of self-esteem and pro-social behaviour, and decreased academic achievement (Tremblay et al. 2011). In the UK, children spend approximately 80% of their day sedentary (Basterfield et al. 2011) and this behaviour appears to be more prevalent in girls compared with boys (Verloigne et al. 2012). Sedentary time is thought to track from childhood through to adulthood (Biddle et al. 2010; Jones et al. 2013) suggesting that sedentary behaviour habits are established at a young age (Biddle et al. 2010).

While specific guidelines on SB have not yet been established in Ireland, Canadian guidelines recommend that young people should limit their recreational screen time to no more than two hours per day (Tremblay et al. 2011). Data from the most recent HBSC survey reveal that approximately half of the children in Ireland watch 2 hours or more of television during weekdays (WHO, 2016b; Figure 3). While television-viewing has been shown to decline in the last decade, the reduction is more than compensated by time spent with other screen devices, such as smartphones, tablets and computers (Bucksch et al. 2014).

Given the problem of physical inactivity amongst today’s children, there is a clear need for effective intervention at this stage of the lifecycle to promote positive physical activity related health behaviours that will track into adolescence and hopefully be maintained into adulthood. Interestingly, the CSPPA study highlighted that the likelihood of children meeting the 60 minutes per day guideline was significantly increased if they actively commuted to/from school and participated in extra sport or physical activity during the school day (Woods et al. 2010). Indeed, school-based interventions have been shown to be effective in reducing health inequalities (Kastorini et al. 2016; Van der Ploeg et al. 2014), promoting healthy behaviours in general (Nyberg et al. 2016), and increasing physical activity (Jones et al. 2013).

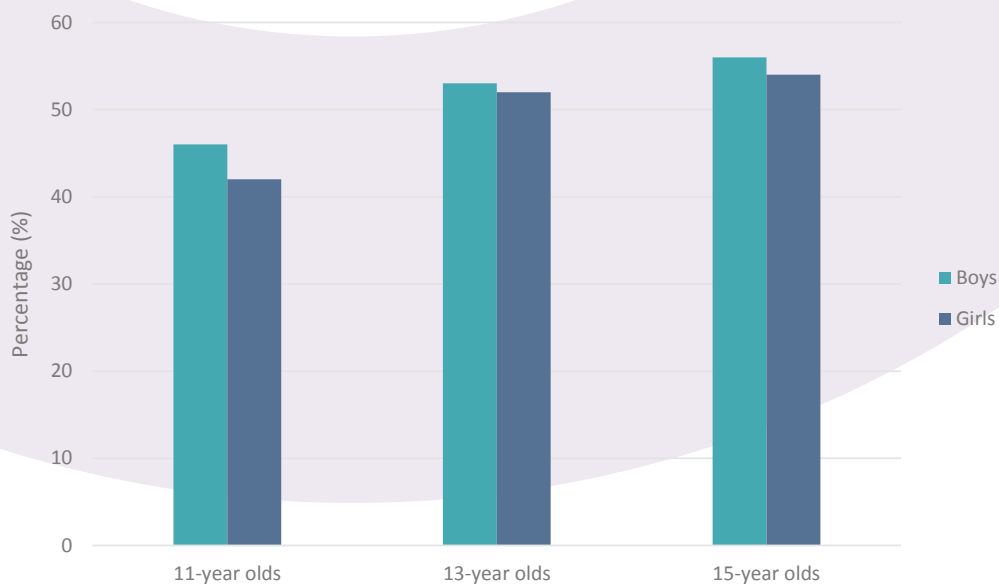


Figure 3. HBSC Survey Results 2013/2014. Percentage of children, in Ireland, who reported watching television for 2+ hours during weekdays. Adapted from WHO (2016b).

Promoting physical activity in younger children

Children's physical activity can be undertaken in a number of contexts, for example, sports clubs, physical activity at school, active travel and play (Brockman et al. 2011). Consequently, interventions to promote PA in this age group should focus on one or more of these contexts. Promoting levels of active play amongst children has been shown to be effective at increasing levels of PA in this population, for example, participation in frequent active play (at least 5 days per week) has been shown to be associated with mean daily PA levels in older children (Brockman et al. 2010). Encouraging participation in active play may also present an opportunity to increase PA participation in other age groups. Furthermore, children's intellectual development, ability to form social and peer relationships, and future health and wellbeing are also shaped by frequent opportunities to play and interact with both adults and other children (National Children's Strategy, 2000). Play also offers an opportunity for parents to engage fully with their children and therefore promotes maintenance of strong parent-child bonds (Ginsburg, 2007). Recently, Ireland's Report Card on Physical Activity (Harrington et al. 2016) reported inconclusive evidence (i.e. not enough data exists) for levels of active play in children in Ireland. This may be due to the lack of universal agreement on how to benchmark and assess active play independent from physical activity. The National Children's Strategy (2000), highlights the lack of opportunities in Ireland for children to participate in play, as well as sport, recreation and cultural activities. However, the recent Government strategy document Better Outcomes, Brighter Futures: National Policy Framework for Children and Young People 2014-2020, lists this as one of the priorities under the Active & Healthy National Outcome and has committed to enhancing access to play, recreation, sport, arts and culture for all children and young people.

Despite the benefits of increased active play on PA in children, there is a paucity of data in relation to the effectiveness of such interventions when targeted at younger children (Brockman et al. 2011; O'Dwyer et al. 2013). O'Dwyer and colleagues (2013) reported no positive change in SB or PA following a 6-week teacher-led active play programme, commenting that the short term nature of the intervention may have explained the failure of the intervention to impact upon PA. In another study from the same authors, a family based active play intervention, encompassing both physical activity sessions and education sessions, increased total daily PA of preschool children during weekdays by 4.5% and on weekends by 13.1%, compared with control children (O'Dwyer et al. 2012). The study also identified that activity levels of parents could act as mediators on children's physical activity engagement; children spent less time engaged in sedentary behaviour and more time being physically active when their parents were also active (O'Dwyer et al. 2012).

Active play interventions delivered in the school or community setting may have the potential to increase PA in children (Public Health Ontario, 2015) however there is limited evidence on the longer term effectiveness of such interventions. As a result, there is a need for long term evaluations to be built into active play interventions and initiatives so that their efficacy can be studied (Public Health Ontario, 2015). Regardless of effectiveness in increasing PA, active play interventions are not likely to negatively impact upon children's PA, therefore policy makers and practitioners should continue to promote active play both within the school day and outside of the school environment (O'Dwyer et al. 2013).

The Role of Schools

Schools are regarded as a fertile environment for the promotion of PA behaviours due to their capacity to target and engage entire student populations, as well as have further community outreach capability. It has been suggested that schools could act as the central element in a community system that ensures students participate in enough PA to develop healthy lifestyles (Pate et al. 2006). School-based interventions are effective at increasing PA (Dobbins et al. 2013) and reducing SB (Hegarty et al. 2016) in children, however there is limited evidence on the longer-term effectiveness of interventions within this setting. Nevertheless, by promoting PA within the primary school setting, the whole student population is targeted and children with limited or no access to play areas have the opportunity to be active (McKenzie et al. 1996).

Schools can promote PA in children through a number of different avenues; for example, by providing opportunities to be active (1) within the formal physical education (PE) curriculum, (2) during break time and through extra-curricular activities, (3) by promoting active travel to and from school and (4) by providing community access to their facilities for use outside of school time. In Ireland, the recommended minimum number of hours of compulsory PE teaching during any given year in primary schools is 37 hours. As a proportion of total taught time, this corresponds to only 4% of the curriculum and is the lowest of 36 EU countries (EU average 10%; Eurodyce, 2013; Figure 4) and below the global average (Harrington et al. 2014). Alarming, only 35% of primary school children receive the recommended amount of PE each week in school (Woods et al. 2010). However, this issue is currently being tackled by The Active School Flag Initiative, which encourages schools to achieve a physically educated and physically active school community. The initiative requires schools to meet Physical Education, Physical Activity and Partnership criteria in order to be awarded the Active School Flag. Examples of these criteria include: at least 1 hour of timetabled PE per week for all pupils; delivery of 5 PE strands each year; twice daily playground breaks; regular use of short PA breaks (Go Noodle, Drop Everything And Run (DEAR), Bizzy Breaks etc.); PA rewards instead of 'sweets as treats'; promotion of the National Physical Activity Guidelines; identification of PA opportunities in the local community; and introduction of new activities by different sports clubs/physical activity providers from the local community.

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Across Ireland, there are currently 626 Active Schools, and in Donegal specifically 35 primary schools (18% of total number of schools) hold the award. In addition, the 'Be Active ASAP!' programme, supported by the Health Promotion and Improvement Department of the HSE (2011), builds on the 1st/2nd class PE curriculum by offering volunteer teacher- and parent-led activities for approximately 50 minutes immediately after school, using school facilities.

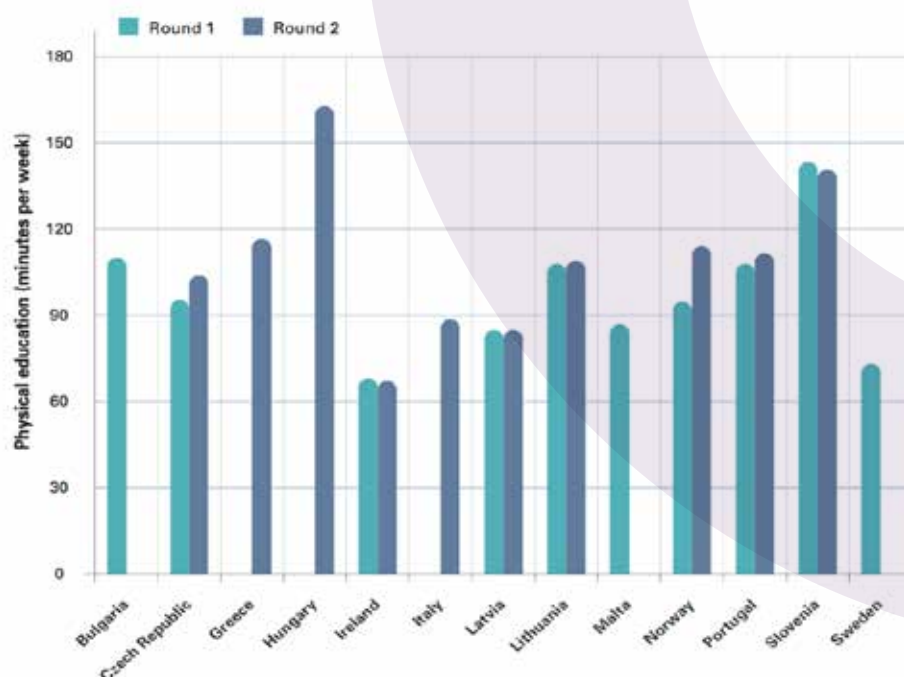


Figure 4. Mean weekly provision of physical education to pupils by their schools in COSI round 1 (2007/08) and round 2 (2009/10), by country. Adapted from Wijnhoven et al. 2014.

The Role of the Family

The influence of parents on children's PA has been extensively studied within the literature. Parental support for PA in childhood can be divided into 2 main categories; (1) through role modelling, including being physically active themselves, and (2) through support, for example, providing encouragement, participating in PA with their child and providing access to resources for children to be active (Welk et al. 2003). A review of over 100 studies concluded that parental support was positively, and consistently, associated with children's PA (Trost & Loprinzi, 2011). However, there was limited evidence to draw conclusions on an association between parent's PA or the role of parenting style and family cohesion on subsequent PA level of the child (Trost & Loprinzi, 2011). Similarly, Gustafson & Rhodes (2006) found unanimous evidence that active parents are more supportive of their children's PA than non-active parents but inconclusive evidence regarding the influence of parent's physical activity on the child's PA level. They did find, however, that having at least one active parent is better than two inactive parents.

A study examining the influence of parents on younger children's PA (< 5 years old) identified a number of correlates that may influence PA levels of preschool children. Consistent with the aforementioned literature (Gustafson & Rhodes, 2006; Trost & Loprinzi, 2011), the study identified parental support as a key influence, with those children receiving greater levels of parental support more likely to participate in at least one hour of PA daily (Zecevic et al. 2010). Watching television > 1 hour per day, having older parents and being an older child were all identified as potential correlates that may reduce the likelihood of a child being highly active (Zecevic et al. 2010).

Given the influence of the family environment on children's PA, a number of interventions to promote PA in this population have adopted a family based approach (van Sluijs et al. 2011). Key reviews in the area have identified a number of successful family based interventions, most of which were targeted at children aged between 4-12 years (Salmon et al. 2007; van Sluijs et al. 2007; van Sluijs et al. 2011). The limited evidence for older children/adolescents is likely to be explained by the declining influence parents may have as children move into adolescence and have more autonomy over their behaviour (van Sluijs et al. 2007). Home-based family interventions that incorporated behaviour change techniques such as goal setting and self-monitoring, for example, using pedometers to track daily steps and set targets, were identified as most successful in a number of reviews (Salmon et al. 2007; van Sluijs et al. 2007). More recent evidence has identified that group based sessions, involving educational components and PA sessions for children, may also be promising (van Sluijs et al. 2011). The length of these interventions and the methods used to assess changes in PA differed, limiting conclusions on which intervention approaches are most effective.

In addition to what type of intervention approaches are most effective, it is important for policy makers and practitioners to consider what approaches are most likely to engage parents/guardians and encourage them to take part in family based programmes and workshops to promote positive behaviour change in their children. A review of approaches on how to engage parents to subsequently promote children's PA highlighted that family counselling, parent training/education or telephone-based interventions may be helpful components within family based interventions (O'Connor et al. 2009).

Given the strong influence of parents on PA behaviours in childhood, particularly younger children (O'Dwyer et al. 2012), the involvement of family members in interventions to promote active play is key. Indeed, the action points within Step 1 of A Healthy Weight for Ireland Obesity Policy and Action Plan, 2016-2025 include the expansion of parenting programmes that incorporate healthy lifestyle and behavioural change (Department of Health, 2016b). However, there is limited research on the evaluation of family based interventions that target parents to elicit change in children's PA, particularly amongst preschool and primary school aged children (O'Dwyer et al. 2012). Further research is needed to fully evaluate the role of family based interventions in the promotion of PA for younger children.

“
the involvement of family members in interventions to promote active play is key
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Conclusions

As highlighted within the present review, many children are failing to meet the current PA recommendations and achieve the associated health benefits. Consequently, there is a need for effective interventions to be targeted early in childhood to ensure healthy behaviours are adopted at an early stage and maintained throughout childhood into adolescence. Schools provide an ideal environment for the promotion of PA-related behaviours. When targeting younger children, the role of parents should be considered and family based interventions may be effective in promoting PA at this stage of the lifecycle. Conclusions on which intervention approaches are most effective are hampered by the limited studies to date employing longer-term evaluations. Nevertheless, there is a strong recommendation for children and young people's PA interventions to be delivered in partnership with schools, families and communities (NICE, 2009). In particular, multi-component PA interventions should include (1) education and advice to increase awareness of the benefits of PA, (2) policy/environmental changes e.g. a more supportive school environment and opportunities for PA during breaks and after school, (3) the family: by providing homework activities which parents and children can do together or advice on how to create a supportive home environment, and (4) the community: e.g. family fun days (NICE, 2009). When developing and implementing PA interventions, it is vitally important that practitioners and researchers incorporate some form of evaluation to fully assess the effectiveness of the intervention in changing PA-related behaviours in younger children.

“
When targeting younger children, the role of parents should be considered and family based interventions may be effective in promoting PA at this stage of the lifecycle
”

Methodology

Protocol

Ethical approval for the evaluation of the ASLC programme was granted by Ulster University School of Sport Research Ethics Committee in February 2016. The study design comprised a controlled trial, with four schools acting as the intervention group and three schools acting as the control group. These schools were matched with regards to number of participants involved. Schools included in the intervention group were due to host an ASLC workshop between March and June 2016, while the control group were not due to host the workshop until the next academic year (post September 2016). A flow diagram of the study protocol is presented in Appendix 1.

Evaluation packs were sent to participating schools for distribution to parents (at least 1 week in advance of scheduled ASLC workshops for intervention schools). The evaluation packs contained (1) an invitation letter and participant information sheet, (2) an informed consent form, (3) a 7-day Family Activities and Food Diary. The parents were invited to participate in the evaluation and were required to provide informed consent.

7-day Family Activities and Food Diary

The 7-day Family Activities and Food Diary (Appendix 2) required parents to provide information on a typical week for their family, including the duration and intensity of PA (for the parents and the child), the duration of SB (for the parent and the child) and the consumption of certain foods and beverages (for the child). The diary was completed at three time points – for the intervention group these were as follows: on the 7 days leading up to the scheduled ASLC workshop (baseline), 2 weeks following the workshop (2-wk) and 3 months following the workshop (3-mo); and at two time points for the control group: at baseline and 3 months later (Figure 5).

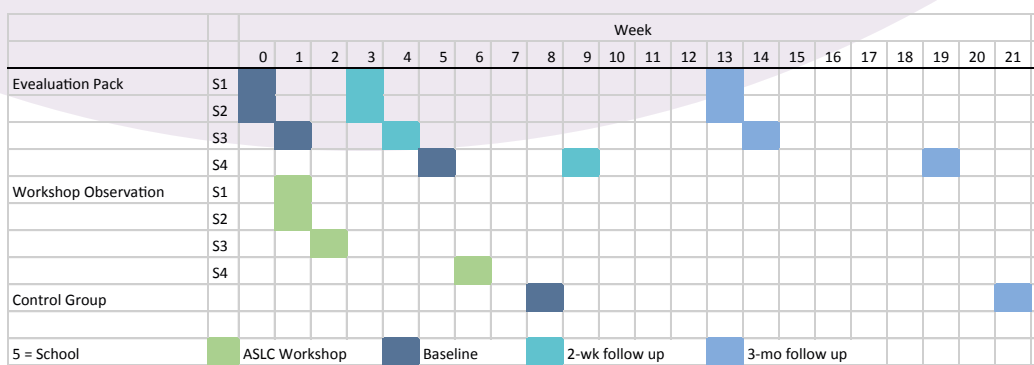


Figure 5. GANTT chart detailing the 7-day Family Activities Diary data collection for intervention and control groups.

Pre-workshop Survey

Prior to commencement of the workshop, parents were asked to complete a short pre-workshop survey, which asked parents about their expectations for the workshop, their knowledge of the current PA guidelines for children and parents' perceptions on aspects of 'healthy living' (Appendix 3).

Observations

Each ASLC workshop was observed by two members of the research team. General activities, timings and interactions that occurred during these workshops were noted using a standardized template created for this evaluation (Appendix 4).

Focus Groups & Interview

A subsample of parents/guardians were invited to take part in focus group discussions to further evaluate the workshop. In addition, focus groups were conducted with workshop developers, tutors and other stakeholders. The main objective of the focus group discussions was to tease out the strengths and weaknesses of the current workshop format. The focus groups involved informal group discussion, facilitated by two members of the research team (Appendix 5).

An additional online survey was produced and circulated (via SurveyMonkey) to those who were interested in participating in the focus group but could not attend. Within this survey, parents and stakeholders were asked similar questions to those asked within the focus group (Appendix 6).

Additional Evaluations

Think, Draw and Write Exercise

This approach builds on the initial work of Wetton in the 1970s, whereby creative methods of evaluation and reflection allow children time to think, and enable them to build ideas in stages, rather than having to provide an immediate response (Gauntlett, 2006) while taking account of their communication skills (Hill, 2006). Wetton (1999) observed that young children appeared to be able to illustrate their feelings and emotions with greater ease than they could articulate them.

