SMALL-SIDED GAMES STUDY OF YOUNG FOOTBALL PLAYERS IN SCOTLAND

INDEPENDENT CONSULTATION PAPER

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1.1 Introduction

We (The University of Abertay Dundee) conducted the following research by means of an observational analysis of small-sided games in Scotland. The purpose of the study using video analysis software (prozone) as our observational analytical tool was to collect data to compare the 4 vs. 4 game to the 7 vs. 7 and 11 vs. 11 game for U12 players.

The basis for the research was due to several factors;

- Scotland has used the small-sided game as the preferred tool for developing young players for over 15 years and it is time to review the evidence for this strategy
- Part of the debate is the appropriate age that young players should move to the adult version of the game
- There had been very little or no previous Scottish research using observational methods
- Much of the previous research was based in the USA and England and was not always relevant to the Scottish system
- Previous studies were basic in analysis and detail

This study will provide an overview of the research that was conducted and will summarise the results from the study. It is hoped that the findings will inform the current debate and provide recommendations for future policy directives as well as creating a base for further research into the age and stage of young players development in football.

1.2 Background

More than fifteen years ago the move towards small-sided football was discussed at national level. In particular, the then, current Technical Director of the SFA, Andy Roxburgh (now Technical Director for UEFA) pioneered the small-sided game as the best means of developing the game for children. The small-sided games principle was based on sound educational and developmental evidence. Children learn in a progressive and sequential way using a building block approach. According to existing research the belief is very much that the 11-a-side game is a game designed by adults for adults and should be seen as the last part of the learning journey. Therefore, the 7-a-side game is the intermediate step and the 4 v 4 game is the first step in the ladder.

According to current research (Winter, 2005; Insight, 2004; Manchester United, 2003), the ability of children to make decisions in a difficult, ever changing environment will be dictated by their developmental age, their preparation and the complexity of the situation. Professional educators and football coaches from

around the world are agreed that the small-sided game is the best developmental tool for under 13's considering all the information. Also, the use of the 4 and 7 a side games are the best means of teaching the technical and tactical [decision making] parts of the game in preparation for the adult game.

Many believe that the large size of an eleven-a-side pitch, even at its smallest dimensions is too big for children due to the fact that they spend large amounts of time running around or standing still without even touching the ball with very limited passing interaction as well as skill and technical development. The limited time a child touches the ball will not allow appropriate time to develop the basic skills of which many of our international counterparts carry out so successfully. Ultimately, this will result in relatively low skill levels amongst young players in Scotland, which in turns leads to a number of children becoming disenchanted and leaving the sport.

In Scotland today, the PMP (May 2003) Youth Football in Scotland: Structure and Development review, Executive Summary report recommends that all football for U12s boys & girls is small sided. However, some coaches still allow children to participate in full-sized, eleven-a-side games. Examples of eight, nine and ten-year old children playing eleven-a-side matches on a full-size pitch is still occurring too frequently and without a definitive, well argued policy, based on evidence, the game will always fail to give young people the most appropriate experience in which to learn our national game.

2. Review of Literature

Skill Acquisition is an essential component of both coaching and the education of children encountering new skills in new sports. An understanding of the basic principles of motor skill acquisition can enhance the process of teaching / learning, and further, is associated with the application of motor control principles, in effect contributing to the factors associated with the successful acquisition of new skills. Skill acquisition goes on to provide information for coaches and performers relating to specific cue indicators, to aid performance during practice and competition.

Dreyfus & Dreyfus (1986) described a model of skill acquisition. The overriding theme associated with this model is related to professionalism in action. This involves knowledge, the application of that knowledge and the decision making process involved with the application of knowledge. As an individual approaches a level of expertise those decisions become more intuitive, less easily understood at a cognitive level. They are less step-wise and more instinctive responses.

The Dreyfus & Dreyfus (1986) model focuses on learning by experience, and the five levels, which describe skill acquisition, are:

a. Novice
b. Advanced beginner
c. Competent
d. Proficient
e. Expert

The learning of physical skills requires the relevant movements to be assembled, component by component, using feedback to shape and polish them into a smooth action. Rehearsal of the skill must be done regularly and correctly.

Further to the Dreyfus & Dreyfus (1986) model, Schmidt (1999) identified a further correlation between experience and skill acquisition.

Schmidt's theory (1999) was based on the fact that actions are not stored rather we refer to abstract relationships or rules about movement. Schmidt's schema is based on the theory that that every time a movement is conducted four pieces of information are gathered:

- the initial conditions - starting point
- certain aspects of the motor action - how fast, how high
- the results of the action - success or failure
- the sensory consequences of the action - how it felt

Relationships between these items of information are used to construct a recall schema and a recognition schema. The Recall schema is based on initial conditions and the results. It is also used to generate a motor program to address a new goal. The recognition schema is based on sensory actions and the outcome. It would therefore seem feasible that practice and competition opportunities for children (and youths) must be appropriate to the age and stage of the performer. In football the environment and practice conditions will have a major impact (positive or negative) on the player's learning.

2.1 *Transfer of learning*

Transfer of learning can take place in the following ways:

Skill to skill, this is where a skill developed in one sport has an influence on a skill in another sport. If the influence is on a new skill being developed then this is said to be proactive and if the influence is on a previously learned skill then this is said to be retroactive. This skill to skill learning can be particularly effective with children due to the diverse range of activity associated with childhood activity.

Theory to practice, the transfer of theoretical skills into practice. In effect allowing children to associate a sound theoretical knowledge of football with the actual practical element associated with the sport.

Training to competition, linking the transfer of skills developed in training into the competition situation, highlighting the need for quality practice and coaching during the educational stage.

2.2 *How are faults caused?*

Having assessed the performance and identified that there is a fault, there is a need to determine why the faults are occurring. Faults have been identified as being caused by :

- Incorrect understanding of the movement by the athlete
- Poor physical abilities
- Poor co-ordination of movement
- Incorrect application of power
- Lack of concentration
- Inappropriate clothing or footwear
- External factors e.g. weather conditions

For learning to be achieved successfully Magill (1998) found that there are four main characteristics exhibited as learning takes place. These characteristics can be directly related to the teaching and learning of sports performers. The characteristics are: Improvement; Performance of a skill shows improvement over time, Consistency; performance becomes increasingly more consistent over time, Persistence; whereby the improved performance capability is marked by an increasing amount of persistence, and Ability, where the improved performance is adaptable to a variety of performance context characteristics. In order to give effective feedback, a coach is required have a comprehensive understanding of these characteristics and how they affect their athletes learning.

For coaches to achieve the goals of a distributed learning paradigm, it is important to address two critical components of a learning environment; the coach's and the athletes. Coaches who accept feedback as an educational tool must accept this role as being a central cog in the educational wheel. Coaches must consider their athletes; ages, cultural backgrounds, interests and experiences, education levels and familiarity with particular methods of feedback. For a coach to provide effective feedback, a clear understanding of learning is essential. Learning is defined by Magill (1998 p126) as:

> "*A change in the capability of a person to perform a skill that must be inferred from a relatively permanent improvement in performance as a result of practice or experience*"

For various reasons, athletes find particular means of learning more suited to them, and so in effect respond differently to different methods of feedback Salmela (1995). Further investigations by Salmela (1995) found that the response to feedback depended upon the individual athlete, in that some athletes responded to the atmospheres of group discussions (team sports) whilst others preferred practical demonstrations or coach: athlete discussions (individual sports). For a coach to provide effective feedback they must have a clear understanding of different learning approaches commonly demonstrated by learners, whilst having a clear and holistic understanding of the feedback goal.