The Think, Draw and Write evaluation was carried out by the school teachers after the ASLC workshop, with written instructions (Appendix 7) provided by the project leaders of ASLC to ensure standardisation of the approach adopted. Six questions were posed within a four-page workbook (Appendix 8) which encouraged children to provide written or artistic feedback on the workshop:

1. What did you like best about the lesson?
2. What did you not like about the lesson?
3. What do your family do to stay healthy?
4. What might children do that is not healthy?
5. How does play and exercise make my body healthy?
6. Favourite thing to do after school?

Post-Workshop Survey

As part of the existing ASLC programme, parents (Appendix 9), school representatives (Appendix 10) and workshop tutors (Appendix 11) are asked to complete an evaluation form at the end of the workshop. The parent evaluation form was adapted to include some additional questions for the current evaluation Appendix 12, and was completed by the parents of the four participating intervention schools following participation in the ASLC workshop. An analysis of this adapted form is provided, as well as an analysis of the original form in a sub sample of 5 schools for further context.

Data Analysis

SPSS and Microsoft Excel were used to analyse quantitative data (7-day Family Activities and Food Diary/Pre-workshop survey/Post-workshop survey/Observations/Think, Draw and Write activity), reporting descriptive statistics and frequencies. For the 7-day Family Activities and Food Diary, comparisons between baseline and 2-wk and 3-mo follow-up were analysed using a related-samples Wilcoxon-Signed Rank Test and significant results were established at $p \leq 0.05$. Qualitative data obtained from the Think, Draw and Write activity and Surveys were summarised as word clusters.

The interview and focus group discussions were audio-recorded and transcribed verbatim. Data were analysed thematically, using a deductive approach which involved the following six key phases:

- (1) Familiarisation with the data was achieved by listening to the audio-recordings and re-reading transcripts.
- (2) Each transcript was then subjected to systematic coding conducted by a member of the research team, whereby meaningful quotes or key examples from participants were assigned a code.
- (3) Potentially relevant codes were then grouped together to develop themes.
- (4) These themes were then reviewed by a member of the research team to ensure the themes were representative of the coded excerpts.
- (5) Once themes had been reviewed throughout the entire data set, definitions and names were then formally assigned to each theme.
- (6) The process of coding and reviewing themes was repeated independently by a second member of the research team to minimise the potential for bias and to ensure that all quotes were correctly coded. It was agreed that data saturation had been achieved when no new codes materialised.

Quotations from participants were used to highlight typical responses and ideas that led to the development of key themes.

Results

7-day Family Activities and Food Diary

130 parents were invited to participate in the evaluation. Of these, 66 returned the first evaluation pack with completed informed consent and 7-day Family Activities and Food Diary (51% response rate). Follow-up evaluation packs were completed by 14 parents at 2-weeks and 14 parents at 3 weeks (21% response rate). This report summarises the results from the diaries within two sections: (1) baseline information from 66 parents and children, and (2) baseline, 2-week and 3-month follow up data from a subsample of parents and children. Control group diaries were only received by 5 participants and therefore this data has not been included in this evaluation.

Section 1: Baseline Data

Diaries were completed predominantly by mothers (N = 45; mean 3 SD: age 38 3 5 years), followed by fathers (N = 18; age 40 3 6 years) which reflected attendance at the ASLC workshop (Figure 6).

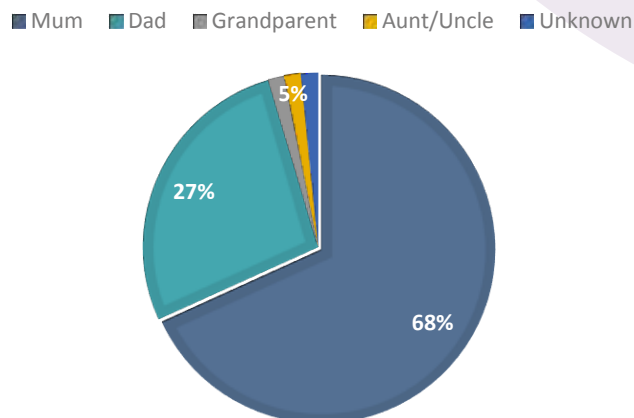


Figure 6. The parent/guardian who attended the ASLC workshop. Age range 27-58 years old.

Physical Activity

Before the workshop (baseline), most parents reported themselves (56%) and their children (65%) as physically active, in some capacity, every day of the week (Figure 7). Looking further at the intensity and the duration of this activity, when considering only days where parents engaged in a minimum of 30 minutes of MVPA, and children a minimum of 60 minutes MVPA, only 17% and 6% were active to this level, every day (Figure 8). With respect to the guidelines for PA, 48% of parents were achieving 30 minutes of MVPA on 5 days of the week and 6% of children were achieving 60 minutes of MVPA every day of the week.

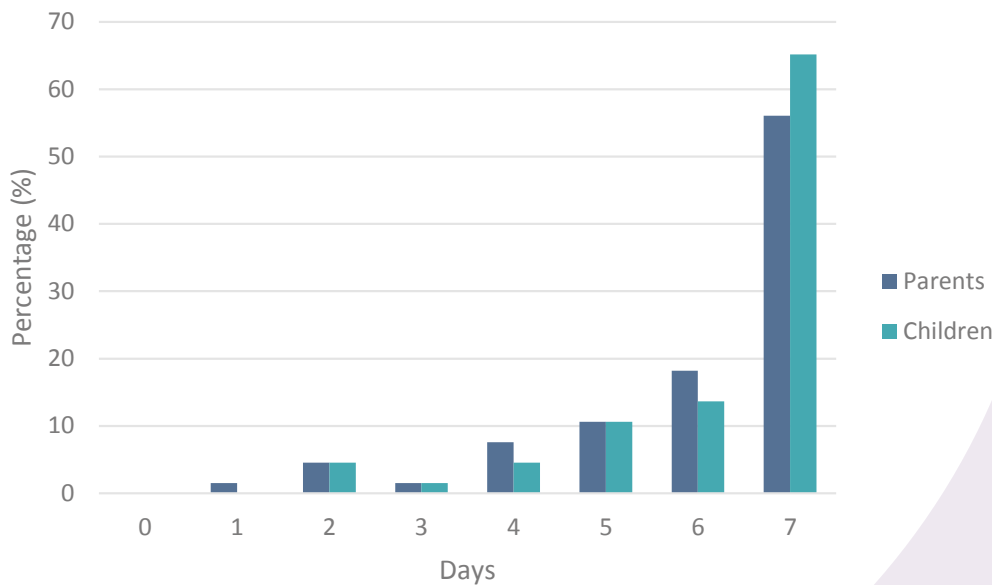


Figure 7. Average number of days per week engaged in physical activity (low, moderate or vigorous intensity), for parents and for children.

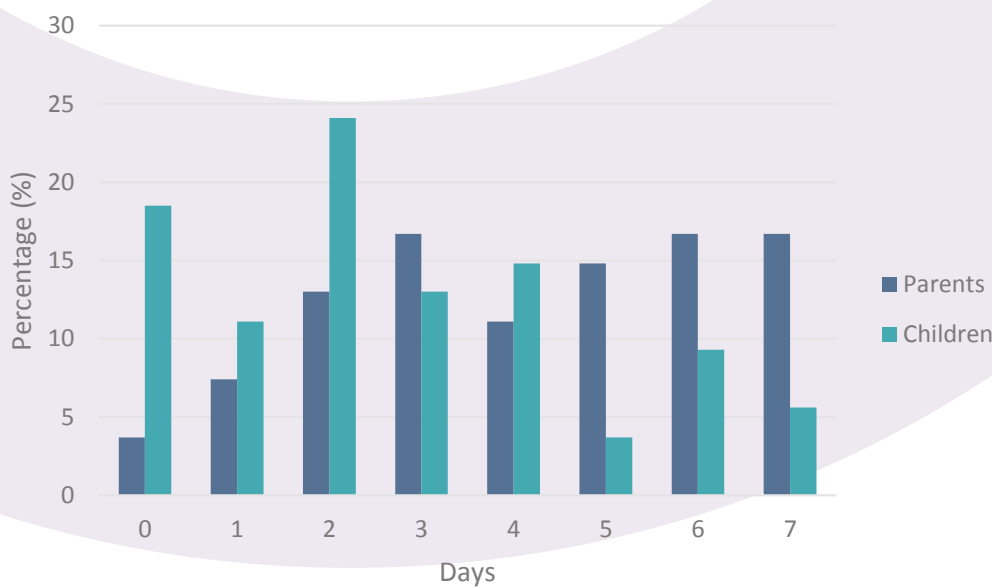


Figure 8. Average number of days per week parents and children are physically active (i.e. at least 30 minutes of MVPA for adults and at least 60 minutes of MVPA for children).

The types of activities that parents reported their children engaged in during a typical week are reported in Figure 9. The most common activity was ‘Playing Outside’ and this was consistent across all days of the week. ‘Playing with toys’ was the 4th most popular activity and seemed to be the indoor alternative to outdoor activity. Children tended to engage in sports predominantly on Saturdays, and also attended activity/soft play centres at weekends. Walking for recreation was the 2nd most commonly reported activity and was particularly popular on Sundays. Few children actively commuted to school (approximately 6% of the sample), and of those that did, walking was the preferred choice.

Figure 10 describes the typical duration of activities, (i) during weekdays and (ii) at weekend. Activity bouts were most commonly between 30-60 minutes, and bouts lasting more than 60 minutes were more likely to be carried out at the weekend compared with during the week.

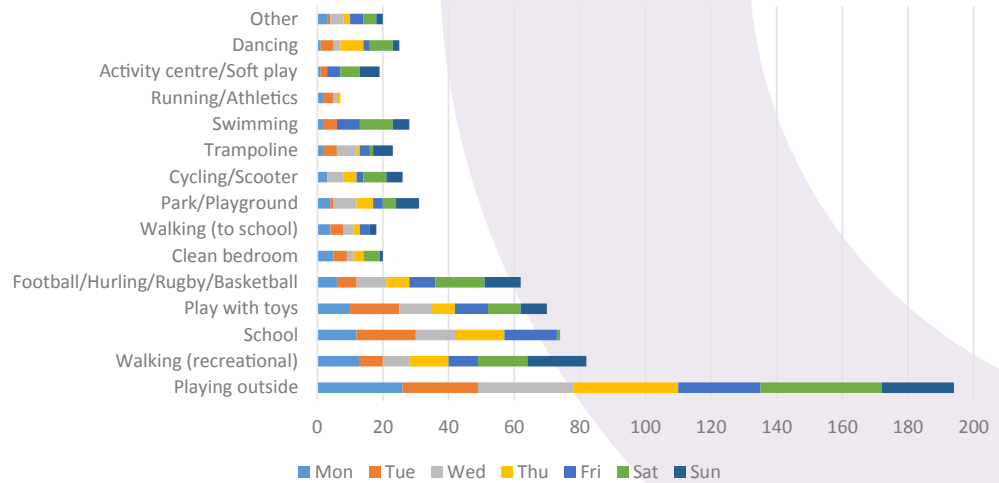


Figure 9. Types of physical activity that children engage in, and how frequently, during the week. NB: ‘Other’ is a composite category including activities that were reported very infrequently, such as yoga, farming, shopping, drama and gymnastics.

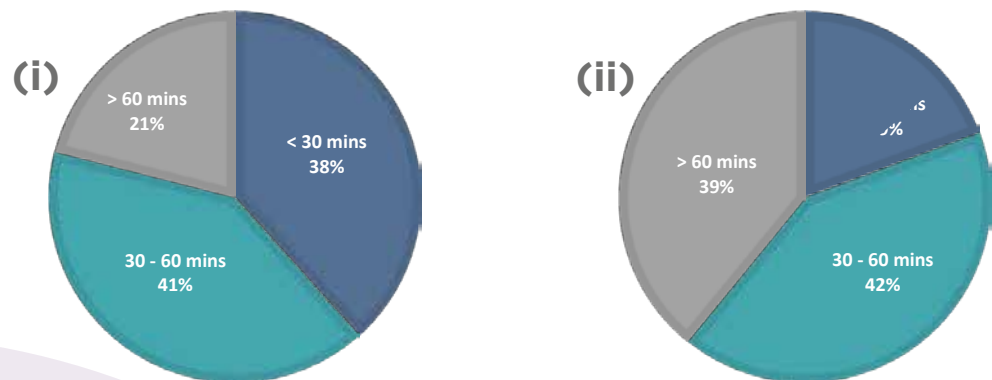


Figure 10. Average duration of (i) weekday and (ii) weekend, physical activity bouts in children.

The types of activities that parents engaged in during a typical week are reported in Figure 11. The most common activity was 'Housework', and the intensity at which this was carried out varied anywhere from low, to moderate, to vigorous. This was closely followed by 'Walking' which was predominantly reported as either low or moderate intensity. Both activities were reported consistently throughout the week. Aerobics and gym based exercise were common during the week, while playing with children was more common at weekends. Few parents partook in any sport (approximately 6% of the sample), but running (10%) and swimming (9%), particularly at the weekend, were slightly more popular. The duration of activity bouts for parents was most commonly reported as between 30-60 minutes and was similar for both weekday and weekend activities (Figure 12).

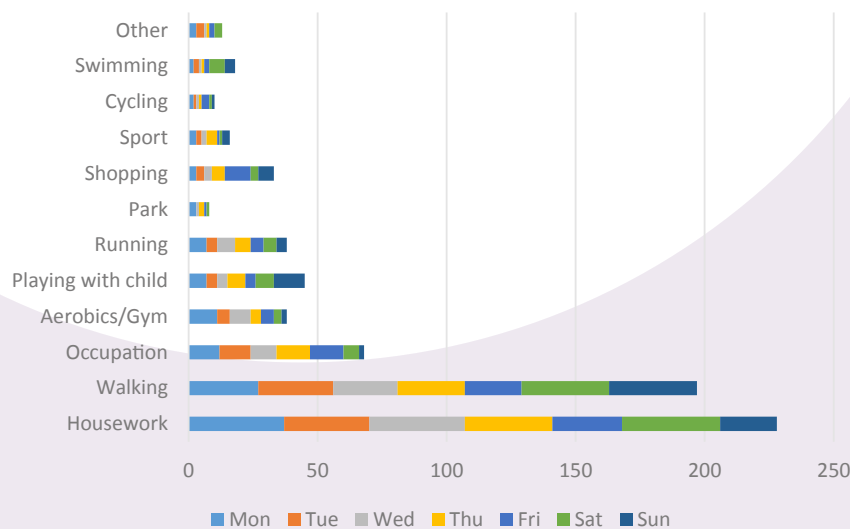


Figure 11. Types of physical activity that parents engage in, and how frequently, during the week. NB: 'Other' is a composite category including activities that were reported very infrequently, such as yoga, coaching, flying drone, gardening and dancing.

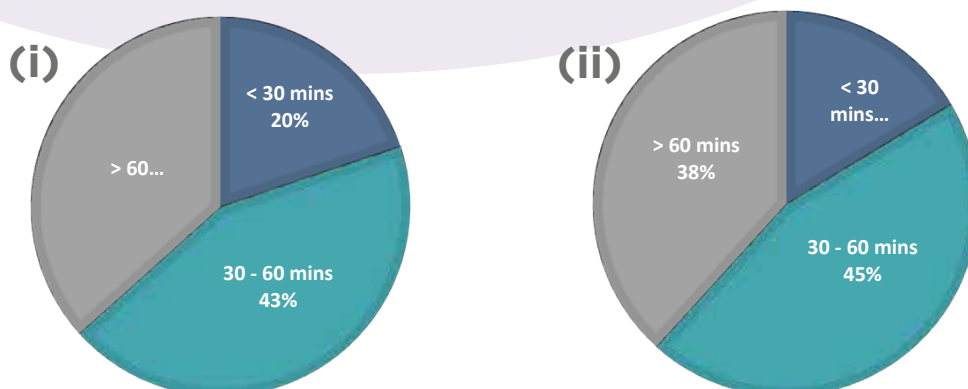


Figure 12. Average duration of (i) weekday and (ii) weekend, physical activity bouts in parents.

To provide a baseline level of parent + child interactions during a typical week, parents were asked to identify which of the reported activities were carried out in partnership with their child. During the week, children were more commonly active on their own (or with siblings/friends). It was more common for parents and children to do activities together at the weekend, particularly on a Sunday (Figure 13).

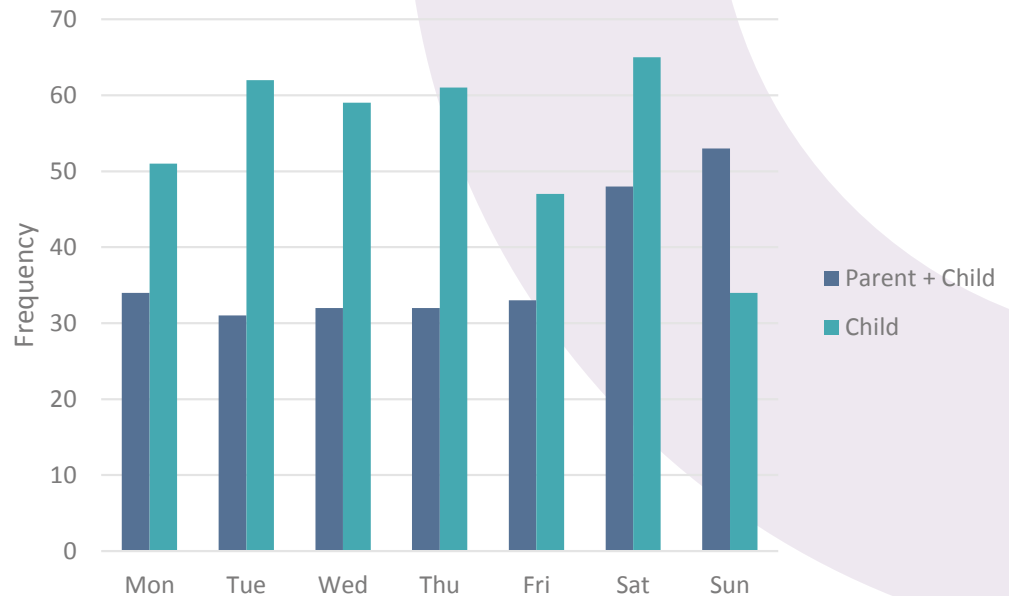


Figure 13. How frequent the physical activities were carried out by the child on their own (child) or together with their parent (parent + child).

Sedentary Behaviour

Many parents and children engaged in sedentary behaviour every day of the week (Figure 14).

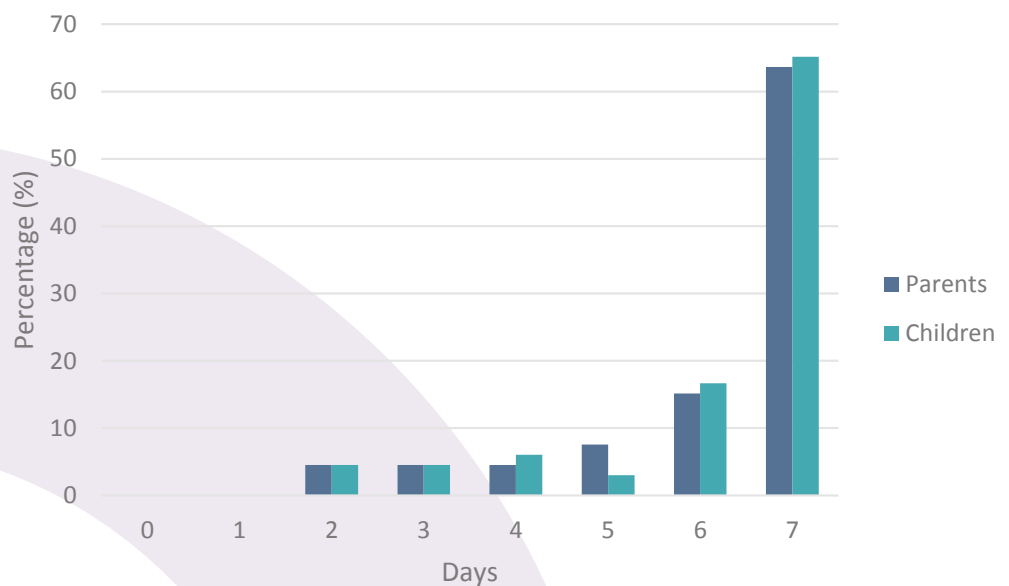


Figure 14. Average number of days per week parents and children engaged in sedentary behaviour.

The types of sedentary activities that parents reported their children engaged in during a typical week are reported in Figure 15. The most common sedentary activity amongst almost all children every day of the week was 'Watching TV'. Reading and completing homework was the second most common sedentary activity, and was even reported during the weekend. 'Playing indoors' was the 4th most popular sedentary activity, closely followed by 'Videogames', which were most commonly played at weekends. Regarding the duration of sedentary bouts, parents reported that children were most often sedentary for less than 60 minutes during the week. It was more common for children to engage in sedentary activity lasting more than 60 minutes at the weekend (Figure 16).

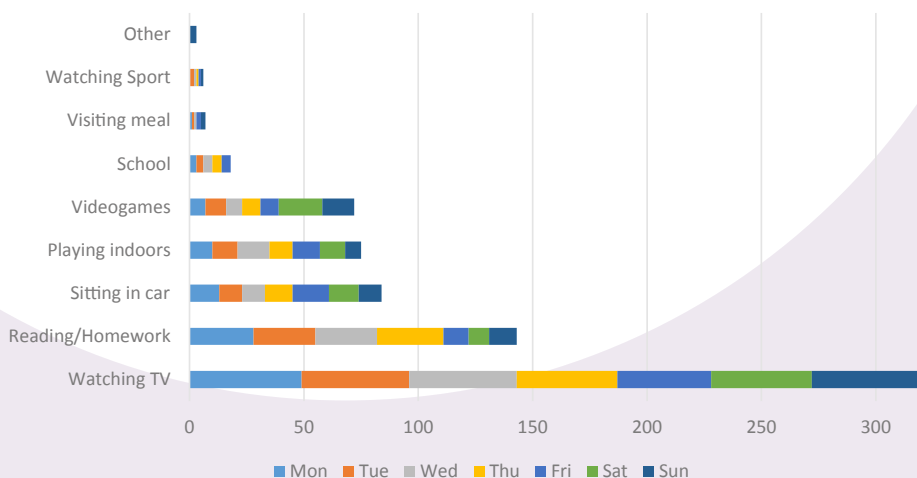


Figure 15. Types of sedentary behaviour that children engage in during the week. NB: 'Other' was reported by the parent.

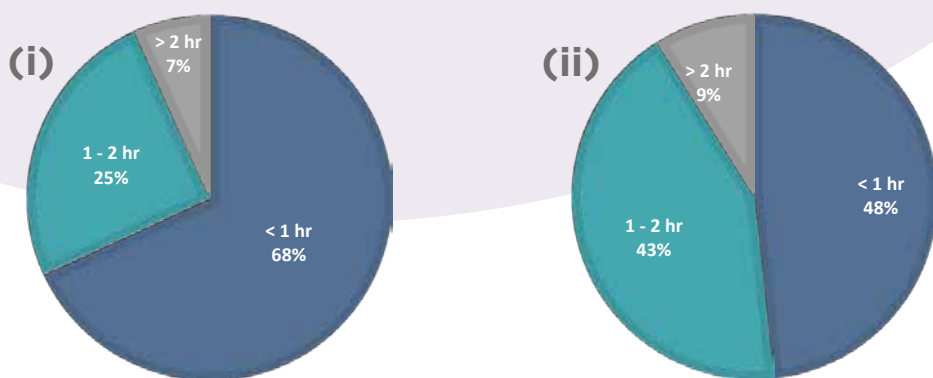


Figure 16. Average duration of (i) weekday and (ii) weekend, sedentary behaviour bouts in children.

The types of sedentary activities that parents engaged in during a typical week are reported in Figure 17. Throughout the week, and consistent with children, the most common sedentary activity was ‘Watching TV’. Driving (often specified as ‘driving to work’) and computer-based work or paperwork were also commonly reported. A greater proportion of parents tended to engaged in longer bouts (more than 2 hours) of sedentary behaviour compared with children. However, the majority of parents reported sedentary bouts lasting less than 2 hours at a time (Figure 18).

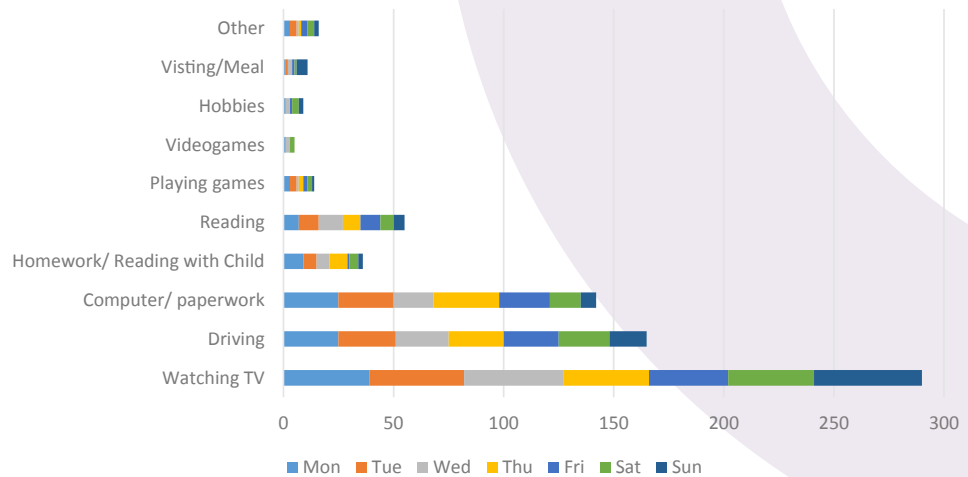


Figure 17. Types of sedentary behaviour that parents engage in during the week. NB: ‘Other’ was reported by the parent.

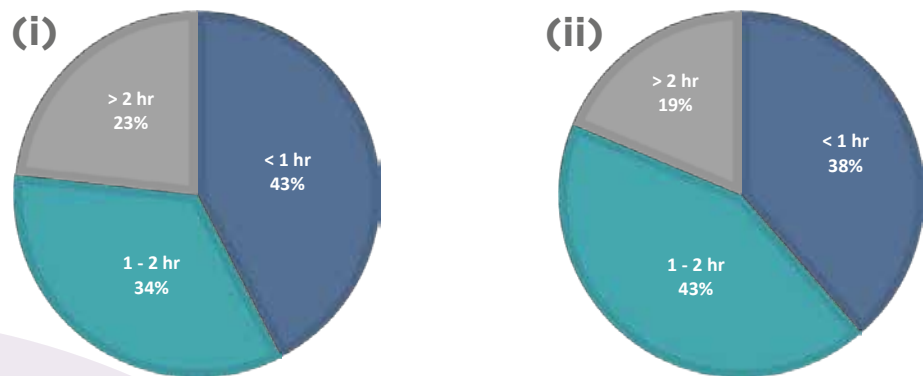


Figure 18. Average duration of (i) weekday and (ii) weekend, sedentary behaviour bouts in parents.

When parents were asked to identify which of the reported sedentary activities were carried out in partnership with their child, the opposite trends were observed when compared to physical activity. Throughout the week, and particularly at weekends, children were more commonly sedentary together with their parent (Figure 19).

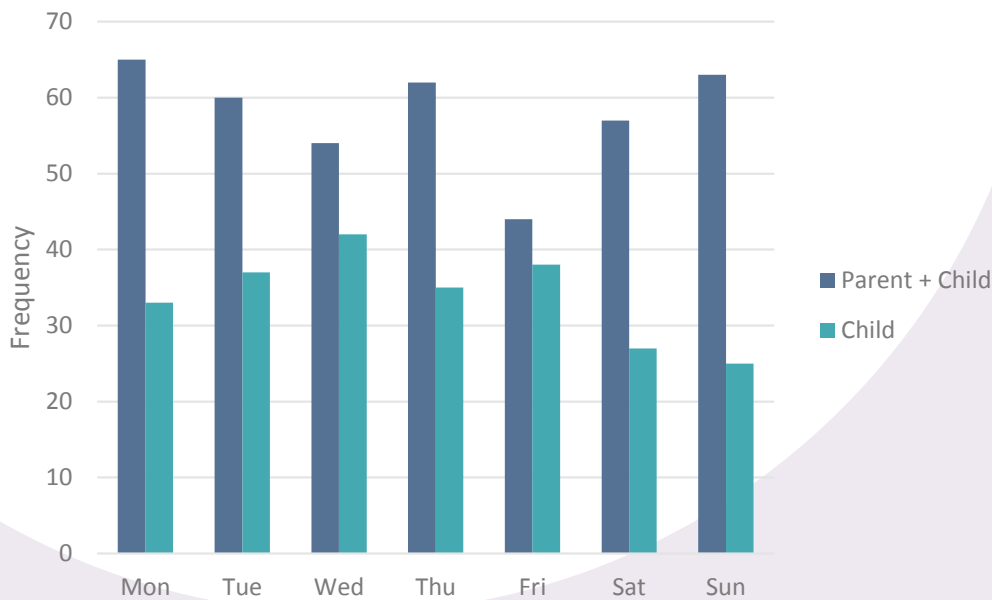


Figure 19. How frequent the sedentary activities were carried out by the child on their own (child) or together with their parent (parent + child).

“

For children, 4% were achieving 60 minutes of MVPA every day at baseline, and this increased to 21% at 2-week follow-up, but decreased to 12% at 3-month follow-up

”

Section 2: Baseline + Follow-up Data

Before the workshop (baseline), many parents reported themselves (60%) and their children (70%) as physically active, in some capacity, every day of the week (Figure 20). At 2-week follow up there was a slight decrease in the proportion of parents active daily and a slight increase for children, but at 3 months there was an increase for both, with 71% of parents and 86% of children active (at low, moderate or vigorous intensity) daily.

Looking further at the intensity and the duration of this activity, when considering only days where parents engaged in a minimum of 30 minutes of MVPA, and children a minimum of 60 minutes MVPA, only 15% and 4% were active to this level, every day, respectively. With respect to the PA guidelines, 40% of parents were achieving 30 minutes of MVPA on 5 days of the week at baseline and this remained relatively constant at 2 weeks (43%) and 3 months (43%) post workshop. For children, 4% were achieving 60 minutes of MVPA every day at baseline, and this increased to 21% at 2-week follow-up, but decreased to 12% at 3-month follow-up.

Table 1 reports the average number of days physically active per week for parents and children at baseline, 2-week and 3-month follow up. There was no significant change in PA for parents across the three testing sessions. For children, there was a statistically significant decrease in the number of days engaged in only low intensity activity (i.e. some activity, but not meeting guidelines) 3 months following the ASLC workshop, and a statistically significant increase in the number of days engaged in MVPA (i.e. meeting guidelines) at 2 weeks and 3 months following the ASLC workshop.

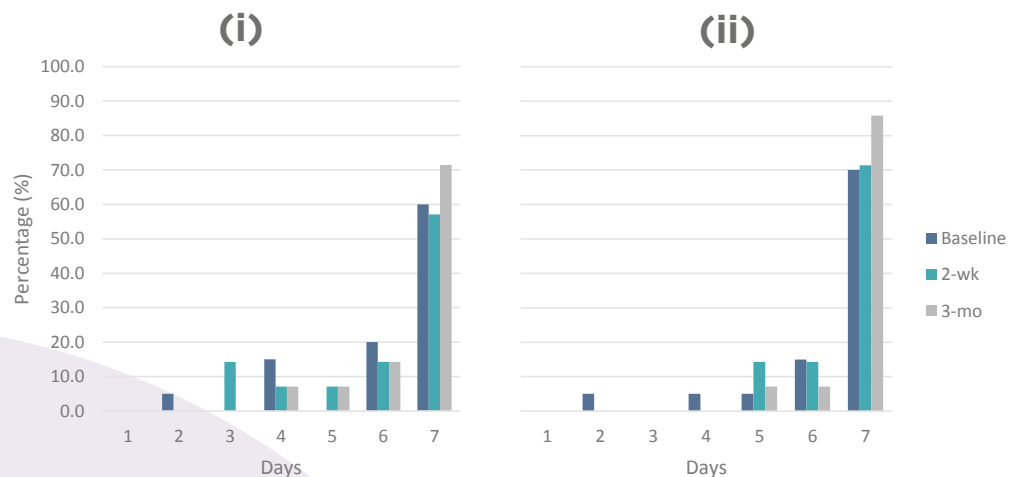


Figure 20. Average number of days per week engaged in physical activity (low, moderate or vigorous intensity), at baseline, 2-week and 3-month follow-up, for (i) parents and (ii) children.

Table 1. Average number of days parents and children engaged in physical activity. Data presented as mean 3 SD.

Number of Days	Parents			Children		
	Baseline (N=20)	2-wk (N=14)	3-mo (N=14)	Baseline (N=20)	2-wk (N=14)	3-mo (N=14)
[‡] Inactive	0.9 3 1.5	1.1 3 1.5	0.5 3 1.0	0.7 3 1.3	0.4 3 0.8	0.2 3 0.6
Low intensity	2.1 3 1.7	1.4 3 1.3	1.7 3 1.6	4.0 3 2.1	2.1 3 1.9	1.9 3 1.3**
[‡] Moderate-to-vigorous intensity	4.2 3 2.0	4.5 3 1.8	4.6 3 1.7	2.5 3 1.9	4.4 3 2.2*	4.9 3 1.6**

[‡]Inactive days = no activity recorded

[‡]Moderate-to-vigorous intensity data reflect the number of days (1) adults accumulated 30 minutes of MVPA and; (2) children accumulated 60 minutes of MVPA

*significantly different from baseline p<0.05; ** significantly different from baseline p<0.01.

Parents were asked to report how many of the activities recorded in the 7-day Family Activities Diary were carried out in partnership with their child (i.e. parent-child interaction). While, on average, there was a trend showing an increase in parent + child activities following the workshop (albeit not statistically significant, p=0.07), by 3 months this had decreased close to baseline (Figure 21).

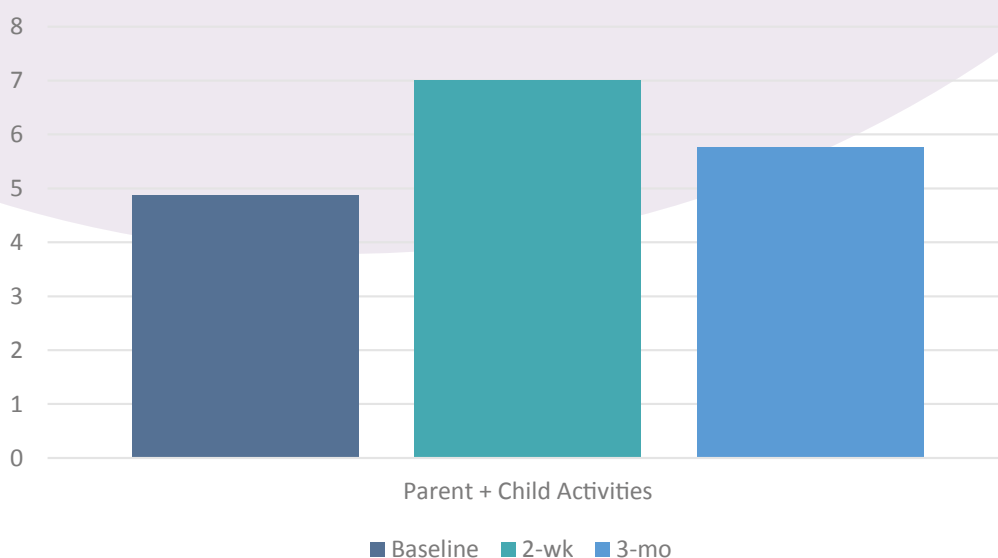


Figure 21. Average number of parent + child activities per week at baseline, 2-week and 3-month follow up.

Nutrition

Table 2 reports the average daily and weekly consumption of fruit and vegetables, water, fizzy drinks and sweets/chocolate for children at baseline, 2-week and 3-month follow up. At baseline, parents report giving their children, on average, 3 portions of fruit and veg per day, half a glass per week of fizzy drinks, approximately 3 glasses of water per day and approximately 1 bar of chocolate or bag of sweets per day. There was a modest increase ($p=0.05$) in the number of fruit and veg portions at 2-week follow up (on average 6 portions more per week), however by 3 months this had decreased back to baseline values ($p=0.53$). A similar trend (albeit not statistically significant) was observed for water consumption, whereby the number of glasses of water increased by an average of 8 per week at 2-week follow up, but decreased close to baseline levels by 3-months. Fizzy drinks and sweets/chocolate consumption showed an upward trend across the 3 months, with a statistically significant increase from baseline at 3 months for consumption of fizzy drinks ($p=0.01$).

Table 2. Average daily and weekly consumption of healthy and unhealthy food and beverages in children. Data presented as mean 3 SD and ranges.

	Average Weekly Portions			Average Daily Portions			
	Baseline	2-wk	3-mo	Baseline	2-wk	3-mo	
Fruit & Veg	Mean	213 9.04	273 6.94*	223 9.77	3.00 31.29	3.86 3 0.99*	3.19 31.40
	Range	0 - 38	16 - 38	7 - 45	0 - 5	2 - 5	1 - 6
Fizzy Frinks	0.5 3 0.97 0 - 5	1.3 3 1.83 0 - 5	4.7 3 1.9** 2 - 8	0.07 3 0.14 0 - 0.7	0.19 3 0.26 0 - 0.7	0.68 3 0.28** 0.29 - 1.14	
Water	20 3 8.58 2 - 38	28 3 11.80 16 - 53	23 3 10.19 10 - 43	2.81 3 1.23 0 - 5	3.95 3 1.69 2 - 8	3.34 3 1.46 1 - 6	
Sweets/Chocolate	7.5 3 3.60 2 - 18	8 3 4.35 3 - 18	9 3 3.47 4 - 15	1.07 3 0.51 0.29 - 2.57	1.19 3 0.62 0.43 - 2.57	1.25 3 0.50 0.57 - 2.14	

*significantly different from baseline $p \leq 0.05$; **significantly different from baseline $p \leq 0.01$;

Pre-Workshop Survey

Expectations

When asked “What are your expectations for today’s workshop?”, approximately 1 in 5 parents/guardians expected to either ‘learn new games and/or ways to play’ (29%) or ‘have fun and be active/exercise’ (21%). Several parents were unsure about what to expect at the workshop (18%). Other responses included: ‘how to be more active’ (5%); ‘exercise/activity and nutrition’ (5%); ‘learn health guidelines’ (8%); ‘how to get kids more active’ (8%); ‘learn about family/how to play together’ (3%); and ‘interact with child’ (3%). Only one respondent expected ‘detail on healthy eating, interactions and physical activities’.

Healthy Eating

Figure 22 shows results of the question “Do you eat healthily?”. Parents were given 5 options on a Likert scale ranging from Always to Never. Most parents (70%) report eating healthily ‘very often’.

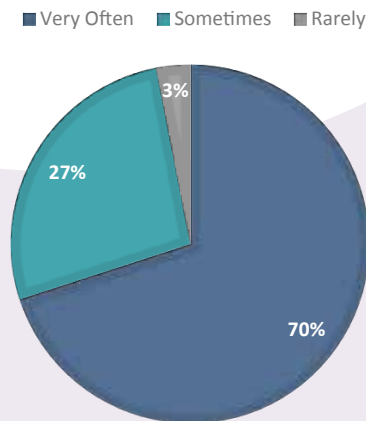


Figure 22. Percentage of parents reporting level of healthy eating.