This concept is highlighted by Salmela (1995) who stated that the education of children within a practical setting was invaluable. Salmela (1995 p.62) found that for athletes to achieve effective learning, this involves "*Physical, technical, tactical and mental components"*. The key concepts of talent identification involve a multi-disciplinary approach considering all these factors with individual desire and commitment being the main one. It is crucial that the coach is aware of this and adapts the content of their training sessions accordingly.

The adaptation to differing methods of feedback can also be related to the discipline of neuroscience. Neuroscience has been found to have a major impact on learning, as discovered by Vygotsky (1996) who suggested that learning is distributed across three interconnected networks; the recognition networks which specialise to receive and analyse information, seen as the "what" of learning; the strategic networks are adapt at the planning and execution of actions, known as the "how" of learning; and the affective networks known to affect the brains ability to evaluate and set priorities, the "why" of learning. Vygotsky (1996) found that athletes cannot simply be categorised as being 'Disabled' or 'Bright' learners, as each athlete differs within each brain network showing both strengths and weaknesses, whilst covering each of the three networks making every child unique. Scientists have made unprecedented progress towards unlocking the impact neural networks have on learning, driven by new technology and techniques for imaging the brain's activity (Vygotsky 1996). Studies by Magill (1998) have found that one of the clearest and most conclusive findings from neural research is that there are no "regular" learning styles.

As found by Vygotsky different athletes have contrasting abilities throughout the different networks of the brain and so the coach can adapt the content of their training sessions to meet the many strengths and weaknesses of the individual child. Vygotsky (1996) further suggested that it is not advisable to focus on one strong network with any individual child. This principle was highlighted by Franks *et al* (1996) who supported Salmela's (1995) concept of practical learning being crucial to the development of athletes. Franks *et al* (1996) investigated the need for a wide range of coaching evaluation systems to equally meet the strengths and weaknesses of all athletes in order to provide equal feedback opportunities. Franks *et al* (1996) found that there should be seven steps to practical coaching evaluation, ensuring all neural networks are fully evaluated during the learning of practical coaching. Vygotsky (1996) also found that strengths and weaknesses across all three networks interact with the coaching and learning environment in ways that can either bring about progress or frustration. Sometimes a problem in one area can receive so much attention that other issues are missed. These studies have shown that to provide effective methods of feedback coaches should have an effective understanding of these neural networks and the impact upon feedback.

Whilst the learning styles of the athletes has an impact on the coach's ability to give quality feedback, the coach's ability to recall incidents objectively also has a major impact.

2.3 *The Zone of Proximal Development*

Children should always be challenged during the learning process, Vygotsky (1996) defined a "zone of proximal development" as being crucial to an individuals development. The zone of proximal development is:

> "*The distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under guidance or in collaboration with more capable peers"* (Vygotsky 1996).

The zone of proximal development suggests that all children must have a willingness to learn and a desire to reach their "upper levels of competence" (Vygotsky 1996). It was found however that these upper boundaries are not immutable and that they are constantly changing with the athletes increasing independent competence. Vygotsky's study concluded that with help "*What a student can perform today with assistance, they will be able to perform tomorrow independently",* highlighting the learning process.

2.4 *Individual Zone of Optimal Functioning*

This was later supported by Hanin (2000) who identified an Individual Zone of Optimal Functioning. This concept was designed to apply directly to an athletes performances, intended to regulate their psychological emotions, in an attempt to achieve optimal performance. Whilst Vygotsky (1996) and Hanin (2000) identified the learning states and styles of athletes, the role of the sports coach within the learning cycle was investigated by Siedentop (1991) who found that effective coaching has more to do with the coaches ability constantly observe, analyse, evaluate and modify their coaching to satisfy the needs of the participants within their group.

As previously stated by Vygotsky (1996) and Hanin (2000), the studies found that individuals learn best in their Zone of Proximal Development and perform best within their Individual Zone of Optimal Functioning, where challenge is just beyond their current capacity but not out of reach. Children have been identified as having a comfort zone, whereby the level of difficulty, challenge, and frustration vary considerably. Successful learning depends on a coaches ability to sustain their athlete's enthusiasm whilst adjusting their own coaching style to constantly challenge other players in the team. However, again, with relevance to this study of the small-sided game the challenge must be appropriate and questions must be asked as to whether or not the use of the full-sized 11v11 game is conducive to both the player's development and also the coaches ability to set an appropriate challenge to players and to provide a suitable environment for feedback.

It must be recognised by coach's that athletes often require a target to be set in order to achieve a particular goal. By setting goals, athletes are often forced to complete a task as a deadline is in place. When athlete's work towards a goal DeShon & Alexander (1996) found that learning takes place in two different ways; explicit learning and implicit learning. Explicit learning takes place when:

> "*the vast majority of problem solving research examines the ability of individuals to consciously develop a mental representation of the problem, formulate strategies and test alternative hypotheses for the task performance".*

2.5 *Implicit and Explicit Learning*

Learning can also be implemented via implicit learning. Implicit learning occurs, as individuals are also capable of learning complex rules of system behaviour even when there is no conscious attempt to do so. DeShon & Alexander (1996) defined implicit learning as:

> "*The acquisition of knowledge concerning stimulus co variation learned through repeated exposure to problem exemplars without intention or awareness"*.

While explicit learning requires cognitive resources and is sensitive to distraction, implicit learning is relatively resource independent. Holyoak & Spellman (1993) stated that "*a large domain of tasks are best learned implicitly"*. The learning approach of goal setting is often associated with rewards, according to Lepper & Green, (1978) this however can lead to its own problems. The study found that despite rewards being set for children the rewards on offer were not always a motivation. The study also found that extrinsic rewards were inappropriate and ineffective for long-term motivation. It was discovered that "*Extrinsic rewards can result in unintended negative consequences for learning such as turning play into work"* (Lepper & Green 1978)

2.6 *Impact of Fatigue on Learning*

As detailed by Barnett *et al* (1973) fatigue has been shown to alter the recruitment pattern and intensity of work of a muscle's motor units. The research found that during the acquisition of a new skill it is best to practice in non-fatigued conditions whether or not the skill would eventually be performed in fatigue, an example being in the final minutes of a football match. Barnett *et al* (1973) further found the establishment of neuromuscular skill patterns is best achieved in non-fatigued states. When a skill is over learned to a desired level of proficiency then it can be practiced under difficult and environmental specific cues, for example whilst experiencing anxiety / arousal or in front of crowds – all realistic possibilities for football coaches.

3. Methodology

3.1 *Observational Analysis*

Video analysis aims to provide feedback to coaches and competitors with a goal of increasing the desired performance. The athlete's technique can be studied usually at slow speed or frame by frame. Qualitative (subjective assessment - non numerical evaluation) and quantitative (measurement based - provides kinematics and kinetics) feedback can provide a description of movement in detail. Two-dimensional or three-dimensional analysis can be chosen depending on the type of movement patterns.