Physical Activity Guidelines for Children

Parents were asked to state what the current PA guidelines are for children. Of the 67 respondents, only 12 (18%) correctly answered this question; i.e. all children and young people should be active, at a moderate to vigorous level, for at least 60 minutes every day (Department of Health and Children, Health Service Executive, 2009). Twenty (30%) provided either no answer or stated that they did not know what the current guidelines were. The remaining respondents provided incorrect answers in terms of ‘duration’ (ranging anywhere from 20 minutes to 3 hours of activity per day), or answers such as ‘sports’, ‘as active as possible’, ‘daily activity’, ‘weather dependent’ or ‘different activities’.

“
50% of parents expected to:
learn new games and/or ways to play
have fun and be active/exercise
”

“
82% of parents did not know the current Physical Activity Guidelines for Children
”

Observations

From the four ASLC workshops observed, it was evident that a disparity exists between physical activity levels and person-person interactions across different workshops. Furthermore, it was apparent that what occurs within an individual session is dependent on the tutor leading the session, the parents that attend, the space that is available and the needs of the children. The real-time activity and interactions that occurred between a parent, child and the tutor are shown in Figures 23 and 24.

Physical Activity Levels

Across all workshops, the main activity observed was standing. This related to: (1) time spent for tutors giving instructions, (2) handing out equipment, and (3) several of the games included standing as a central focus (mean 3 SD; 70 3 6% of total workshop duration). Regarding physical activity levels, it was noted by the observers that the only activities reaching a moderate intensity were those involving running (8 3 5%). It must be noted that for School A and D, the percentage of time spent running during the workshop was relatively lower than that for School B and C (Figure 23). It was apparent that only a small proportion of time engaged the group in high intensity activity.

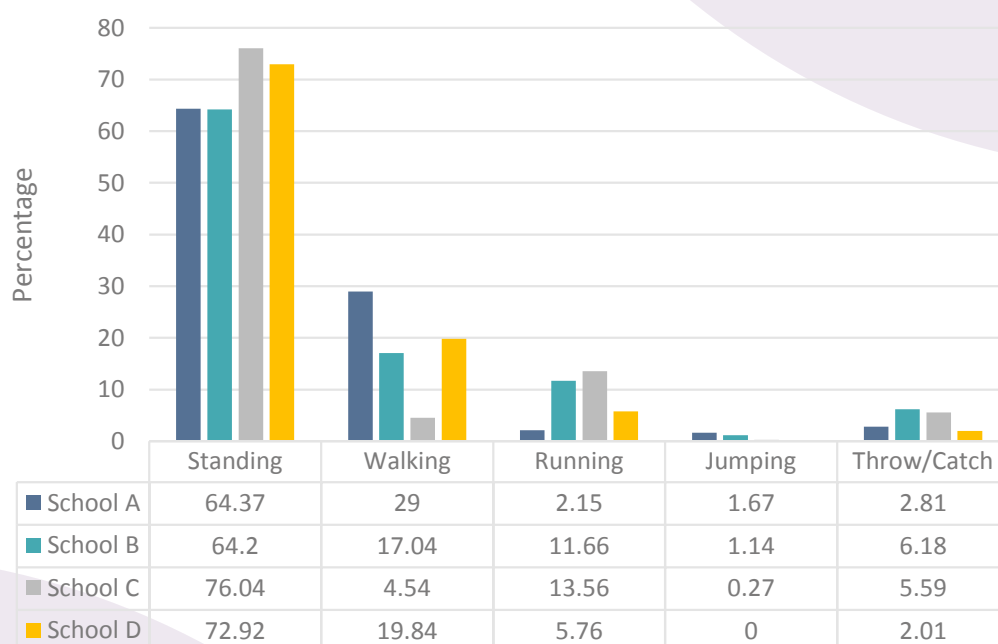


Figure 23. Proportion of time engaged in different activities during the ASLC workshop

Interactions

Overall person-person interactions are summarised in Figure 24. The percentage of total time for each type of interaction varied within each of the schools. For example, the tutor in School D led over half of the session (56%), which reduced the percentage time available for other interactions to occur. Whereas, the tutor in School C only led 22% of the workshop which resulted in a greater amount of parent-child and child-child interactions compared with School D.

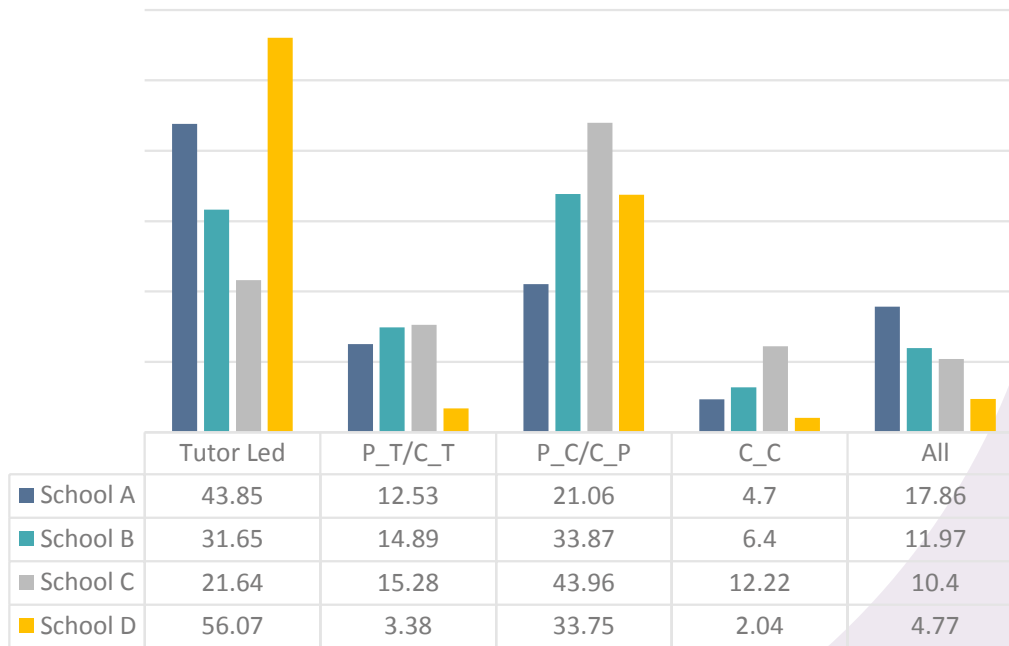


Figure 24. Person-person interactions during the ASLC workshop as a percentage of overall time. P = parent; T = Tutor; C= child; All = everyone together.

Parent-child and child-parent interactions, across all the workshops, occurred on average 33.39% of the time. This percentage relates to the amount of overall time that was given for interaction to occur. However, if the time for tutor-led activity is omitted, the percentage time in which other interactions occurred (parent-child, child-parent and everyone together) was high (73.31%), as shown in Table 3.

It must be noted that there were differences with regards to the parent:child ratio in each of the four workshops, which may have affected the overall interactions observed. It was also apparent that real-time interactions between the children, parents and tutor varied at different workshops, which affected positive engagement in the sessions as well as the way the tutor progressed the workshop. In some of the activities there was an unwillingness for some parents to participate fully, and this is noted by tutors in other areas of this evaluation.

Table 3. Percentage of total time for interaction between parent-child (P_C) and child-parent (C_P) excluding tutor-led activity.

	Type of Interaction		
	P_C / C_P (%)	All participants (%)	Total time (%)
School A	38	32	70
School B	50	18	68
School C	54	13	67
School D	77	11	88

“
 Programme
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 have fun –
 parents too!”

Focus Groups & Interview

One interview (parent) and 2 focus groups (tutors and stakeholders) took place at the Health Service Executive offices, Letterkenny, on 16th June 2016.

- **Focus group 1: Workshop developers and tutors**
 Participants (n=4; 1 project manager, 1 project coordinator, 2 tutors)
- **Focus group 2: Key Stakeholders**
 Participants (n=2; Sports Development Officer with Donegal Sports Partnership (previously worked as a tutor/developer on ASLC) and teacher from school where the ASLC workshop was delivered)
- **Interview: Parent**
 Participant (n=1; parent who attended workshop with their child)

These informal discussions were focused on teasing out the strengths and weaknesses of the current ASLC format to assist with developing the programme. Reflecting on the key analysis of discussions, several recurring themes were identified:

1. The ethos and a clear understanding of the programme
2. The activities being delivered and interaction level
3. The programme as a vehicle to effect change

These points will each be addressed, where relevant, from the viewpoint of the:

- a) Workshop developers and tutors
- b) Key stakeholders
- c) Parents

Key Point 1: Ethos and understanding of the programme

It was clear from all involved that the ethos of the programme was about the promotion of active play, through fun games and activities, and encouraging the development of fundamental movement skills, as well as the promotion of healthy eating for obesity prevention.

Workshop developers and tutors

“Schools provide a structure to promote and deliver a physical activity programme, targets families and young children – a change is needed here, great turnout”

“Workshops are fun while getting activity, parent/child bonding time, feedback has been mainly positive”

“Workshops are a lot of fun, kids and parents generally enjoy it”

“Programme has met the needs of schools regarding parental reach, great opportunity to get key messages to parents and teachers, kids have fun – parents too!”

Parent

“Promotion of activity for children, whole idea of healthy eating. I suppose as well interaction between parents and children, and other parents and other children, all under that umbrella.”

Key Point 2: Activities being delivered and interaction level

Workshop developers and tutors

With reference to the design of the programme and the specific activities included (structured vs unstructured), it was clear that the tutors have a degree of flexibility regarding what is delivered. From the focus group it was noted:

“I suppose we would be encouraging the tutors to go in with a rough template if everything was ideal, you would have to alter that, trying to get as much activities that you can do.”

With reference to actual physical activity the games promoted the overall benefit to increase engagement which is important for the success of achieving the aims of this intervention. It was stated:

“The fact that the games are simple to remember – a few kids actually said that their older siblings had played that game and they had that game at home – anecdotally know that this happens in some instances.”

“The activities that are involved are task orientated, not about the outcome, there’s no winners and losers, it’s just about the movement, moving together and having fun.”

The programme supported family based activity by promoting parents’ involvement in their children’s development through active play which is core. It was noted:

“Workshop is fun, parents play with their child, engaged in workshop”

“Families enjoyed it, positive experience”

“Positive experience for both, easy games to repeat at home”

“Encourages parental support, social time at end of workshop, engaged”

Key Stakeholders

“I’d agree that it probably does in the short term, they maybe go home and do it once, in terms of the longevity of that I don’t know. It maybe increases an awareness of the importance but whether it actually leads to change it’s very hard to tell, very hard to measure something like that.”

“Maybe if it was over a 6 week period, or brought the parents back and asked them how many times have they done the activities - but even at that you’re relying on the parents, their take on it so I’m not sure. I’m just not convinced, and I’d love to say that I think it would but the nature of the programme one off, I don’t think it does.”

“Model the parents – not only group work, but things that they can do practically at home e.g. learning to ride a bike. The group games are great but I think it should be individual games to work on at home.”

“If it were a 6-8 week programme, you could say strongly agree but at the moment I would say I probably disagree.”

“
The activities
that are
involved
are task
orientated,
not about
the outcome,
there’s no
winners and
losers
”

Regarding structured play and the amount of physical activity during the session:

“
I thought they
(the games)
were brilliant.
My son has
his granny
making bean
bags
”

“There’s enough physical activity but needs to be more on how to play with the children – there’s sometimes an awkwardness with the parents – needs to be more one to one so that the parent really has to engage with the child.”

“In terms of development at home and after, you need the one to one. Is there enough work done for parents? Should there be a workshop with parents in addition to a workshop for parents and children, separately, in preparation for it – where they are educated with the importance of the whole programme.”

Parent

“I thought they were brilliant. My son has his granny making bean bags – they were very good games, very funny with the hoops, the competitive streak really came out in people.”

Regarding the duration of the workshop:

“It certainly wasn’t too long; it was very enjoyable. I would have no objection to it being longer but I suppose you have to draw the line somewhere, I’m not sure how far their attention span would go.”

Key Point 3: The programme as a vehicle to effect change

Key Stakeholders

Regarding the viability of the programme as a vehicle to promote important national campaign messages:

“As it is at the minute, a one off thing, I don’t think so, I think it would be information overload for people. I think little snippets of information over a period of time can help but I think parents will get overloaded with trying to promote active play, healthy eating, all the rest of it all together. I think maybe giving little bits over a longer time may work better. It certainly can be used but maybe not as it is at the minute.”

“I would agree with that to an extent and I think as a teacher, we’re being bombarded with everything – smoking, healthy eating, drugs, we have to fix everything almost in the primary school so I think a once off isn’t enough, even though as it is it’s a fabulous programme – on its own it can’t tackle the obesity crisis, if it was termly or even run as an initiative for cross-border counties or something, I think that would be fabulous, you could have it once a month.”

“A freebie – for example, if you said to the dad’s there’s a half price soccer jersey for taking part, people will come, get people in through something like that and then you can give a message and make a difference.”

Parent

Regarding the promotion of healthy eating:

“Think it did, that was good, that was the most useful thing on the booklet, you had to really think what they were eating, if they did get a treat – I thought that part of it was useful because that really did focus me in that regard. Really the booklet you’re just there thinking what did he eat, you become more mindful of it.”

SurveyMonkey Questionnaire

Those who could not attend the focus group session were circulated a short online questionnaire via SurveyMonkey. The response rate was small (n = 5) consisting of 1 parent, 1 School Principal and 3 Key Stakeholders. The results concur with what was stated during the focus groups and interview conducted, with all agreeing that the purpose of the workshop was to: (1) increase physical activity; (2) increase interaction between parent and child(ren); (3) change behaviour; (4) introduce fun games and; (5) provide health promotion message. Further comments elaborated that the main aim of the programme is to encouraging active play between parents and children, and to increase physical activity (i) in children and (ii) for families. When asked what aspect of ASLC they enjoyed most, all responses were focused around fun, games and parent-child interactions. The School Principal commented:

“The workshop in school where the parents and children got a chance to play various games together. It showed parents and children alike that it can be very enjoyable to do things as a family in the company of school friends and their parents.”

This was supported by two of the Key Stakeholders who stated watching the interaction between parent and child as the most enjoyable aspect of the workshop. One of the stakeholders (tutor) stated that it was:

“Nice to have a noisy workshop with lots of giggles and interaction between the parents, their children, other parents and even the tutor.”

When asked if the ASLC programme could be improved, all, except the parent involved in the workshop, felt that there were aspects that could be enhanced. This was mostly focused on the number of workshops that are delivered, with the general feeling that one one-off 90-minute session is not enough to encourage a change in behaviour. The School Principal indicated three school workshops would be more beneficial, stating:

“They would more likely to lead to a change in behavior, this could possibly develop into a habit.”

“
It showed
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children alike
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very enjoyable
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the company
of school
friends and
their parents
”

A question was posed relating to what additional aspects would they like to see included in the programme. Again, an expansion of the programme was highlighted. The School Principal stated that more activities on balance and right and left orientation would be beneficial, whereas the Key Stakeholders commented on the need to link to Social, Personal and Health Education (SPHE) and reinforce what was done during the session within classroom activities. Participants were also asked for additional comments that might assist the programme:

"I would like the programme to be continued and extended as Junior Infants is the right age group to target to get parents on board."

"Programme suited very much to a younger age. Whilst it's a lovely enjoyable programme not sure of the impact of the initiative over time, delivered over a longer period it could really encourage life changes."

"A dedicated programme to get families active and out together can change bad habits, behavior, attitudes and lives."

Additional Evaluation: Think, Draw and Write

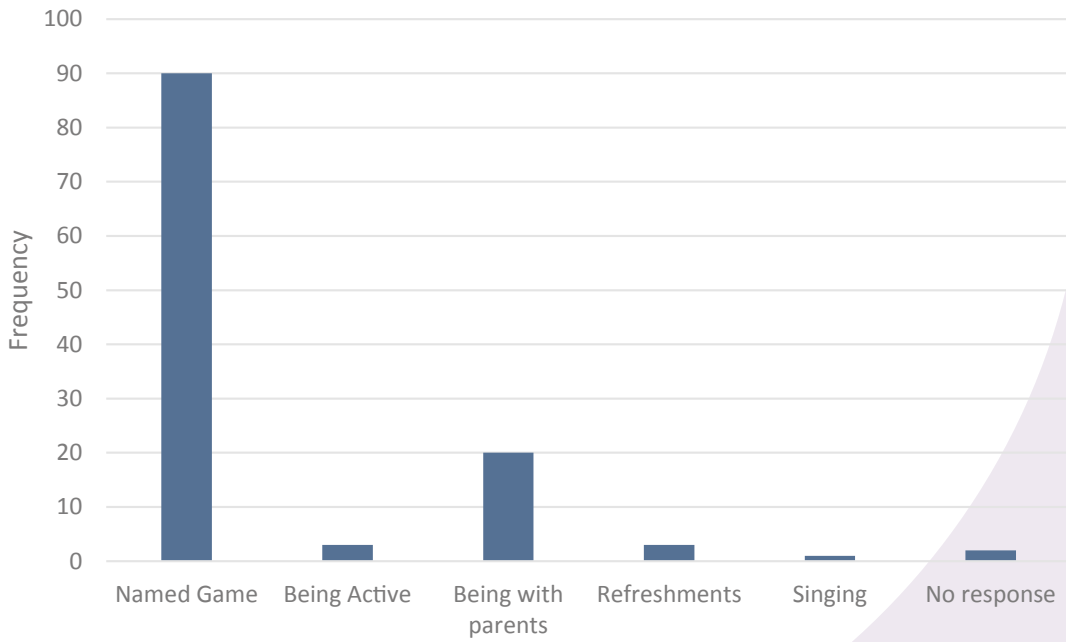
Four schools took part in the Think, Draw and Write evaluation (n = 109) with an almost equal number of boys (n = 56) and girls (n = 53), aged 4 (n = 9), 5 (n = 91) and 6 (n = 9). The results of the six questions are presented in graphical format and word clusters which provides a visual summary of the key comments from children (Figures 25-30). The larger the word in the word cluster image, the more repeat responses from the children.

Parental interaction was of significant importance for the children, and while they liked playing the games, a key aspect was having the opportunity to interact and play with their parent. This is further emphasised when considering the responses to question three regarding what children and their families do to stay healthy, with the majority of responses highlighting eating healthy, eating together and being active.

In terms of the games themselves, the children listed ones which they really liked and others they were not so keen on. Some children also provided details of why they didn't like a game, revealing that an inability to perform the tasks involved in an activity may be the reason for not enjoying particular games.

The children's awareness of the benefits of physical activity was limited to aspects such as growing strong, and few children were aware of the benefits to bones, the heart and emotions. An awareness of the negative effect of sweets and chocolate was highlighted, as well as the positive effect of fruit.

“Parental interaction was of significant importance for the children, and while they liked playing the games, a key aspect was having the opportunity to interact and play with their parent”



Playing
Mummy Oranges
Fruit Singing Food
Jumping
Game Daddy
Running Hands
Standing

Figure 25. What children liked best about the ASLC workshop.

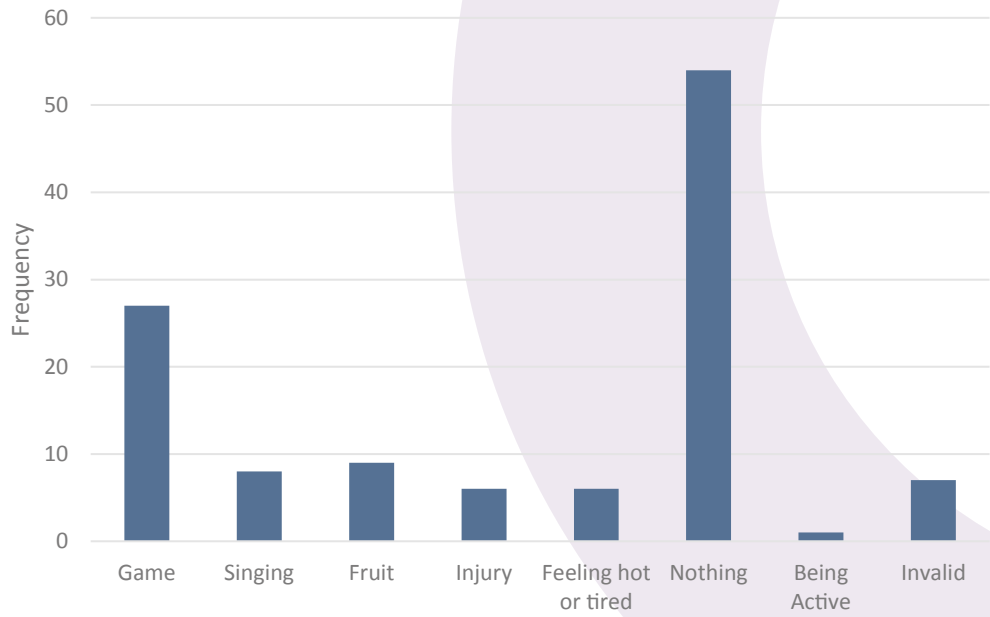


Figure 26. What children did not like about the ASLC workshop.

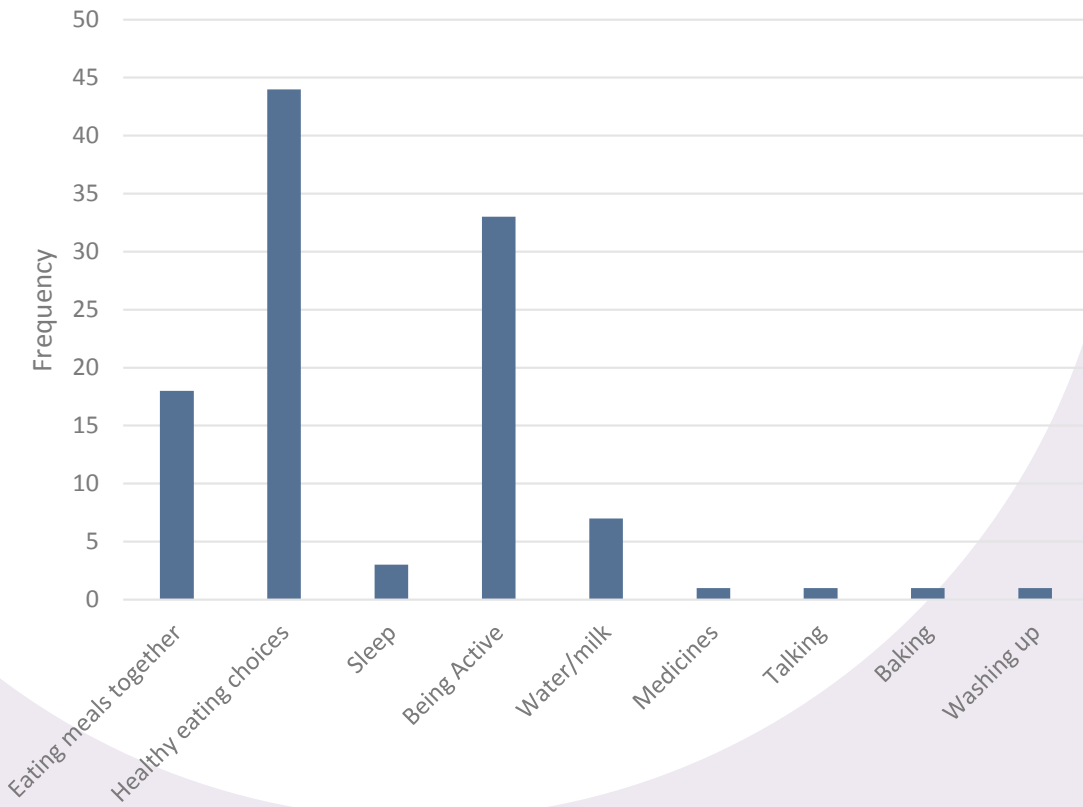


Figure 27. What children think their families do to stay healthy.

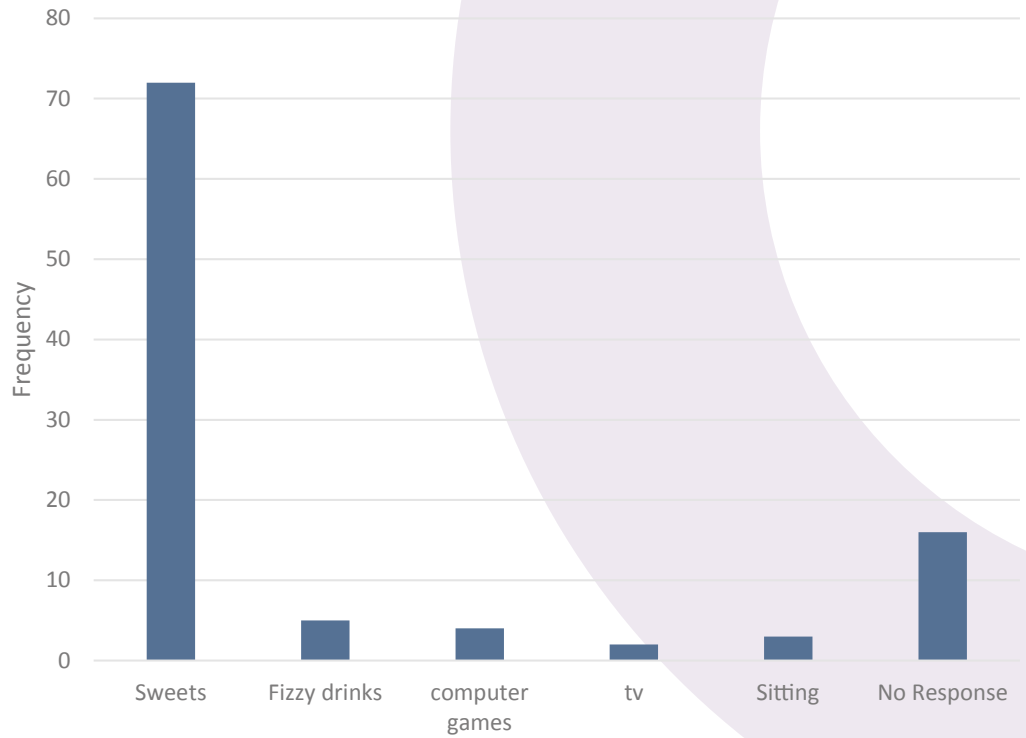


Figure 28. What children think are unhealthy things to do.

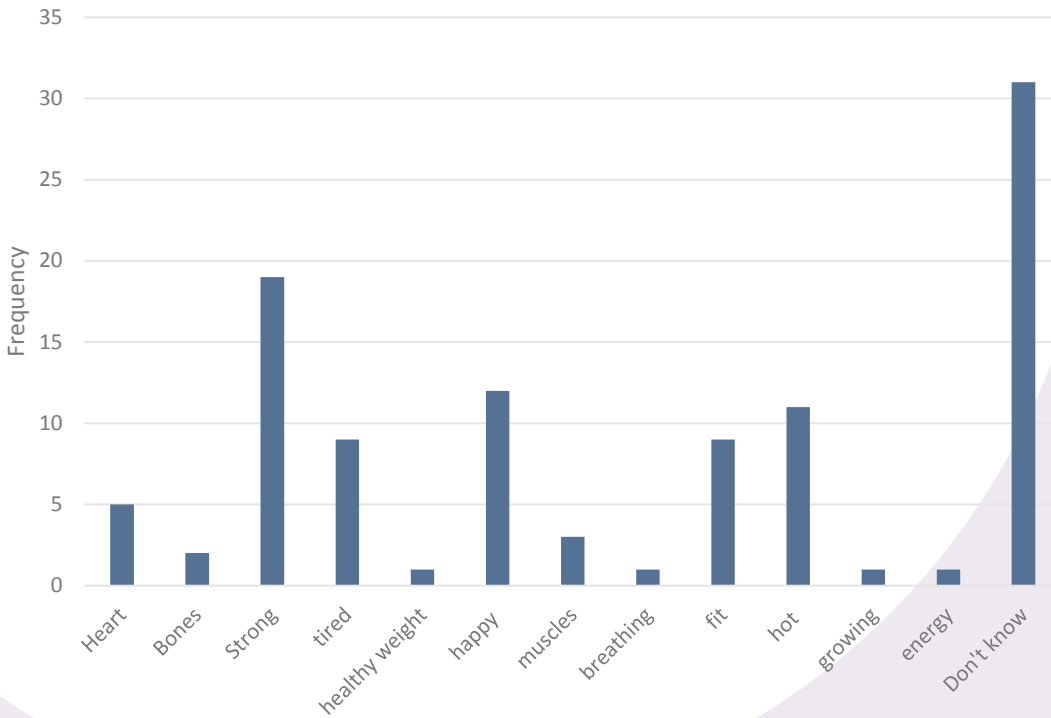


Figure 29. How children think play and exercise makes their body healthy.

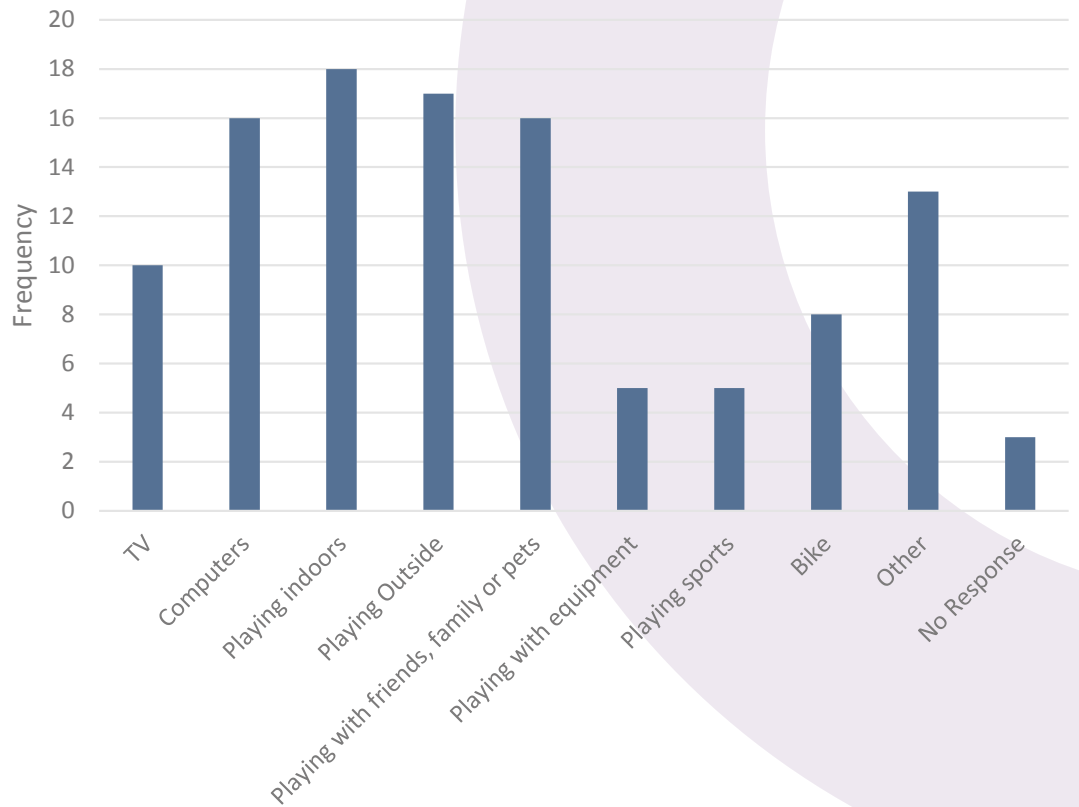


Figure 30. Children's favourite after school activity.

Additional Evaluation: Post-Workshop Survey - Intervention Schools

Parents

100% (n = 104) of parents confirmed that the workshop met their expectations. When parents were asked to express their satisfaction level following the workshop,

81% indicated that it was better than they had expected and 19% found it as expected.

Figure 31 shows the ratings of: information received prior to the workshop; venue; facilitator; content; and fun factor. The venue, the facilitators, the workshop content and the fun factor all received high proportions of excellent ratings. Information prior to the workshop was unsatisfactory amongst 2% of parents, satisfactory amongst 15%, but the majority (76%) found the information to be either good or excellent.

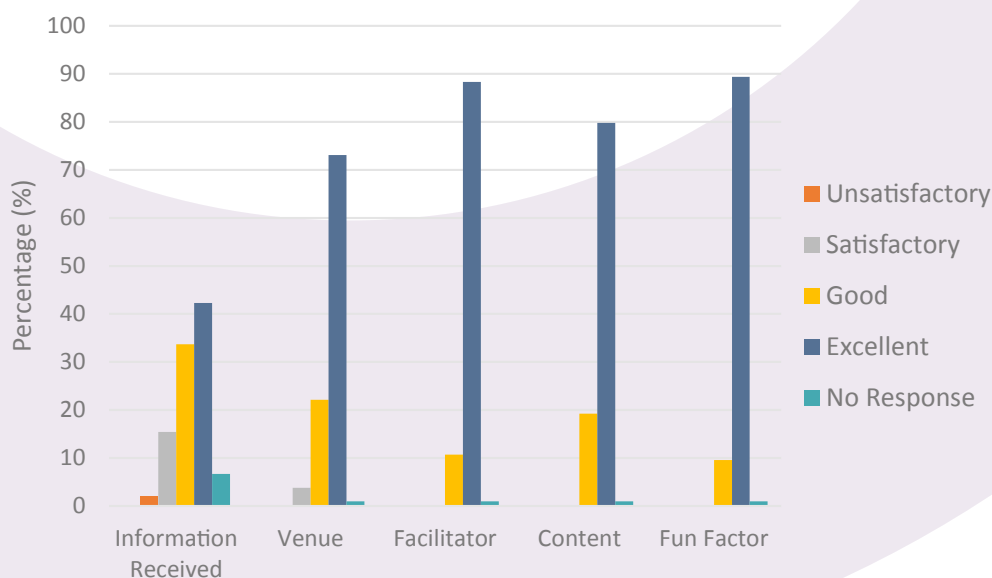


Figure 31. Rating of ASLC workshop key elements.

Parents were asked to rate what they particularly enjoyed about the workshop (Figure 32). Most enjoyable, at 81%, was the ‘interaction with the children’, ‘activities and games’ was selected by 66%, and the ‘attitude of the children’ by 44%. All options were available to select and therefore one respondent could have selected all 3 options. 87% felt there were no aspects of the ASLC workshop that could be improved.

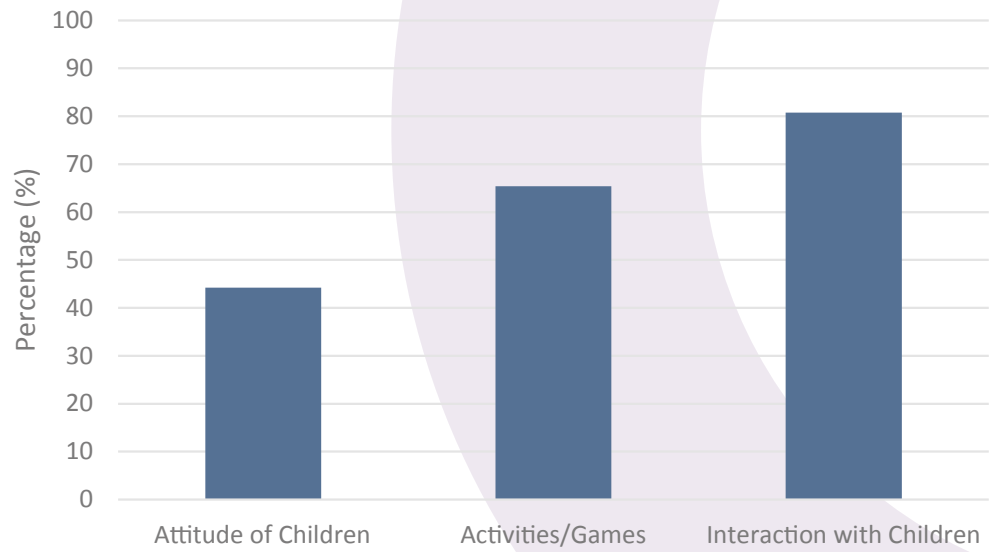


Figure 32. What parents enjoyed about the ASLC workshop.

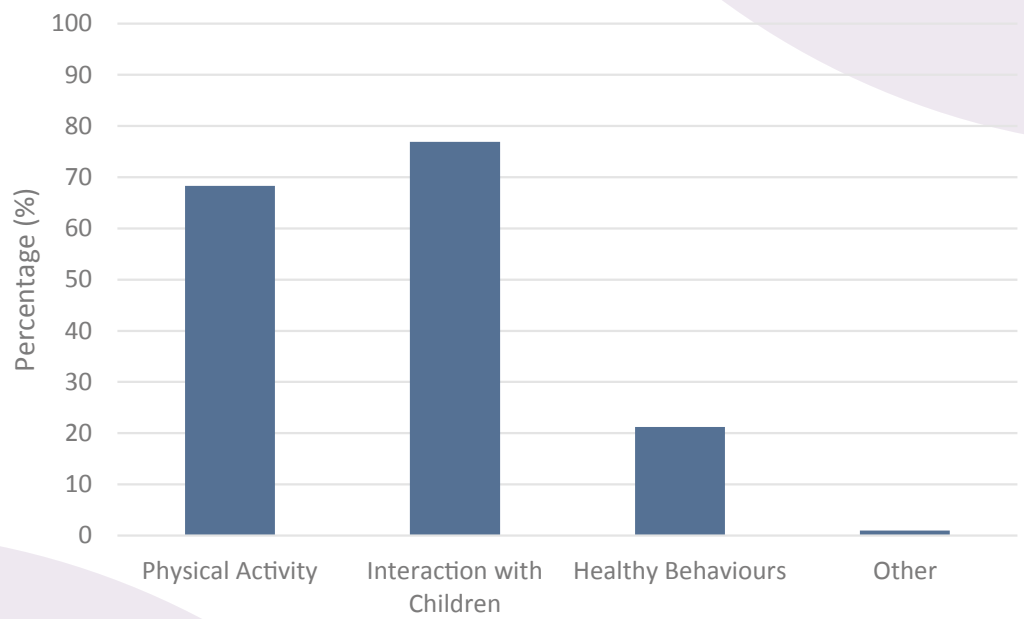


Figure 33. What parents thought the main focus of the workshop was.



Figure 34. Are there any aspects of the workshop that you feel could be improved? NB: Larger text denotes stronger response.

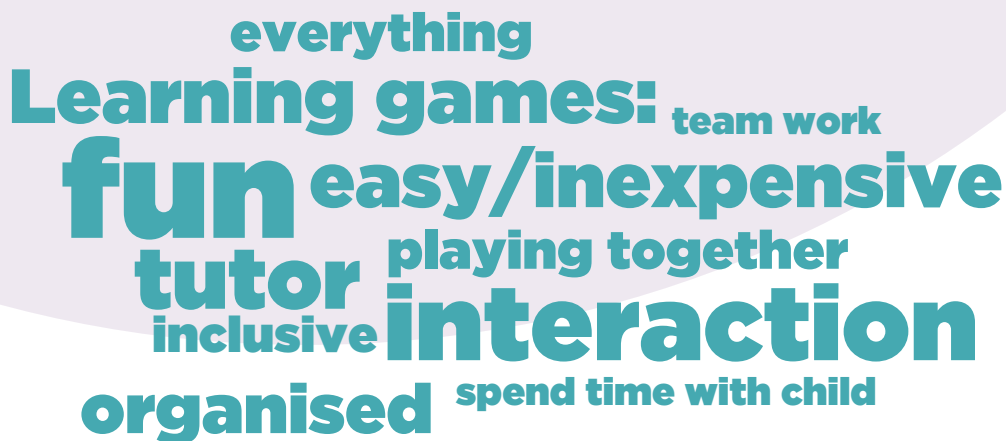


Figure 35. What are the strengths of the workshop? NB: Larger text denotes stronger response.