3.2 *Set-Up*

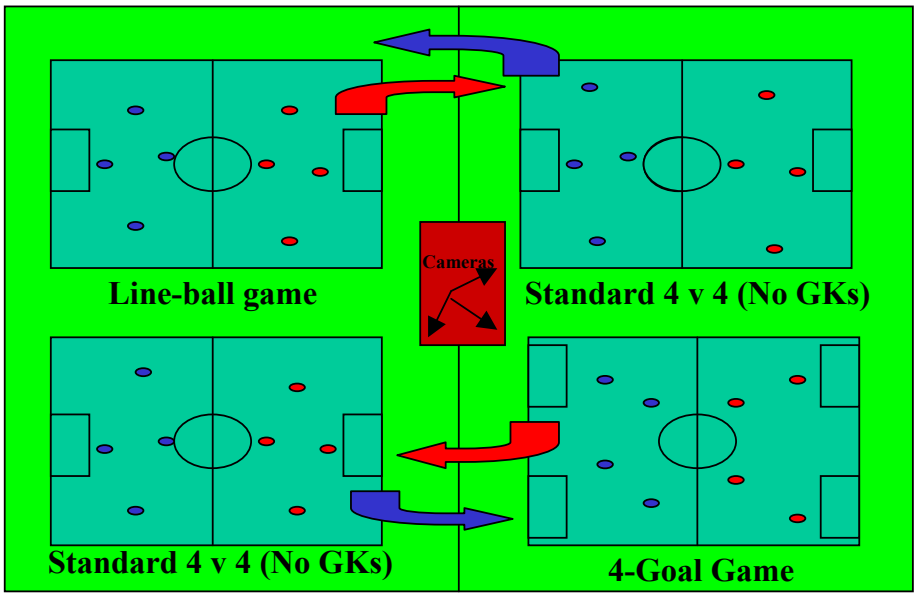
- √ The games analysed featured children playing organised football in the U12 age-group
- √ Two sample groups were analysed within the study; 1) two Youth Initiative Performance Clubs and 2) two juvenile clubs registered in the local SYFA football league
- √ The study was conducted on exactly the same surface (3-G Astroturf) with exactly the same weather conditions (fair conditions, no wind).
- √ Initial focus on eleven-a-side games followed by four-a-side and seven-a-side games.
- √ Youth Initiative Performance Clubs played against each other, as did teams from the local juvenile league. This will provide us with two sets of results allowing comparisons between the sample groups
- √ Video cameras were used to record games from a position 6-feet in the air near the halfway line on both occasions. The cameras followed the movement of the ball and the immediate surrounding action for the duration of the games.
- √ Video footage was transferred to a computerised match analysis system. This same data analysis tool was used for all games
- √ Appendix 1 demonstrates the criteria used within the overall analysis
- √ Analysis was based on footage from each game format (4 v4, 7 v 7, 11 v 11). The 4 v 4 format featured multiple games on four pitches where teams continued to move from pitch to pitch against different opponents. The 7 v 7 format was based on multiple games on two pitches (Two cameras were positioned to capture footage on different pitches in both cases)

- √ The 11 v 11 format featured games against the same opponents in each case

- √ Two squads of 16 players were used in all cases with corresponding numbers (bibs) in every game.

4. **Pitch Layout for Small-Sided Games**

4 V 4 LAYOUT



PITCH DIMENSIONS: 30 M x 20 M

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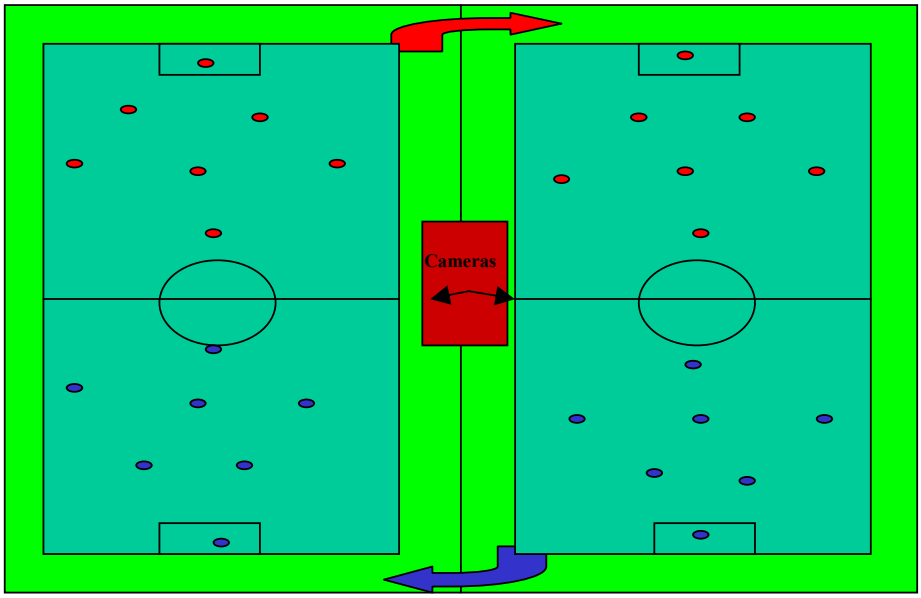
7 V 7 LAYOUT



PITCH DIMENSIONS: 60 M x 40 M

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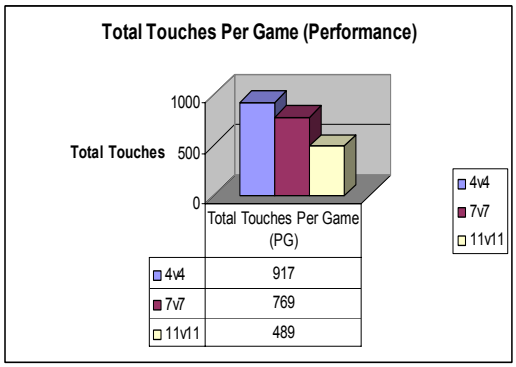
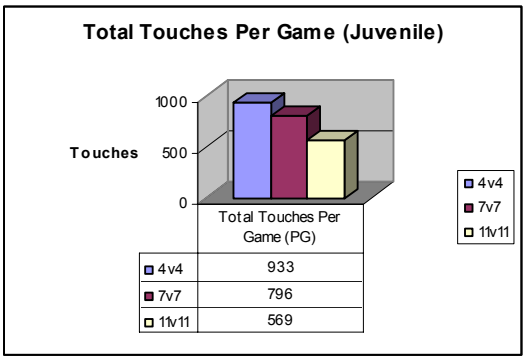
5. Results Summary Section

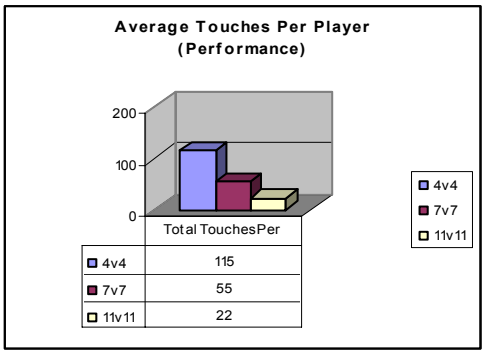
The information below provides an overview summary of the key findings between the 4v4, 7v7 and 11v11 formats. Although this is not a direct comparison between juvenile and performance clubs in Scotland, the results can be viewed individually. Performance clubs are illustrated in the left-hand column and the juvenile study on the right. A full breakdown can be seen in the results table, which can be viewed in Appendix 1.