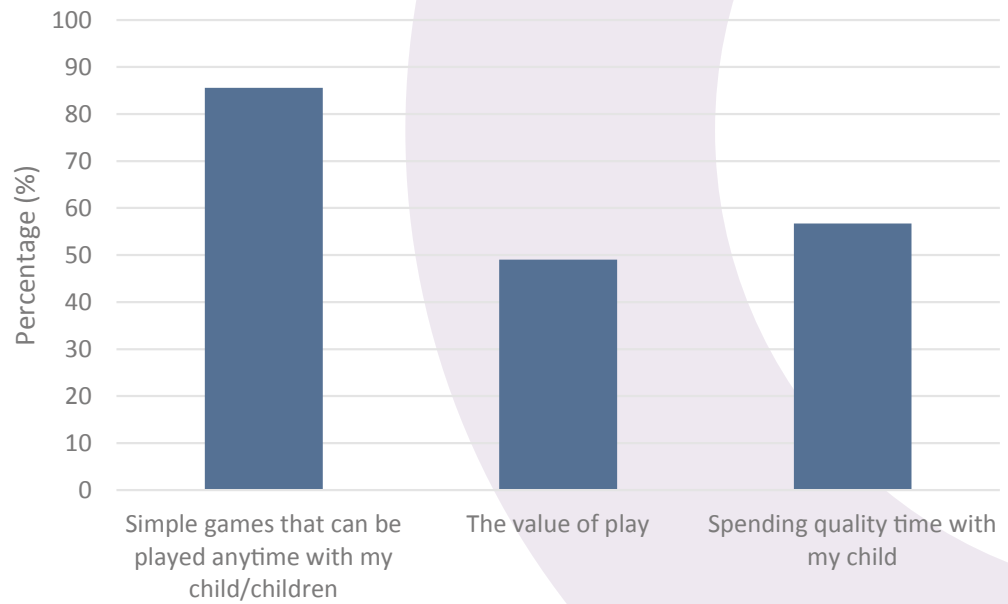


Figure 36. What parents learned from the workshop that they might use with their child(ren).

Parents were asked what actions they would take in the future as a result of attending the workshop. The majority (51%) responded that they would “play more games (with my child)”. Other responses included: “interact more with my child” (7%); “be more active/exercise” (5%); “games can be played indoors” (4%); do more simple things/games” (4%); “play with basic/simple equipment” (3%); “play more outdoors” (3%); “take more time for healthy activities” (3%). The remaining 20% of parents/guardians did not respond.

73% of parents were interested in receiving further training (Figure 37). Of the 73%, the majority would prefer training on healthy eating and nutrition, around 45% would like physical activity or training on play, followed by 20% looking for general parenting training.

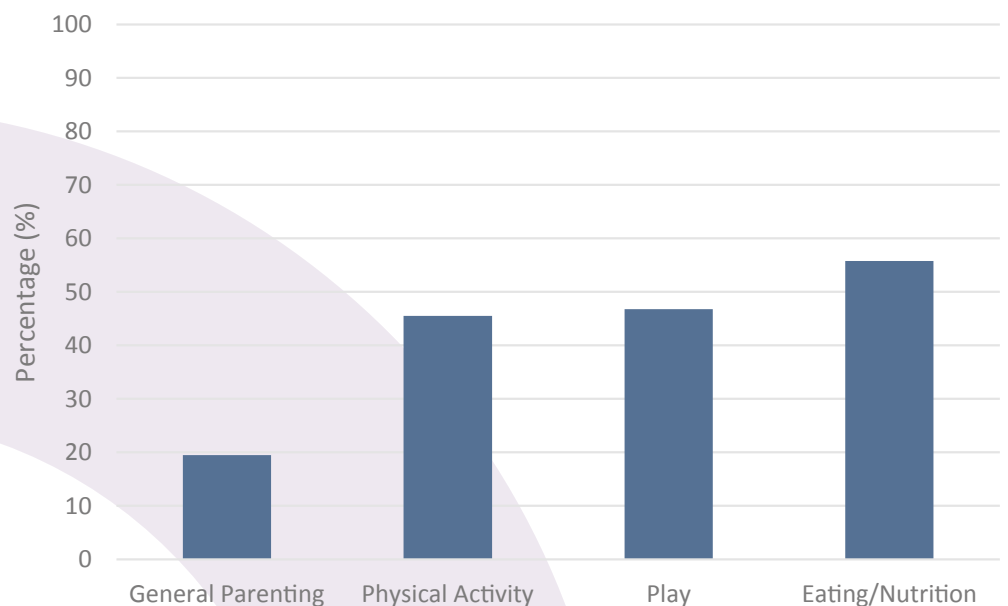


Figure 37. Preference for what training parents would like in the future.

Tutors

2 tutors (the same tutor facilitated 3 workshops) provided feedback from the 4 ASLC workshops included in this evaluation. In every instance the workshop met the tutors' expectations, and ran either 'as expected' (n = 3) or 'better than expected' (n = 1). Tutors rated the venue, school involvement, the content, the fun factor and parental involvement as either good or excellent.

When asked to comment on what they enjoyed about the workshop, the tutors focused mainly on the level of parental involvement:

"Kids very excited to have parents in, great turnout."

"Parents really got stuck in from the start."

"Fantastic turnout of parents so they (the children) were all partnered up."

"The intensity - all parents were very eager to get involved and engage in the workshop. The new principal welcomed everyone to the workshop."

When asked what could be improved, tutors commented:

"We ran out of time...(for the parachute games)"

"Would love to have had them moving about more but kept them in two's a lot"

"Included lots of 1:1 games and included a few more singing games"

"...kids were starting to get tired"

Additional comments referred to the welcome participation of 'Dads' at the workshop, the limited but manageable space available, and the amount of laughter from the group which was enjoyable.

Schools

A school representative (usually the class teacher) provided feedback following each workshop. All the schools rated the workshop as 'better than expected'. The information provided, venue, facilitator, content and fun factor were all rated either good or excellent. When asked to provide comments on what could be changed, left out or included in future workshops, all responses were very positive stating that, the workshop worked well, the activities were very suitable and enjoyable, and the workshop included lots of wonderful ideas for parents. Additional comments included:

"Very interesting, lovely to see parents taking part."

"I am delighted to have Lynda with us again to raise awareness about health and activity."

All schools were interested in a follow-up workshop in the future.

Additional Evaluation: Post-Workshop Survey - Additional Schools

Parents

99% (n = 69) of parents confirmed that the workshop met their expectations. When parents were asked to express their satisfaction level following the workshop, 89% indicated that it was better than they had expected and 11% found it as expected. Figure 38 shows the ratings of: information received prior to the workshop; venue; facilitator; content; and fun factor. The venue, the facilitators, the workshop content and the fun factor all received high proportions of excellent ratings. Information prior to the workshop was poor or unsatisfactory amongst 3% of parents, satisfactory amongst 12%, but the majority (85%) found the information to be either good or excellent.

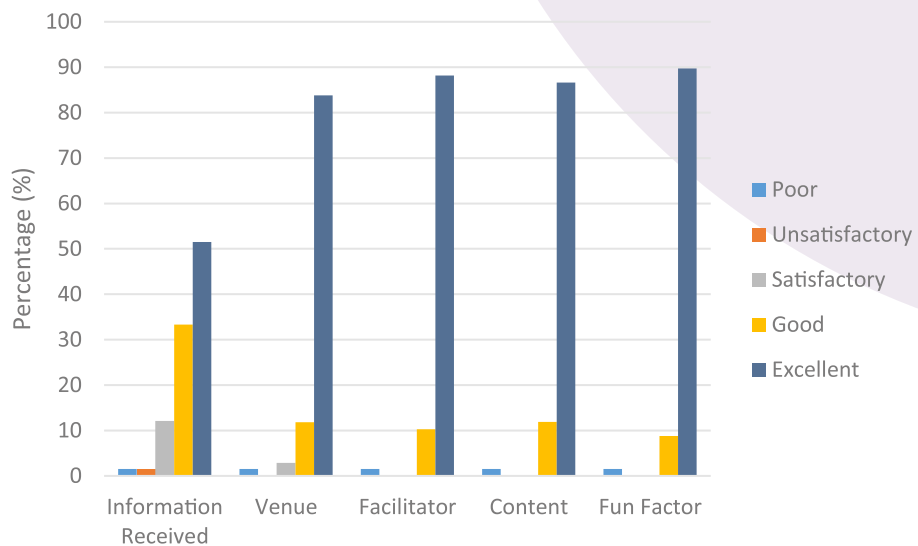


Figure 38. Rating of ASLC workshop key elements.

Parents were asked to rate what they particularly enjoyed about the workshop. Most enjoyable, at 83%, was the ‘interaction with the children’, ‘activities and games’ was selected by 28%, and the ‘attitude of the children’ by 17%. All options were available to select and therefore one respondent could have selected all 3 options.

80% of parents were interested in receiving further training. Of the 80%, the majority would prefer training on play, around 45% would like physical activity or nutrition training, followed by 21% looking for general parenting training.

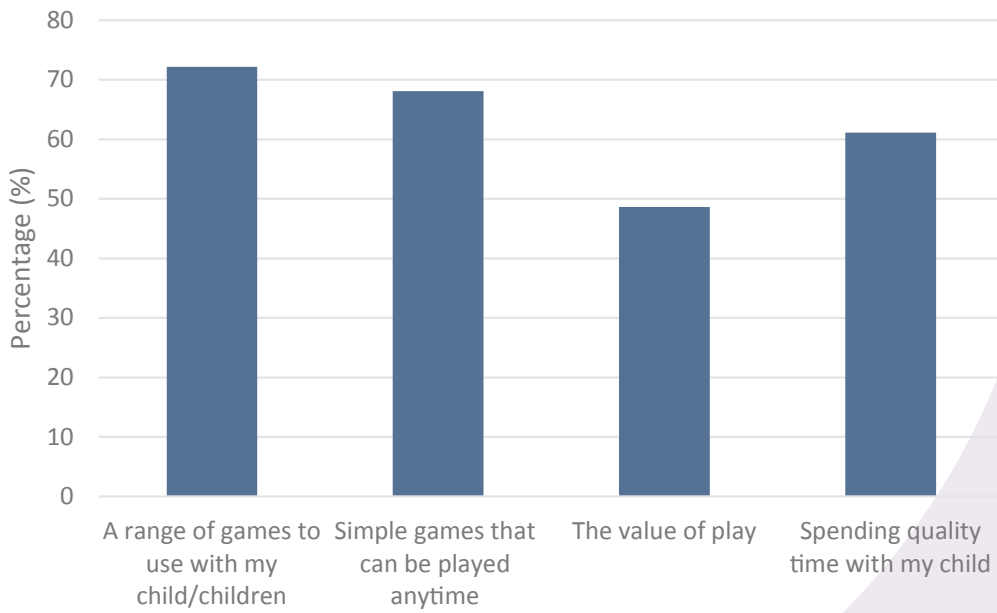


Figure 39. What parents learned from the workshop that they might use with their child(ren).

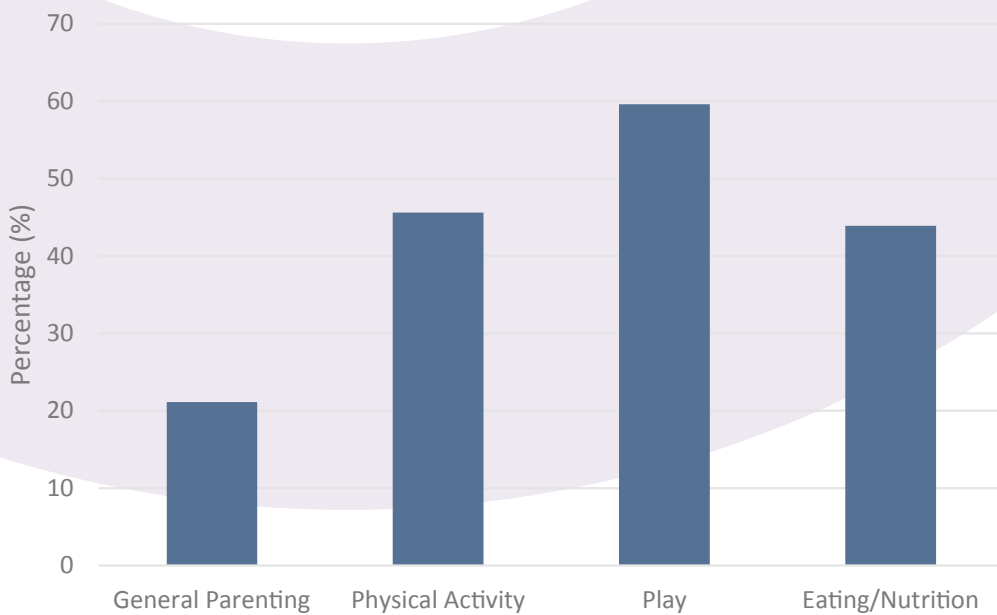


Figure 40. Preference for what training parents would like in the future.

Tutors

2 tutors provided feedback from 5 additional ASLC workshops. In every instance the workshop met the tutors’ expectations, and ran either ‘as expected’ (n = 3) or ‘better than expected’ (n = 2). Tutors rated the venue, the content, the fun factor and parental involvement as either good or excellent. School involvement was also rated as either good or excellent, with the exception of one instance in which the tutor rated it ‘satisfactory’.

When asked to comment on what they enjoyed about the workshop, the tutors focused on the level of enjoyment and the involvement from everyone:

“Big turnout, great venue, loads of space for games”

“How much the kids enjoyed the games”

“Parental involvement”

“Very lively bunch especially the older group”

“Both parents and kids enjoyed games”

When asked what could be improved, tutors commented:

“I would include more singing/rhymes for younger groups”

“Kids were hungry/tired so workshop shortened by 15 mins”

Additional comments referred to the mixed quality of refreshments made available to the children and parents, and the varying level of teacher/school involvement in the workshop, at different schools.

Schools

Schools' satisfaction level with respect to the workshop was either 'as expected' or 'better than expected'. The information provided, venue, facilitator, content and fun factor were all rated either good or excellent. When asked to provide comments on what could be changed, left out or included in future workshops, all responses were very positive stating that, all content was excellent. Additional comments included:

“All parent comments have been positive”

“A booklet with the games featured could be provided to adult participants for reference (or take home DVD)”

“Children and parents actively participating and having lots of fun, would highly recommend”

All schools were interested in a follow-up workshop in the future.

Conclusions

From the evaluation conducted, there are a number of key aspects of the present ASLC programme that must be commended. It is evident, from the results reported above, that the programme aims are being met. Furthermore, from the open discussions during the qualitative aspect of the evaluation (focus groups and interview), the programme as a whole was considered to be of real value for all concerned. Nevertheless, upon analysis of the observations, focus group discussions and 7-Day Family Activity and Food Diaries, there are areas where the current workshop format could be developed to further enhance the overall impact of such an intervention.

Parental Involvement

Firstly, it must be noted that only 18% of the parents included in this evaluation could accurately describe the current PA guidelines for children prior to participation in the ASLC workshop. There are important implications in understanding the guidelines for PA as noted by Knox et al. (2015), who suggested that accurate knowledge of the guidelines could influence the amount and quality of activity undertaken. Young people rely on an adult, such as a parent, to provide them with opportunities to be active and engage in healthy behaviour at home. In fact, this individual is essential in enhancing these opportunities beyond the school setting. If this adult is not aware of the key health messages and/or activities in which they can engage, positive changes in health behaviour will not occur. The National Physical Activity Plan for Ireland (Department of Health, 2016) recognises the need to develop more community wide physical activity programmes and partnerships focused on children and families and to provide education and physical activity opportunities to them in schools, neighborhoods and communities. ASLC provides an opportunity for this to be achieved.

In addition, feedback obtained from the children themselves, through the Think, Write and Draw exercise, clearly identified 'Mummy' and 'Daddy' as central to the workshop (Figure 25), suggesting that parental involvement in the programme was one of the most important aspects.

Healthy Behaviours

Within this evaluation the key purpose was not just to examine quality of PA as a result of participation in the workshop but to focus on the interaction between parent and child and the continued promotion of PA and healthy behaviour beyond the school day.

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*the
programme as
a whole was
considered
to be of real
value for all
concerned*
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Physical Activity and Sedentary Behaviour

It can be shown from the evaluation of the 7-Day Family Activities and Food Diary that, as a result of, participating in the ASLC workshop, parents become more aware of the key health messages regarding PA and healthy eating. Physical activity engagement, in particular, was increased in children after participation in the workshop, and this increase was maintained for at least 3 months. This provides evidence that the ASLC workshop is effective in increasing PA levels of children in general as well as stimulating a greater proportion to achieve the National PA guidelines for PA. While none of the children included in this evaluation were entirely inactive, the diaries revealed a slight decrease in the number of inactive days reported (although not statistically significant). Inclusion of health messages centred around the adverse effects of inactivity and SB during the workshop, as well as the benefits of PA, could result in a greater reduction in inactive days.

Considering that the ASLC workshop, in its current format, resulted in an 6% increase in the number of children physically active 3 months later (in comparison to whole sample baseline), if this programme were to be scaled up and delivered in all primary schools across Ireland, this could translate to 19,246 children being more active (based on CSO 2011 census data: 320,770 5-9 year olds across the state). To reach the Healthy Ireland targets of a 1% increase per annum in the number of children physically active, this would translate to approximately 3,208 children per annum. ASLC appears to exceed this target almost 6-fold. If the programme was to be extended from one one-off workshop per school to, for example, a 6-week programme, the potential for greater impact and lasting effects could be significantly increased.

“ the ASLC workshop is effective in increasing PA levels of children in general as well as stimulating a greater proportion to achieve the National PA guidelines for PA ”

‘Playing indoors’ was far less popular than ‘playing outdoors’ and in fact was the 4th most common sedentary activity. From the 7-Day Family Activities and Food Diary responses, it was evident that parents believed outdoor activity was ‘physical activity’, while indoor activity was ‘sedentary’. In some cases, parents reported that their child was inactive all day because the weather was bad. This suggests a need for parental education around what is meant by ‘being active’ and perhaps a stronger message regarding opportunities for active play may be required during the ASLC workshop.

Participation in the ASLC programme had no effect on the subsequent PA levels of the adults involved. This is to be expected as the focus of the programme is directed to the healthy behaviours of the children rather than the adults. With such strong engagement from parents in the programme, there is huge potential for ASLC to target the adults participating, as well as the children, thereby expanding the reach and impact of the programme to the wider family. As mentioned previously, there is unequivocal evidence that active parents are more supportive of their children's PA than non-active parents (Gustafson and Rhodes, 2006), so there is a rationale for targeting this group also.

Nutrition

At baseline, most parents reported that their family eats healthily very often, yet on average, children did not consume the recommended 5 portions of fruit and vegetables daily (Food Safety Authority of Ireland, 2011). With respect to children's consumption of healthy and unhealthy food and beverages, it was evident that a short-term effect existed as a result of attending the ASLC workshop, i.e. immediately following the workshop there is an improvement in healthy food consumption however by 3 months' post workshop this effect is lost. A consistent and repeated message regarding healthy eating may be required in order to have a lasting improvement in nutritional status, and this is something that could be achieved through further expansion of the ASLC programme.