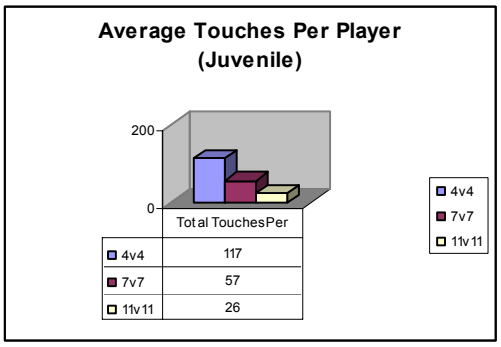
Performance Clubs **Juvenile Clubs**

5.1 TOUCHES WITHIN THE GAME

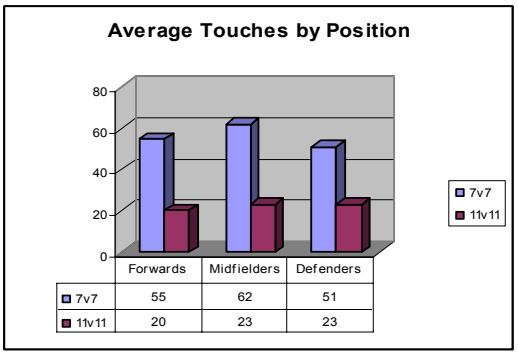


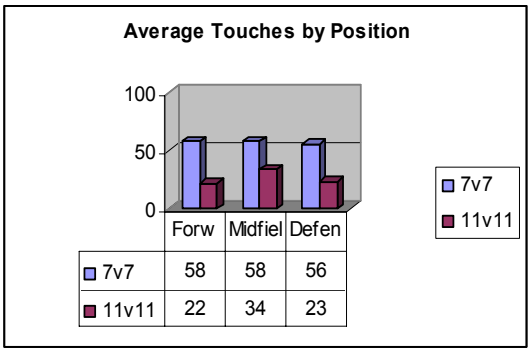




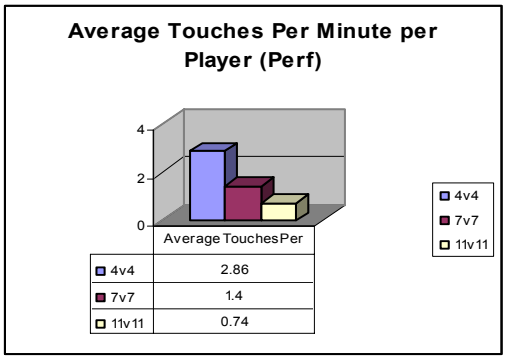


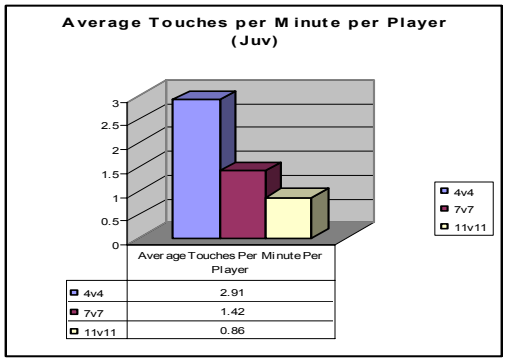
The findings clearly indicate that in both formats players receive repeated touches far more often in the small-sided format (4 v 4 / 7 v 7) than they do in the full-sized game. Children will touch the ball up to five times more in the 4 v4 format than they will in an 11-a-side game. The differences are considerable as well when the 7 v 7 is compared to the full 11 v 11 game where players touch the ball on average 50% more often.



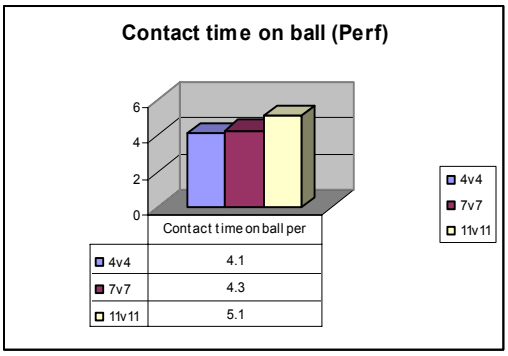


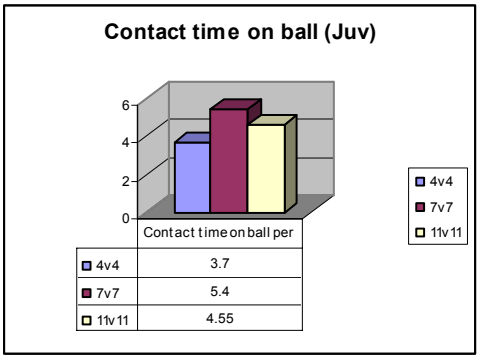
The analysis for average touches by positions are consistent with the total passes and average touches per player where children in the small-sided games touch the ball far more often than in the 11-a-side game. The small-sided player will touch the ball two-to-three times more often. In terms of differences by position, there are very few differences, however, in the performance club study, midfielders touched the ball more often than any other position – not the case in the juvenile club study. NB. Results for the 4 v 4 game were not considered in this instance due to the fact that positioning is not of great consequence.





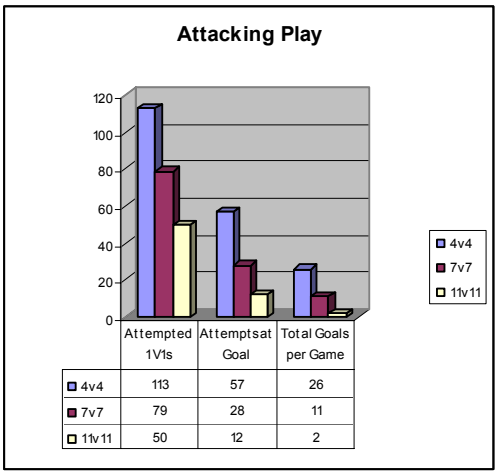
The studies found consistency again where in both cases players touched the ball more often per minute in the 4v4 and the 7v7 games than the 11v11 games. There were no significant differences between the performance clubs or the juvenile clubs.



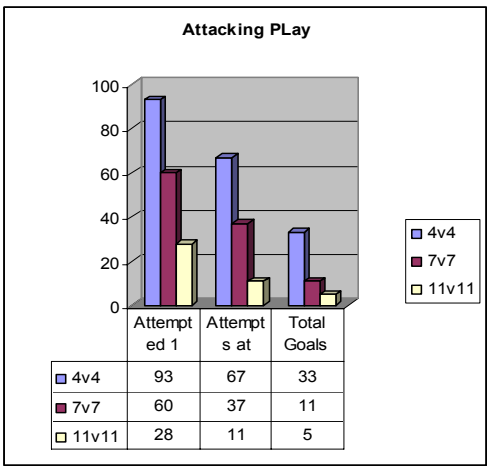


Although there are not significant differences on the contact time on the ball per player between the game formats, in the performance study results do indicate less time on the ball in the small-sided game. However, these results are not conclusive in the juvenile banding and therefore it could be suggested that further studies are required to form some consistency in this area.

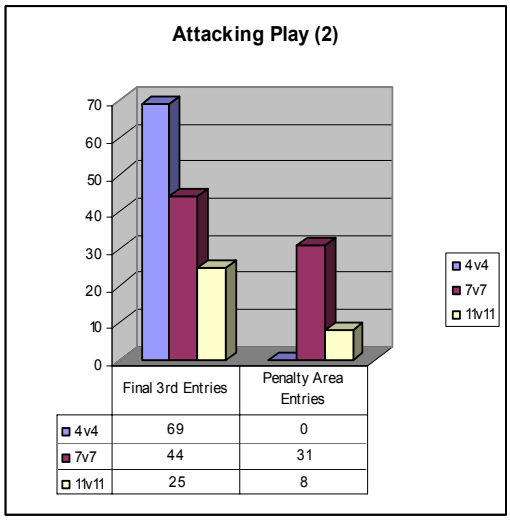
5.2 ATTACKING PLAY



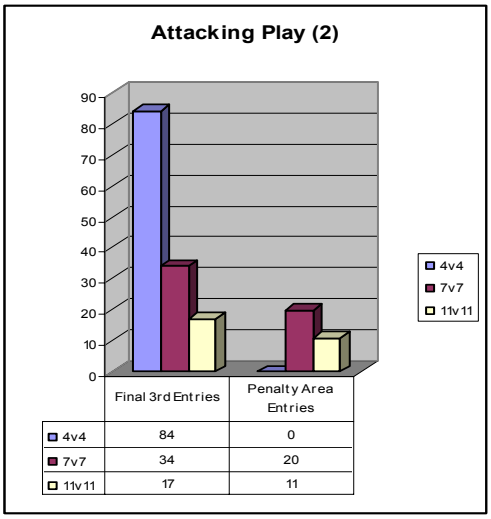
	Attempted 1V1s	Attempts at Goal	Total Goals per Game
4v4	113	57	26
7v7	79	28	11
11v11	50	12	2



	Attempted 1	Attempts at	Total Goals
4v4	93	67	33
7v7	60	37	11
11v11	28	11	5



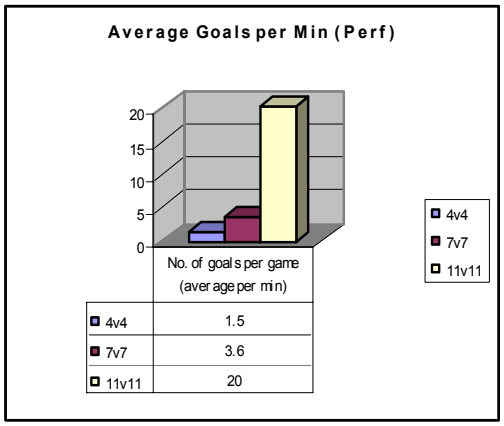
	Final 3rd Entries	Penalty Area Entries
4v4	69	0
7v7	44	31
11v11	25	8

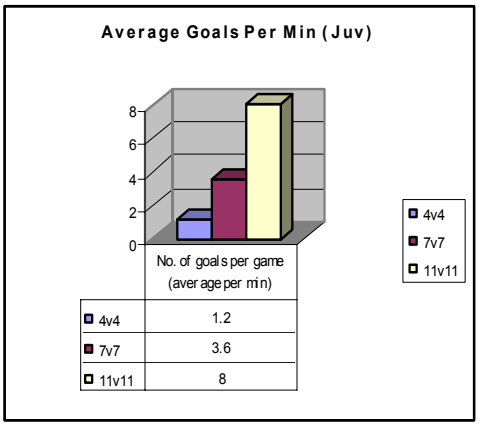


	Final 3rd Entries	Penalty Area Entries
4v4	84	0
7v7	34	20
11v11	17	11

In terms of attacking play it is very clear in both cases that more attacking play takes place in the small-sided game. In attacking 1 v 1s, up to three times more 1 v 1s are attempted between the 4v4 and the 11v11 game. Up to two times more take place between the 7v7 and the full-size game. The total number of shots on goal is consistent with the attacking play differences with more attempted goals and goals occurring in the small-sided games. This is mirrored in the number of final third entries and penalty area entries as well.

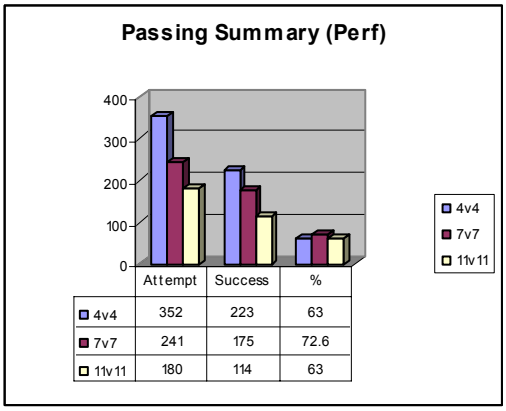
In this instance there were some clear differences between the two studies. Key differences between formats were in 1 vs 1 and final 3rd entries, which tended to be around 30% higher by Performance Clubs in the 7v7 and 11v11 games. Although it is interesting to note that there were more attempted shots on goal and actual goals in the Juvenile than the Performance games.

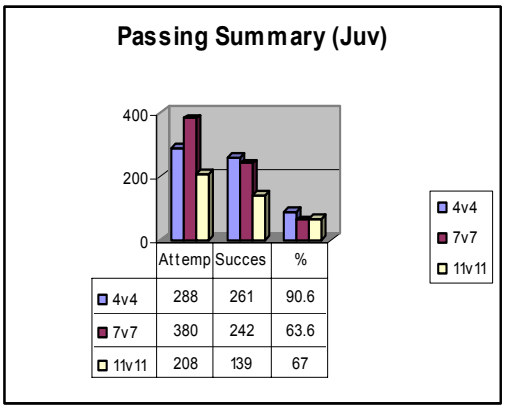




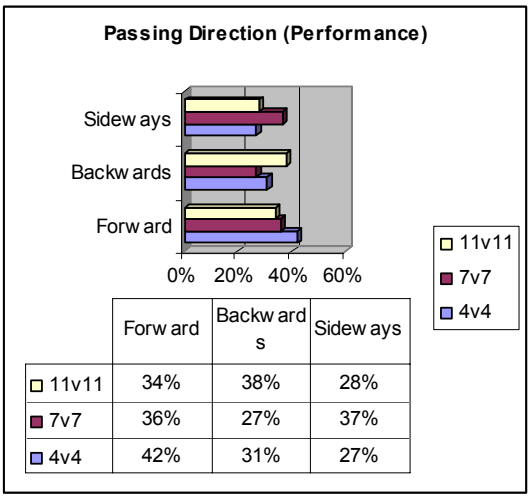
Within the analysis it is evident that far more goals were scored in the small-sided games than the 11v11 format. There was a goal scored on average every 1.2 and 1.5 minutes in the 4v4 games (no goalkeepers). In the 7v7 format this decreased to a goal every 3.6 minutes respectively and even further to one goal every 20 minutes in the performance game and one goal every 8 minutes in the 11v11 juvenile matches. This correlates directly to the technical skills by goalkeepers (below), where it is clear to see that goalkeepers receive more touches, make more saves and general actions in the 7v7 format than they do in the 11v11 games. Technical skills performed by goalkeepers tend to be between two and four times more often in the small-sided game, potentially allowing for better technical development.

5.3 PASSING SUMMARY

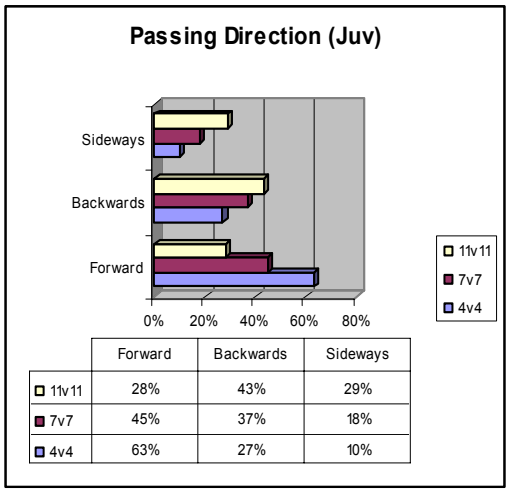




The results above demonstrate the total attempted passes versus the total successful passes per game against the successful pass rate as a percentage. Results clearly show that in the small-sided formats there are far more passes attempted and successful passes than in the 11v11 game. Although it is interesting to note that there is very little difference between the various game formats in terms of percentage-success rates. However, it can be concluded that more passes and therefore more overall successful passes leads to better technique, skill development as well as confidence and enjoyment from young players.