Family Interaction

Parents and children tended to engage in more sedentary activities together than physical activities. Considering the influence parents can have as 'role models' (Welk et al. 2003), there is a danger that a negative situation could develop leading to an impact on SB throughout the life course. Targeting SB habits in younger children is vital for future health behaviour and therefore justifies a need for parents and children to be more physically active together rather than sedentary together. One way this could be achieved is through 'active homework'. For example, homework/reading comprised a large proportion of SB for children (Figure 15) and was also one of the sedentary activities reported by parents (Figure 17). If school teachers could assign active homework tasks as opposed to only academically focused work, then this would prompt parents and children to be active together.

Participation in the ASLC workshop resulted in a slight increase in the number of physical activities that parents and children carried out together 2 weeks later (albeit not statistically significant). While this shows a positive trend, further improvements may be gained by educating/training parents on ways and opportunities to be active with their child. In addition, considering the importance of play in developing strong parent-child bonds (Ginsburg, 2007), active play indoors, in partnership with parents, should be more strongly promoted within the ASLC programme.

“
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The ASLC Workshop

Workshop observations were a key element of this evaluation, as they showcased exactly what tutors and participants were engaged in during the workshop and for what periods of time.

Summarised observations of the workshops revealed that time spent in tutor led activity ranged from 22-56%. In the two schools where tutor-led time exceeded 44% of the overall time there was a clear compensatory reduction in parent-child, child-parent and child-child interactions. While it is necessary for the tutor to instruct games, a more standardised approach could be adopted to minimise tutor-led time (and therefore standing time for children and parents). This would also provide greater opportunity for engagement between parent – child, child – parent, and child – child, which is one of the ASLC objectives.

It was observed that key aspects of Fundamental Movement Skills (FMS; e.g. balance, throwing and catching) and specifically Fundamentals of Movement (FoM; e.g. balance, coordination and agility), were being delivered in the games and activities, and there is potential for these to be further encouraged and enhanced within the workshop. For example, standing was noted as the main activity during workshops (70% of workshop duration) and included time spent for tutor instructions, equipment distribution and transitions between games. A large percentage of the activities within the workshop also included standing as a core element. During these periods, tutors could potentially incorporate and observe skills such as balance and coordination within their delivery. While it is the intention of the programme to engage children in MVPA, it was noted during observations that the activity level was low for nearly 90% of the time. Nevertheless, if we are looking at the true development of physical activity, or indeed 'Physical Literacy', the activities which had standing central to the game (e.g. parachute game) are prime instances when children and adults were engaged in FoM (physical) and the 'C' system (building confidence, character building, cohesion, connections, contribution, competence) (Haskins, 2014). So, although the activity level may have been low there are other aspects taking place that can be considered as valuable to the physical activity learning journey of the young person.

It was through open discussions at the focus groups that a lot of the understanding regarding the purpose of the programme and the key messages delivered were drawn upon. The perception is that the workshop promotes PA in young children, gets kids and parents active in a fun way and provides an opportunity for parent-child bonding. It was also mentioned that the workshop allows schools to meet their own targets in terms of parental reach. Interestingly, 'active play' and 'playing together' were not mentioned with regards to the ethos of the programme within the focus groups, although this was noted by one SurveyMonkey respondent. If this is one of the unique aspects of ASLC, then it might be necessary to revisit the marketing/promotional information provided to avoid the programme being referred to as 'another physical activity intervention'.

The workshop itself is consistently referred to as fun and enjoyable. This is important because research shows that activity preference and enjoyment are correlated with physical activity engagement in children (Sallis et al. 2000), and that activities/sports are more likely to be taken up long-term if the individual enjoys doing them (Allender et al. 2006).

A strong theme emerged regarding the take-home message for parents, and where ASLC could impact beyond the one-off workshop. There was a general feeling that, during the workshop, more opportunities for one-to-one parent-child bonding are needed and perhaps less focus on PA and more focus on active play between parent and child(ren). An extension to the ASLC programme was consistently mentioned and there was a strong feeling that more repeated delivery of workshops would result in greater behaviour change.

Children's Perspective

The Think, Draw and Write activity provided an interesting insight into the ASLC workshop from the perspective of the children involved (both individually and collectively). Parental interaction was very important for the children and a key aspect was having the opportunity to interact and play with their parent. This provides a strong rationale for the continued involvement of parents in the ASLC programme, and suggests an increase in the role of the parent as a motivating tool pre and post activity. Further education, training and engagement for parents could assist in developing this aspect of the programme, which is something parents have indicated (via post workshop evaluations) that they would be were interested in availing from.

In total six responses noted an accident or injury sustained as something which they did not like about the workshop, highlighting the importance of health and safety during the workshop and dealing with these matters at the time to avoid the potential lasting negative effects which the child may feel going forward.

Children indicated specific games they liked and others they were not so keen on. Some children also provided details of why they didn't like a game, revealing that an inability to perform a task may have been the reason for not enjoying particular games. This is interesting as workshop tutors and developers are of the opinion that the games are 'simple' and 'easy', yet some children seemed to have difficulty with some tasks. This highlights a need for tutors to observe technique and help children if necessary, or to ensure games are based on techniques children have been already been taught as part of other activities (i.e. core FMS learned during PE). It is important to take account of both the individual responses and the responses as a whole, as Bloyce and Smith (2010) found that different kinds of sports and activities are experienced differently, by different kinds of participants. Particular circumstances must be considered in some detail, as what works for one participant (or group of participants) might not necessarily work for others.

The children's awareness of the benefits of PA was limited to aspects such as growing strong, with far fewer aware of the benefits to bones, the heart and emotions. An awareness of the negative effect of sweets and chocolate was highlighted, as well as the positive effect of fruit. This shows that children of this age can be influenced by health messages, but also emphasises the need for further education regarding the physiological and psychological benefits of physical activity.

Interestingly, through the Think, Draw and Write activity, slightly more children indicated their favourite activity was playing indoors compared with playing outdoors (Figure 30), yet playing outdoors was by far the most common activity reported by parents (Figure 9). This suggests a slight disconnect between what children like to do and what parents think their children like (or should) do. Providing parents with a more significant role in this process in future should result in better understanding of their child's likes and dislikes. Furthermore, this would enable parents and teachers to individualise their approach to promoting understanding of, and engagement in, healthy behaviours.

Limitations

It should be noted that self-report methods for assessing behavior are subject to social desirability bias, whereby individuals are inclined to over report engagement in socially desirable behaviours (i.e. fruit and vegetable consumption or physical activity levels) and under report undesirable actions (i.e. consumption of unhealthy foods or engagement in sedentary activities) (Sallis and Saelens, 2000). However, while objective measurements (such as accelerometers) are more indicative of true behaviour, they are expensive, time consuming to use, require prolonged engagement and sufficient valid wear time, which is notoriously difficult in young children (Welk et al. 2000).

The poor response rates for the 2-week and 3-month diaries must be noted, however the information gathered from those who did return their diaries assisted in formulating an overall picture of what occurred post intervention. Furthermore, timing of the 3-month data collection fell in the summer months when children were not in school and this may have affected the results.

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Parental interaction was very important for the children and a key aspect was having the opportunity to interact and play with their paren

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Recommendations

In summary from the evaluation conducted by the research team there are a number of key messages and recommendations for the developers of the ASLC programme to assist in the continuation of the current programme.

1. Expansion of the ASLC programme

The ASLC programme is extremely well received by all involved and is an initiative that targets key priorities identified by government. It is commendable that the one-off 90 minute ASLC workshop resulted in positive effects on healthy behaviour in children, which justifies its continued delivery and further roll-out across all primary schools in Ireland. However, it was evident that some positive effects were short-term and that they tended to dissipate over time. Therefore, it is recommended that the ASLC programme be expanded to include a more frequent delivery of the workshop (for example once per month throughout the school year), each time building further upon FMS and FoM (Physical Literacy), parent-child games, key health messages, homework tasks and healthy behaviours.

This expansion would align with the work that is required to meet Healthy Ireland (2016) targets, such as increased proportion of children achieving the National Physical Activity Guidelines. Furthermore, it could assist with achieving Better Outcomes Brighter Futures: National Policy Framework for Children and Young People 2014-2020 goals (for example, it could encourage more schools to achieve the Active Schools Flag).

Alongside this, there is a need to educate parents further with respect to healthy behaviours, including eating habits, PA and active play, and SB. The ASLC team may look to develop a bespoke workshop for parents to guide them in understanding the importance of FMS and FoM for life-long involvement in sport and physical activity and incorporate the key health messages during this time. Furthermore, the team could review the information that is disseminated at the end of the workshop and potentially consolidate existing resources into a training pack for parents.

2. Continued, regular and more detailed evaluation

As is identified in Better Outcomes Brighter Futures: National Policy Framework for Children and Young People 2014-2020, policies and services targeting children should be evidence-informed and outcomes-focused. Therefore, regular and detailed evaluation of ASLC is essential and will assist with evidencing the efficacy of the programme and the achievement of its targets, as well as those of the Department of Health. Furthermore, Ireland has a significant need for PA data in children, particularly younger age group, and especially using objective measurement techniques as opposed to self-report methods. With a scaled-up delivery of ASLC across primary schools in Ireland, there is potential, in partnership with higher education research, to provide a means for obtaining this much needed information. It is recommended that future evaluations should include sufficient time for planning and implementation of methods (i.e. during the summer months) so that the school year of interest is adequately captured.

3.

1. Stronger 'active play' 'playing together' message

It was clear from the evaluation that both parents and children enjoyed the opportunities provided to engage in the playing together aspect. However, a stronger 'playing together' message will encourage this to be further extended beyond the school and into the home environment. To assist with this the team may expand upon the existing resource for parents, that provides the games delivered during the workshop, to include an expanded list of activities, particularly one-to-one games, and key messages relating to the importance of active play. In addition, it might be important for the school to ensure that 'Active Play' and 'Playing Together' are key messages which are addressed during break and lunch periods and indeed any opportunities where physical activity occurs during the school day.

Furthermore, it is recommended that the team revisit the ASLC promotional information that is sent to schools, parents and key stakeholders, as 'active play' and 'playing together' did not come through clearly within the qualitative evaluation in terms of the programme aims.

2. Revisit the games included in the workshop.

There is a need to review the games and activities that are currently being delivered to the participants during the workshop, and how these can place a greater focusing on the core Fundamentals of Movement. It is recommended that activities and games involve higher intensity activity for longer periods and that the ASLC team look at ways to incorporate these more during the workshop, particularly through the replacement of standing time. The delivery team might look to focus their activities on resources within the school such as playground markings and how these could be incorporated into the session. Finally, focusing on one-to-one parent-child games may have more impact for smaller families than group-based games.

There are additional recommendations the evaluation team felt would also enhance the ASLC workshop and assist with the continued growth and development of the current programme:

- a) Review the tutor training and standardise, within reason, the workshop that is being delivered. This would reduce variability in tutor delivery and ensure similar opportunities for activity and play are being awarded to all who participate. This standardisation will not take away from the creative and innovative delivery of the tutor, but will give all an opportunity to reflect upon what activity is currently happening within their workshop.
- b) With respect to key health messages, provide additional information to parents on sedentary behaviour and what impact this has upon the health of the population. This could be in the format of (i) a workshop or (ii) pamphlets.
- c) Exploit the benefits of having a captive audience and target the adult's healthy behaviour as well as the child's. With parents having a strong influence on younger children's behaviour, this would be a good opportunity to direct key health messages whilst also addressing PA targets in the adult population.

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Appendices

Appendix 1

Evaluation of 'Ag Súgradh le Chéile' Flow Diagram

Staff members from HSE and/ or 'Ag Súgradh le Chéile' workshop facilitators contact schools about hosting workshops. Schools complete a booking form to host a workshop.



Schools will be assigned to receive the workshop in the coming weeks or to wait until a later date. This will not be randomly allocated. Schools due to receive the workshop within the coming weeks will act as intervention participants while those due to receive the workshop at a later date will act as control participants.



INTERVENTION: Once a school has booked to take part in the workshop, the HSE or school staff will distribute information leaflets about the study to parents/guardians with a detachable attendance slip.

At this point, parents/guardians will also be provided with an information pack from Ulster University which will be distributed by HSE staff alongside the above information. This will include a consent form if parents/guardians wish to take part in the additional evaluation study alongside their attendance at the workshop.

CONTROL: Parents/guardians will be provided with an information pack from Ulster University which will be distributed by HSE staff/school staff and will be informed that they will have the opportunity to participate in the workshop at a later date.



INTERVENTION: Provided with evaluation pack at least one week before workshop – complete and return to workshop facilitators on day of workshop.

CONTROL: Provided with the same questionnaire pack and asked to return to their child's school.



INTERVENTION: Parents/guardians and their child/children attend the 'Ag Súgradh le Chéile' workshop

CONTROL: Continue with their usual routine



INTERVENTION: Post-intervention (2 weeks and again at 3 months), parents/guardians will be asked to complete the same evaluation pack completed pre-workshop. After 3 months, parents will also be invited to take part in a focus group discussion.

CONTROL: Provided with the same questionnaire pack at the same time points.

Appendix 2

Family Activities Diary Information

Appendix 2



Participant ID: _____

School: _____

Evaluation (please circle):
Before Workshop
After Workshop (2 weeks)
After Workshop (3 months)

Thank you for helping us evaluate the 'Ag Sugradh le Chéile' Workshop!

Please indicate who is attending the workshop:

Mum Dad Other (please specify) _____

Your Age

We would like *you* to record a 'typical week of activities' in your family home, for *you* and *your child*. Please complete the diary every day in the week leading up to your scheduled ASLC workshop.

Here is some information to help you complete the diary:

Physical Activity is any bodily movement including activities you do while working, playing, carrying out household chores, travelling, and engaging in recreational pursuits.

How Long?

Please circle the number of minutes which best represents the time spent doing each activity.

< denotes 'less than'

> denotes 'more than'

What Intensity?

Please circle what intensity you think each activity was.

LOW – Low intensity physical activity is where you're moving your body but not enough to raise your heart rate or feel yourself get warm.

MOD - Moderate intensity physical activity is where you're working hard enough to raise your heart rate and break into a sweat. You're working at a moderate intensity if you're able to talk but unable to sing the words to a song.

VIG - Vigorous intensity physical activity is where you're breathing hard and fast and your heart rate has increased significantly. If you're working at this level, you won't be able to say more than a few words without pausing for a breath.

Sedentary Activities are activities you do while sitting or reclining, e.g. reading, watching TV, playing a games console, travelling in a car/bus/train or working on a computer. Please circle the number of hours which best represents the time you spent doing each activity.

Nutrition – please tell us if *your child* had any:



Fruit & Veg

IF YES –
how many
pieces?



Fizzy Juice

IF YES –
how many
glasses?



Water

IF YES –
how many
glasses?



Sweets & Chocolate

IF YES –
how many
bags/bars?

Appendix 2 (continued)

Family Activities Diary

Family Activities Diary

Did you do any Physical Activity today?	YOU		How Long? (please circle)	What Intensity?	YOUR CHILD		How Long? (please circle)	What Intensity?	Did you do this together?	
	Yes	No			Yes	No			Yes	No
What did you do?			<30	LOW			<30	LOW		
			30-60	MOD			30-60	MOD		
			>60	VIG			>60	VIG		
			<30	LOW			<30	LOW		
			30-60	MOD			30-60	MOD		
			>60	VIG			>60	VIG		
What did you do?			<30	LOW			<30	LOW		
			30-60	MOD			30-60	MOD		
			>60	VIG			>60	VIG		
			<30	LOW			<30	LOW		
			30-60	MOD			30-60	MOD		
			>60	VIG			>60	VIG		
Did you do any Sedentary Activity today?	Yes		<1hr		Yes		<1hr			
			1-2hrs				1-2hrs			
			>2hrs				>2hrs			
			<1hr				<1hr			
			1-2hrs				1-2hrs			
			>2hrs				>2hrs			
What did you do?			<1hr				<1hr			
			1-2hrs				1-2hrs			
			>2hrs				>2hrs			
			<1hr				<1hr			
			1-2hrs				1-2hrs			
			>2hrs				>2hrs			



YES
NO



YES
NO



YES
NO



YES
NO

Appendix 3

Pre-Workshop Survey Template

Pre-Workshop Survey

We would like to ask you a few questions before the workshop starts.

1. What are your expectations for today's workshop?

2. What are the current Physical Activity Guidelines for children?

3. Do you eat healthily? (please circle one answer)

Always Very Often Sometimes Rarely Never

4. Using numbers 1 (most important) to 4 (least important), rank the following:

_____ Physical Activity
_____ Healthy Eating
_____ Interacting with your Child
_____ Playing with your Child

Appendix 5

Focus Group Topic Guide

Welcome to this focus group, let me introduce the research team to you. You are all aware of the reason you have been selected to attend this specific focus group. We are here to ask a number of questions to assist in understanding the strengths and weaknesses of the 'Ag Súgradh le Chéile' workshop. Everything discussed here will be recorded to assist in gaining a better understanding of how you have implemented this into your setting. Please be assured that everything stated today will be taken with the utmost respect and everyone will be given the opportunity to provide us with their opinion. At any point if you would like to leave this focus group, please feel free to do so. Your individual opinions will remain anonymous within the write up. So please speak openly with regards to your feelings. Let's get started.

Focus Group Questions

How were you involved in the project (e.g. Developer, Tutor, Stakeholder, Parent)?

Did you enjoy your involvement with the programme?

Was the process involved in taking part efficient?

Do you think that the programme increased the active play levels of children through the promotion of active play with parents and their children?

Do you think that the programme supported family based activity by promoting parents' involvement in their children's development through active play?

Do you think that the programme raised parental awareness of the National Guidance regarding physical activity for young children?

Do you think that the programme can act as a vehicle to promote important national campaign messages?

Do you think the programme supported schools to work in partnership with parents?

Do you think that the programme promoted healthy eating, particularly with regard to snacks, and linked with the School Policy on Healthy Eating?

Is there anything else you would like to add regarding your involvement in the workshop?

Thank you so much for your time!

Appendix 6

SurveyMonkey Questionnaire

(1) Who is completing the survey?

- a. School Principal
- b. School Teacher - Class involved in the programme
- c. Parent
- d. Key Stakeholder

(2) What in your opinion is the purpose of the programme?

Agree Disagree Not Sure

Increasing physical activity

Increasing interaction between Parent and Child(ren)

Behaviour Change

Introducing Fun Games

Health Promotion Message

(3) With reference to Q2, please state what in your opinion you consider to be the main purpose(s) of the programme? Please give a reason for your answer.

(4) What aspect of the programme did you enjoy most?

(5) Why was this the case?

(6) Would you recommend the programme to others?

- a. Yes
- b. No
- c. Not Sure

Further comment:

(7) Could the programme be improved?

- a. Yes
- b. No
- c. Not Sure

Further comment:

Appendix 6 (continued)

SurveyMonkey Questionnaire

- (8) The duration of the programme is 90 minutes in total. Do you think this is too long, too short or just right?
- a. Too short
 - b. Too Long
 - c. Just right
 - d. Not Sure

Further comment:

- (9) Are there additional aspects you would like to see included in this programme?
- a. Yes
 - b. No
 - c. Not Sure

Further comment:

- (10) The evaluation of this programme has included: pre, 2 and 3 month diaries. Have you completed this part of the evaluation?
- a. Yes
 - b. No
 - c. In Part (some of the diaries)

Further comment:

- (11) Are there any further comments that you would like to add that might assist the above programme?

Appendix 7

Think Draw and Write Instructions

Ag S gradh le Ch ile

Think, Draw and Write Instructions

The think, draw and write technique allows children to express their views using a child friendly medium. Children find it easy to express their views/ ideas through drawing. Draw and write involves few literacy skills and those unable to write are encouraged to whisper what they want to write to the teacher / facilitator who as scribe, without prompting or guessing, writes down their ideas verbatim.