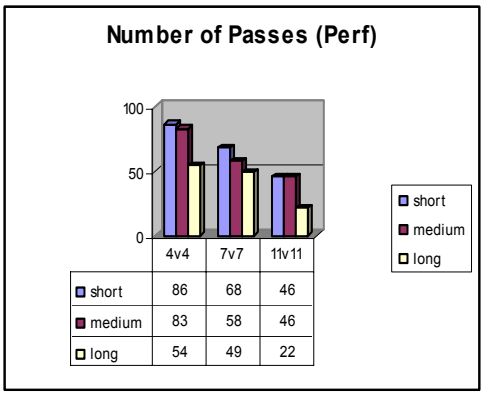


	Forward	Backwards	Sideways
11v11	34%	38%	28%
7v7	36%	27%	37%
4v4	42%	31%	27%

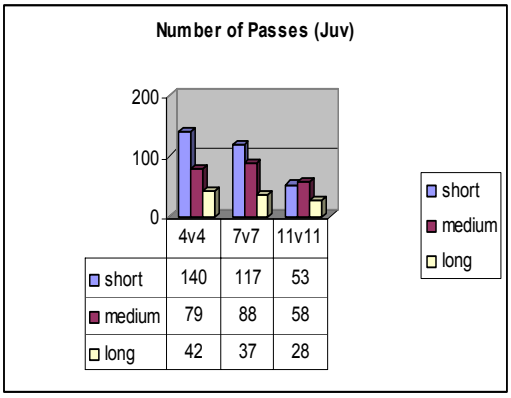


	Forward	Backwards	Sideways
11v11	28%	43%	29%
7v7	45%	37%	18%
4v4	63%	27%	10%

The results clearly show that players are more attacking orientated in the 4v4 game where the majority of passes were made in a forward direction. The 7v7 game also showed an incline towards attacking play. However, in both studies it is clear to see in the 11v11 game that the majority of players are passing in a backwards direction and are less attacking orientated.

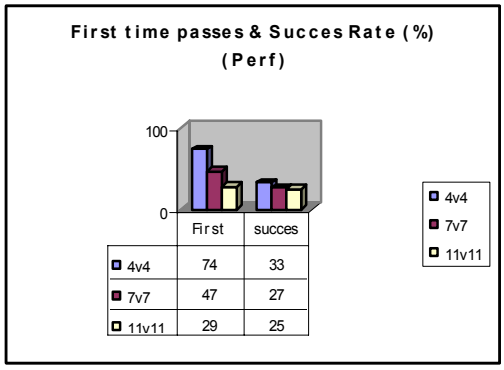


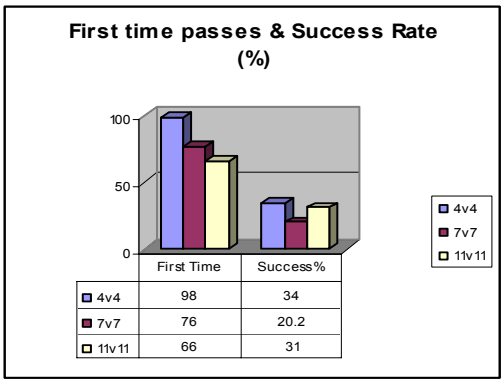
	4v4	7v7	11v11
short	86	68	46
medium	83	58	46
long	54	49	22



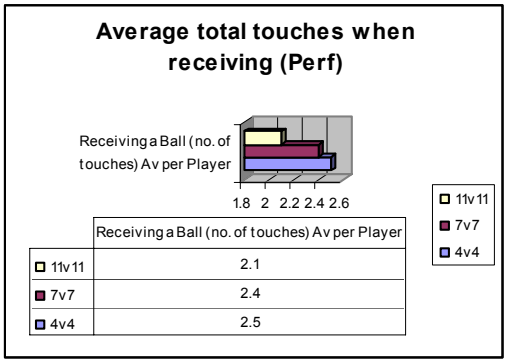
	4v4	7v7	11v11
short	140	117	53
medium	79	88	58
long	42	37	28

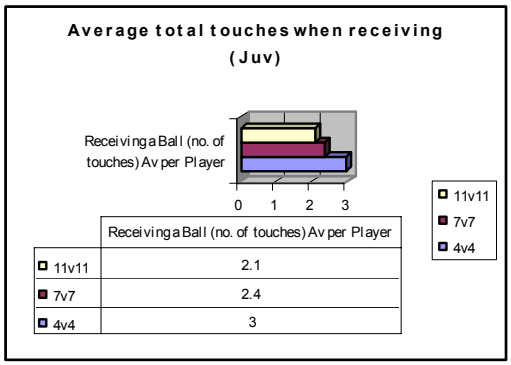
Analysis of passing during the study was completed, with specific measurements being taken according to the pitch size.
4 v 4 – Short (<5m) Medium (5 – 15m) Long (+15m)
7 v 7 – Short (<10m) Medium (10 – 20m) Long (+20m)
11 v 11 – Short (<10m) Medium (10 – 25m) Long (+25m)
As previously stated the number of passes attempted has a direct correlation to the restrictions applied to the game play. As can be seen from this analysis short and medium length passes show a significant increase during the small-sided games. However, it is important to point out that the software did not allow for an exact comparison between the formats due to the fact that it used a proportional method by scale. I.e. a short pass in the 11v11 game could be a medium pass in the 4v4 game.





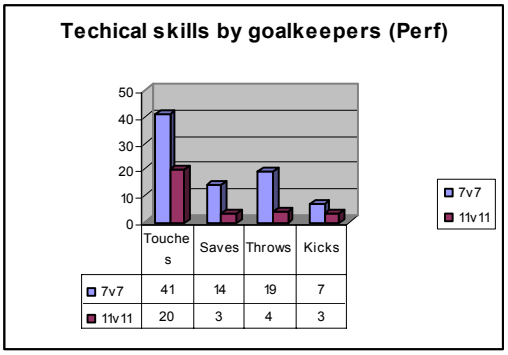
Again, consistency is demonstrated in the results where it can be observed that more first time passes were attempted in the small-sided game format than the full-sized game. Although it is interesting to note that there is very little difference in the percentage-success rate in the performance club format and indeed, in the juvenile study there was a greater percentage-success rate in the 11v11 game. This could be due to the fact that they have more space and time to move the ball in the full size game format.

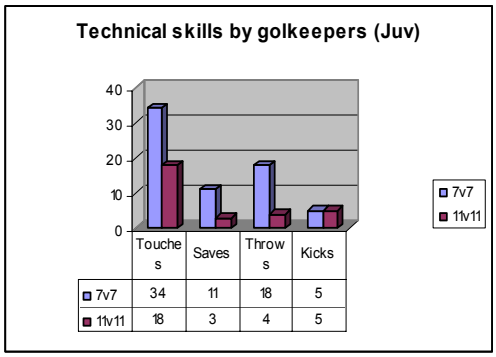




Analysis of the above graph related directly to the number of touches taken by each player whilst in possession. Comparison of the results show players of both performance and juvenile levels increase their number of touches during the small-sided games.