Greet the children and explain that they are going to make some pictures about the Ag Sugradh le Cheile workshop. They will be asked a question and after thinking about it they will draw their picture and write some words beside it. Explain that there are no wrong answers – everybody’s ideas are important. Tell them not to write their names on the booklet.

Follow the instructions for each question. Please do not prompt the children with reminders, ideas, etc.

The Invitations to Write

Getting started!

Look at the front page of your booklet. The first thing you need to tell us is if you are a **boy** or a **girl**. Can you put a tick in the box that tells us you are a **boy** or **girl**?

The next question is about your **age**. Can you put a tick in the box that is the same number as your age.

Well done!

Appendix 7 (continued)

Think Draw and Write Instructions

Q.1.

Now open the booklet. Do you see the box with Number 1 in the circle and the smiley face? I want you to think about the lesson in the hall earlier today with all the grown-ups. What did you **like best** about it? Think about all the different games you played. Can you draw a picture about what you **liked best**?

Don't worry about what anyone else is doing. Your picture about what you **liked best** is important.

I am going to come around and help you write the words about what you **liked best**. You can whisper them to me.

Can everyone finish their picture and words for the first box now please?

Q.2.

Look at Box 2 now with the sad face.

Can you think about anything **you did not like** during the lesson with all the big people? Remember all the things you could see and hear or how you felt during the **active play** lesson. Was there anything **you did not like**? Draw a picture of something **you did not like** in the lesson?

I will come and help you write some words to tell us what **you did not like**.

That was quick – well done everybody.

Q.3.

In box 3, I want you to draw a picture of things you and your family do that **helps keep you healthy**. You can draw more than 1 picture in the box but don't forget we need words for the pictures too.

Remember there are no wrong answers. We want to know anything your family does that **helps keep everybody healthy**. Draw a picture in Box 3 now.

If you need me to help with a word put up your hand and whisper it to me when I come over. Everybody finished?

Appendix 7 (continued)

Think Draw and Write Instructions**Q.4**

Now, I want you to think about things children do that are **not-so-good for our health**. What might some children do that is **not good for their health**? Can you draw a picture of this? Don't worry about what anyone else thinks. Your ideas about what is **not-so-good for children's health** is what we want to find about.

While you are drawing the picture I will come and help write the words to say what the children in your picture are doing that is **not-so-good for their health**.

You are doing great and all this work will be really helpful for the people who are trying to find out about active play and families.

Turn over now to the back page – just 2 boxes to go.

Q.5

This time think about children who have been **playing** and have been **very active**. What parts of their bodies are **helped by playing and moving and being active**? Can you draw a picture in Box 5 please of **how children's bodies are helped by being active**? Think about what happens the body inside and outside.

Draw a picture that shows how the body is helped by being active. I will come and help write the words that describe how you think active play helps our bodies.

Q.6

Last box! This time think about your **favourite thing to do after school**.

What do you like doing best when you come home from school?

Draw a picture of **your favourite thing to do after school**. I will help you write the words to describe what you are doing in the picture.

Well done everyone and thank-you.

Appendix 8

Think Draw and Write Workbook

Ag Súgradh le Chéile

Please tick

Are you a ...



girl



boy

What age are you?



4

5

6

For Office Use

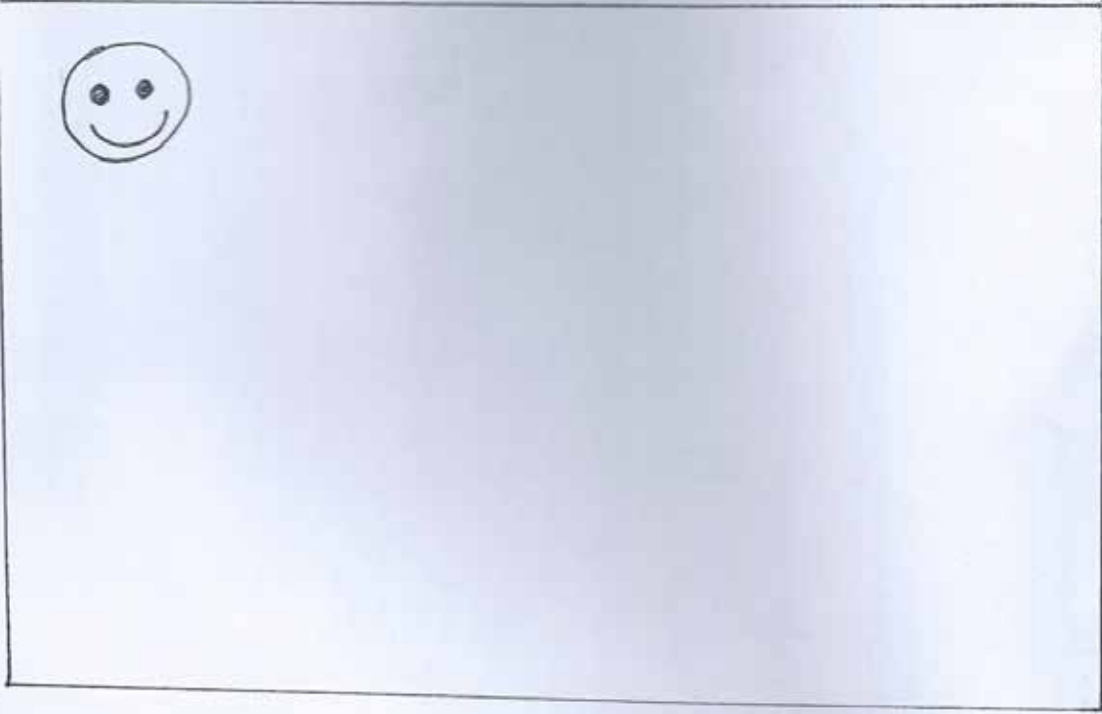
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Class :

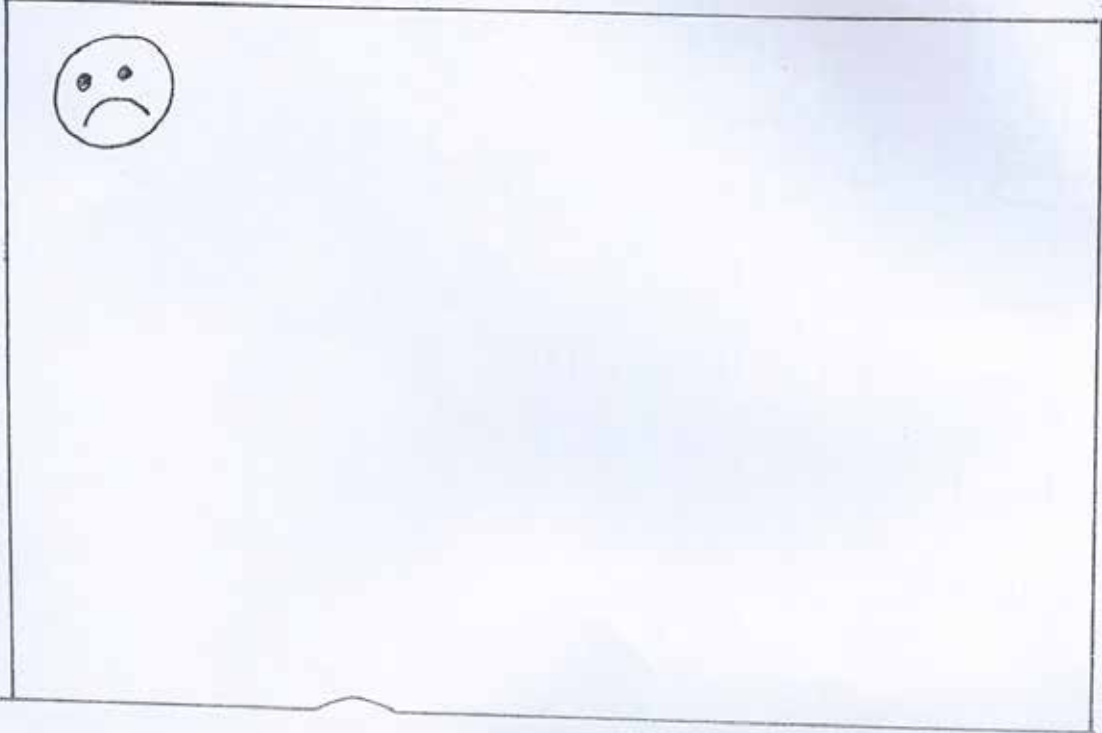
Appendix 8 (continued)

Think Draw and Write Workbook

1




2



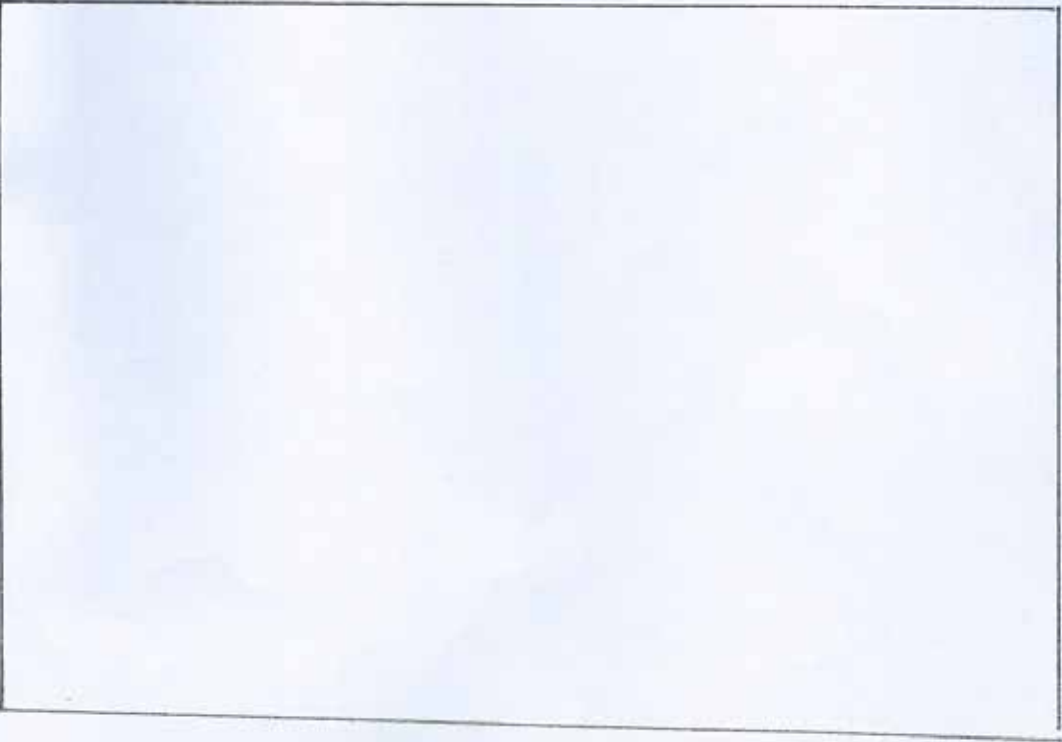
Appendix 8 (continued)

Think Draw and Write Workbook

3



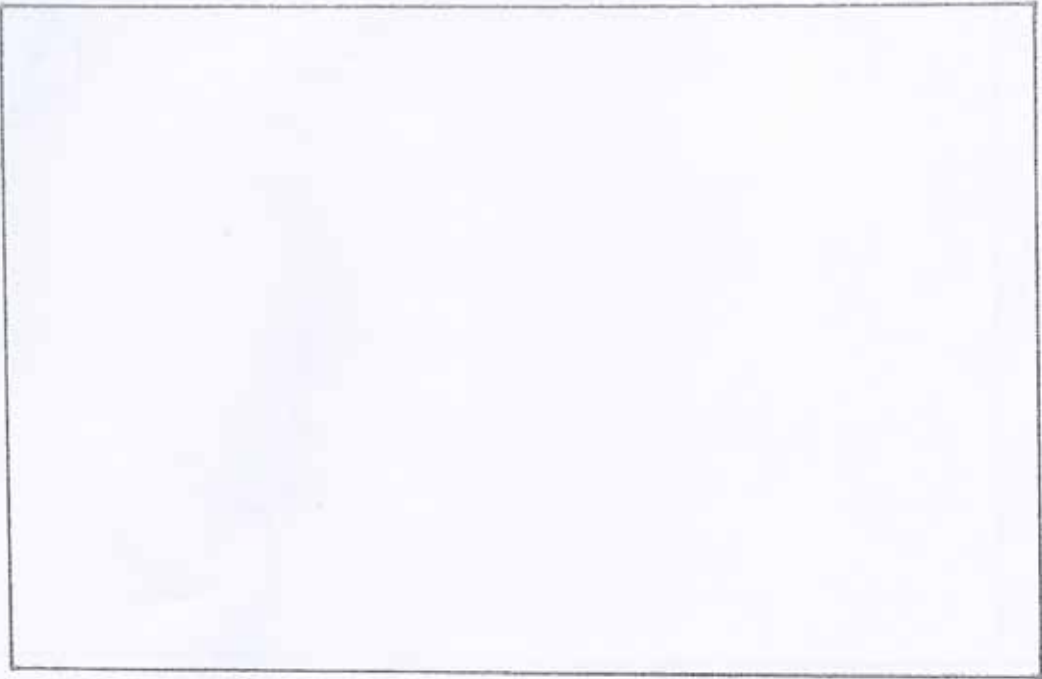
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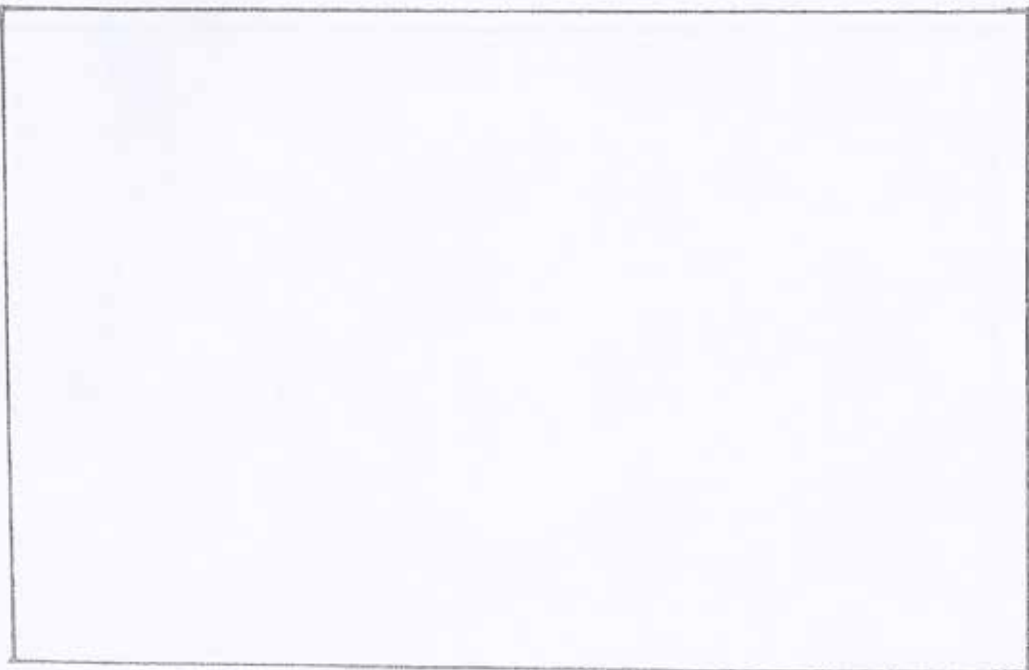
Appendix 8 (continued)

Think Draw and Write Workbook

5



6



Thank you for helping us!

Appendix 9

Parent Feedback Form



YOUR FEEDBACK IS IMPORTANT TO US!!!!!!!!!!!!

Parent Feedback Form

School: _____ Date: _____



1. Did this workshop meet your expectations? Yes No
2. Was it:
 - Better than expected
 - As you expected
 - Not as good as expected
3. Please rate the following: (please circle)

	Poor	Unsatisfactory	Satisfactory	Good	Excellent
Information received prior to workshop	😞	😞	😐	😊	😄
The venue	😞	😞	😐	😊	😄
The facilitator	😞	😞	😐	😊	😄
The content	😞	😞	😐	😊	😄
The Fun Factor!	😞	😞	😐	😊	😄
4. What particularly did you enjoy about the workshop?
 - Attitude of children
 - Activities
 - Interaction with children
5. Are there any parts you feel could be left out /changed/included? _____

6. What did you learn from the workshop that you might use with your child/children?
 - A range of games to use with my child/children
 - Simple games that can be played anytime
 - The value of play
 - Spending quality time with my child
7. Would you be interested in further training?
 - Yes
 - No
8. If so what type of training?
 - General parenting
 - Physical activity
 - Play
 - Healthy Eating & Nutrition
9. Would you be interested in attending a follow-up workshop on active play in 6-8 weeks?
 - Yes
 - No
10. Any additional comments _____

Appendix 10

School Review Form



School Review Form

Name: _____

Contact Number: _____

Location of Workshop: _____

Date of Workshop: _____



1. What were your expectations in hosting the workshop?

2. Was it:

 Better than expected
 As you expected
 Not as good as expected

3. Please rate the following: (please circle)

	Poor	Unsatisfactory	Satisfactory	Good	Excellent
Information received prior to workshop	😞	😞	😐	😊	😄
The venue	😞	😞	😐	😊	😄
The facilitator	😞	😞	😐	😊	😄
The content	😞	😞	😐	😊	😄
The Fun Factor!	😞	😞	😐	😊	😄

4. Are there any parts you feel could be left out /changed/included? _____

5. Would you be interested in holding a follow-up workshop?

 Yes
 No

Any additional comments _____

Please return to:
 Lynda Mc Guinness, Health Promotion Department,
 St. Conals, Letterkenny

Appendix 11

Tutor Review Form



Tutor Review Form

Tutor Name: _____

Contact Number: _____

Location of Workshop: _____

Date of Workshop: _____



1. Did this workshop meet your expectations? Yes No
2. Was it:
Better than expected As you expected Not as good as expected

3. Please rate the following: (please circle)

	Poor	Unsatisfactory	Satisfactory	Good	Excellent
The venue					
School Involvement					
The content					
The Fun Factor!					
Parental Involvement					

4. What particularly did you enjoy about the workshop? _____

5. Are there any parts you feel could be left out /changed/included? _____

6. Any additional comments _____

Please return to:
Lynda Mc Guinness
Health Promotion and Improvement
First Floor, County Clinic, St. Conals
Letterkenny

Appendix 12

Parent Feedback Form



YOUR FEEDBACK IS IMPORTANT TO US!!!!

Parent Feedback Form

School: _____ Date: _____



1. Did this workshop meet your expectations? YES NO
2. Was it: Better than expected As you expected Not as good as expected
3. Please rate the following: (please circle)

	Poor	Unsatisfactory	Satisfactory	Good	Excellent
Information received prior to workshop					
The venue					
The facilitator					
The content					
The Fun Factor!					
4. What did you enjoy about the workshop?

Attitude of children Activities/Games Interaction with children
5. What were the strengths of the workshop? _____
6. Are there any parts you feel could be improved? _____
7. What did you think was the main focus of the workshop?

Physical Activity Interaction with children Healthy Behaviours

Other please specify: _____
8. What did you learn from the workshop that you might use with your child/children?

Simple games that can be played anytime with my child/children

The value of play

Spending quality time with my child
9. What actions will you take in the future as a result of attending this workshop? _____
10. Would you be interested in further training YES NO

If YES, what type of training?

General parenting Play

Physical activity Healthy Eating & Nutrition
11. Would you be interested in attending a follow-up focus group discussion about the workshops in 8-12 weeks' time?

YES NO If YES: please provide a contact email: _____
12. Any additional comments _____