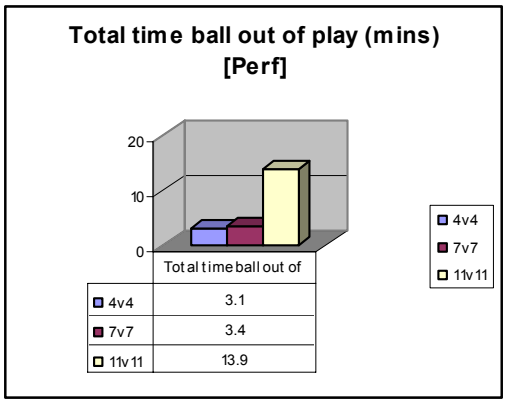
5.4 TECHNICAL SKILLS BY GOALKEEPERS

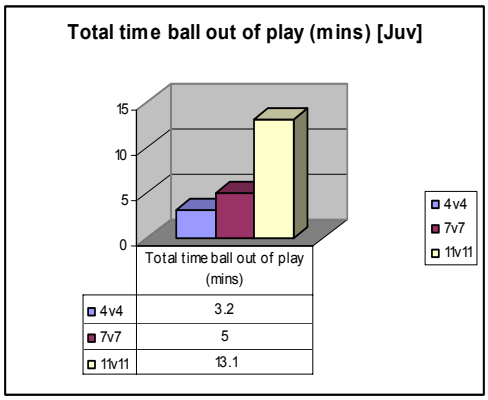


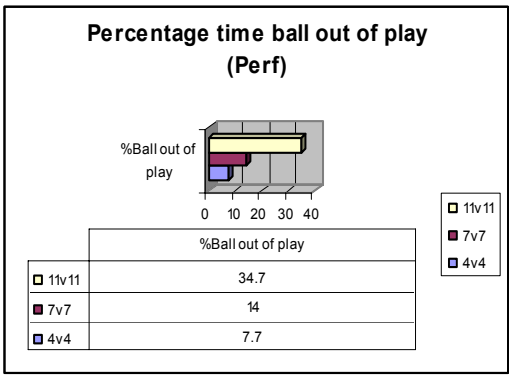


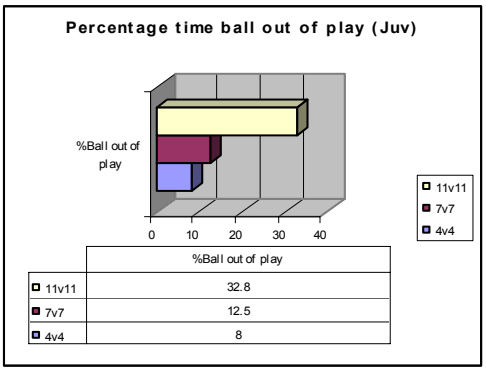
As above, it is clear to see that goalkeepers receive more touches, make more saves and general actions in the 7v7 format than they do in the 11v11 games. Technical skills performed by goalkeepers tend to be between two and four times more often in the small-sided game, allowing for better technical development. Note that in this study there were no goalkeepers in the 4v4 games.

5.5 PLAY AND POSSESSION



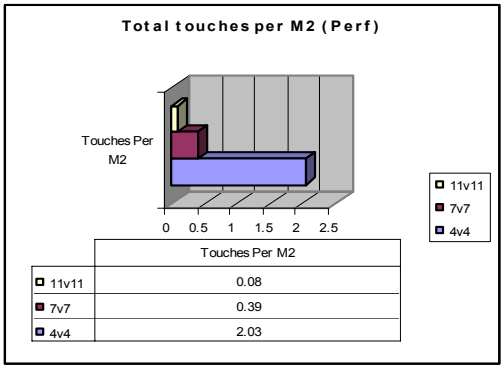




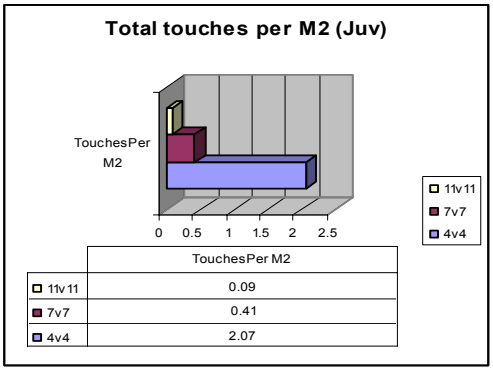


The results show very clearly that the ball is out of play far more often in the 11v11 game than the small-sided game formats. In both cases, the 11v11 games demonstrated that the ball was out of play for 13 minutes plus in both studies, which accounts for around 32-34 % of the overall time of play. In the small-sided games the ball was out of play far less, 7-8% in the 4v4 format and 12-14% in the

7v7 formats. Therefore, in terms of the relationship between the ball being out of play and the number of touches and indeed, most technical skills performed by players, this would certainly be limited through the 11v11 games due to the fact that the ball is in play far less.



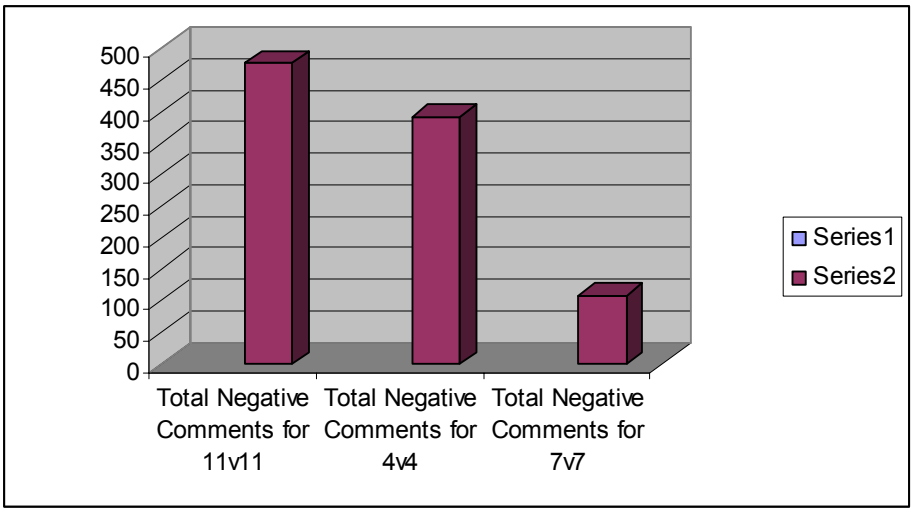
	Touches Per M2
11v11	0.08
7v7	0.39
4v4	2.03



	Touches Per M2
11v11	0.09
7v7	0.41
4v4	2.07

The studies show that in both the performance and the juvenile formats the players make much more use of the playing area in the small-sided games. When the total touches per square metre were recorded it was apparent that players did not utilise the pitch as much in the full-sized game and the number of touches per square metre is much, much less. The space was utilised more in the 7v7 games but it is conclusive that in the 4v4 games players utilise all areas of the pitch.

6. Participants Feedback on Small Sided Games Study



A total of 62 structured questionnaires were completed by parents, players and coaches.

To summarise the results the greatest proportion of negative comments were attributed to the 11v11 format, a total number of 477 negative responses were collected about the 11v11 format compared with 392 for the 4v4 format and 109 for the 7v7 format. Although the children found all formats enjoyable, 90% of the children taking part thought the 4v4 game helped to improve technical aspects of the game more than the 11-a-side game. Only 48% of children thought the 11v11 game helped improve their dribbling skills, whereas over 85% felt the 7v7 provided more opportunities to improve their dribbling skills.

One further significant finding was only 11% of the players believed they touched the ball more during the 11 v11 game compared to the other formats. Over 80% of players believed they touched the ball more in the small-sided games than the 11 v 11 games. This suggests that one or two dominant players maybe benefiting from the 11-a-side game.

To summarise 90% of the players believed the 4v4 format was the best environment to develop as a player.

6.1 Sample Questionnaire

Small Sided Games Study Part I – 4v4 – 7v7 Analysis

POSITIVE AND NEGATIVE COMMENT CATEGORIES for 4v4 against 7v7:

1= Agree with Statement. 2 = Disagree with statement

POSITIVE COMMMENTS ABOUT THE 4 v 4 Study	A	B	C
The game was enjoyable/more enjoyable than 7 v 7			
The Pilot Scheme was well organised			
The Scheme was well organised			
Players get more chance to express themselves			
4 v 4 games are challenging/more challenging than 7 v 7			
There is less emphasis on winning than 7 v 7			
The 4 v 4 improves techniques more			
4v4 is a good learning environment			
Players take more responsibility for their own actions			
The 4v4 game builds player confidence			
The 4v4 game is/was worthwhile			
The 4v4 game improves decision making			
The 4v4 game improves dribbling skills			
There is less pressure (generally) in The game			
There is less pressure from coaches in The game			
The game improves overall development			
The lack of positions aids player development			
The game improves short passing			
In the game there is less pressure from parents			
The game improves tactical awareness			
During the game you can assess players better			
The 4 v 4 games increases number of touches			
Line ball game was best			
The Goalkeepers game was best			
The 4 v 4 games improve reaction time/more than 7v 7			
The 4 v 4 improves 1 v 1/more than 7 v 7			
The 4 v 4 improves scoring opportunities / more than 7 v 7			
The 4 v 4 improves switching of play / more than 7 v 7			
The 4 v 4 improves creation of space/more than 7 v 7			
4 v 4 improves transition from offence to defence			
The 4 v 4 is as competitive / more competitive as 7 v 7			
The two gaol game is/was best			
Subtotal Number of Positive Comments			
TOTAL NUMBER OF POSITIVE COMMENTS			

NEGATIVE COMMENTS ABOUT THE 4 v 4 Study	A	B	C
The 4 v 4 games are less competitive than 7 v 7			
Supervision of players was lacking or more difficult			
The 4 v 4 games did not improve positional awareness			
The parents didn't understand it			
The 4 v 4 games are less competitive than 7 v 7			
The 4 v 4 games are less exciting to watch than 7 v 7			
Its difficult to compare the teams competing			
The Scheme is to expensive to run			
Unique facilities are needed to run The Scheme			
The 4 v 4 games were too one dimensional			
The game was nothing new			
The 4 v 4 games did not improve defensive awareness			
The 4 v 4 games did not improve crossing			
The 4 v 4 games did not improve off the ball running			
The 4 v 4 games did not improve heading			
The Scheme benefits the SFA primarily			
In 4 v 4 the errors go uncorrected			
In 4 v 4 the stronger boys dominate			
The Pilot Scheme is too similar to training			
During The Pilot Scheme player's interest waned			
Players don't learn how to cope with winning or losing			
The 4 v 4 games are more tiring			
The 4 v 4 games need goals and nets			
Subtotal Number of Negative Comments			
TOTAL NUMBER OF NEGATIVE COMMENTS			

KEY

A Children taking part

B Parents of Children taking part

C Coaches and other Observers of the study

Small Sided Games Study Part II – 4v4 – 7v7 Analysis

POSITIVE AND NEGATIVE COMMENT CATEGORIES:
1= Agree with Statement. 2 = Disagree with statement

POSITIVE COMMMENTS ABOUT THE 7 v 7 Study	A	B	C	NEGATIVE COMMENTS ABOUT THE 7 v 7 Study	A	B	C
The game was enjoyable/more enjoyable than 11 v 11				The 7 v 7 games are less competitive than 11 v 11			
The Pilot Scheme was well organised				Supervision of players was lacking or more difficult			
The Scheme was well organised				The 7 v 7 games did not improve positional awareness			
Players get more chance to express themselves				The parents didn't understand it			
7 v 7 games are challenging/more challenging than 11 v 11				The 7 v 7 games are less competitive than 11 v 11			
There is less emphasis on winning than 11 v 11				The 7 v 7 games are less exciting to watch than 11 v 11			
The 7 v 7 improves techniques more				Its difficult to compare the teams competing			
7v7 is a good learning environment				The Scheme is to expensive to run			
Players take more responsibility for their own actions				Unique facilities are needed to run The Scheme			
The 7v7 game builds player confidence				The 7 v 7 games were too one dimensional			
The 7v7 game is/was worthwhile				The game was nothing new			
The 7v7 game improves decision making				The 7 v 7 games did not improve defensive awareness			
The 7v7 game improves dribbling skills				The 7 v 7 games did not improve crossing			
There is less pressure (generally) in The game				The 7 v 7 games did not improve off the ball running			
There is less pressure from coaches in The game				The 7 v 7 games did not improve heading			
The game improves overall development				The Scheme benefits the SFA primarily			
The lack of positions aids player development				In 7 v 7 the errors go uncorrected			
The game improves short passing				In 7 v 7 the stronger boys dominate			
In the game there is less pressure from parents				The Pilot Scheme is too similar to training			
The game improves tactical awareness				During The Pilot Scheme player's interest waned			
During the game you can assess players better				Players don't learn how to cope with winning or losing			
The 7 v 7 games increases number of touches				The 7 v 7 games are more tiring			
The 7 v 7 games improve reaction time/more than 11v 11				The 7 v 7 games need goals and nets			
The 7 v 7 improves 1 v 1/more than 11 v 11							
The 7 v 7 improves scoring opportunities / more than 11 v 11				Subtotal Number of Negative Comments			
The 7 v 7 improves switching of play / more than 11 v 11							
The 7 v 7 improves creation of space/more than 11 v 11				**TOTAL NUMBER OF NEGATIVE COMMENTS**			
7 v 7 improves transition from offence to defence							
The 7 v 7 is as competitive / more competitive as 11 v 11				KEY			
				A Children taking part			
Subtotal Number of Positive Comments				B Parents of Children taking part			
TOTAL NUMBER OF POSITIVE COMMENTS				C Coaches and other Observers of the study			

Small Sided Games Study Part III – 11v11 – Small sided

POSITIVE AND NEGATIVE COMMENT CATEGORIES:
1= Agree with Statement. 2 = Disagree with statement

POSITIVE COMMMENTS ABOUT THE 11 v 11 Study	A	B	C	NEGATIVE COMMENTS ABOUT THE 11 v 11 Study	A	B	C
The game was enjoyable/more enjoyable than 4v4/7v7				The 11v11 games are less competitive than 7v7/4v4			
The Pilot Scheme was well organised				Supervision of players was lacking or more difficult			
The Scheme was well organised				The 11v11 games did not improve positional awareness			
Players get more chance to express themselves				The parents didn't understand it			
11 v 11 games are challenging/more challenging than 4v4/7v7				The 11v11 games are less competitive than 11 v 11			
There is less emphasis on winning than 4v4/7v7				The 11v11 games are less exciting to watch than 4v4/7v7			
The 11v11 improves techniques more				Its difficult to compare the teams competing			
11v11 is a good learning environment				The Scheme is to expensive to run			
Players take more responsibility for their own actions				Unique facilities are needed to run The Scheme			
The 11v11 game builds player confidence				The 11 v 11 games were too one dimensional			
The 11v11 game is/was worthwhile				The game was nothing new			
The 11v11 game improves decision making				The 11 v 11 games did not improve defensive awareness			
The 11v11 game improves dribbling skills				The 11 v 11 games did not improve crossing			
There is less pressure (generally) in The game				The 11 v 11 games did not improve off the ball running			
There is less pressure from coaches in The game				The 11 v 11 games did not improve heading			
The game improves overall development				The Scheme benefits the SFA primarily			
The lack of positions aids player development				In 11 v 11 the errors go uncorrected			
The game improves short passing				In 11 v 11 the stronger boys dominate			
In the game there is less pressure from parents				The Pilot Scheme is too similar to training			
The game improves tactical awareness				During The Pilot Scheme player's interest waned			
During the game you can assess players better				Players don't learn how to cope with winning or losing			
The 11 v 11 games increases number of touches				The 11 v 11 games are more tiring			
The 11 v 11 games improve reaction time/more than 7v7/4v4				The 11 v 11 games need goals and nets			
The 11 v 11 improves 1 v 1/more than 7v7/4v4							
The 11 v 11 improves scoring opportunities / more than 7v7				Subtotal Number of Negative Comments			
The 11v11 improves switching of play / more than 7v7/4v4							
The 11 v11 improves creation of space/more than 7v7/4v4				**TOTAL NUMBER OF NEGATIVE COMMENTS**			
11v11 improves transition from offence to defence							
The 11v 11 is as competitive / more competitive as 7v7/4v4				KEY			
				A Children taking part			
Subtotal Number of Positive Comments				B Parents of Children taking part			
TOTAL NUMBER OF POSITIVE COMMENTS				C Coaches and other Observers of the study			

6.2 Analysis of Completed Small Sided Games Questionnaire

Analysis Of Completed Small Sided Games Questionnaires.

Total Questionnaires Completed	62
Players	41
Parents	17
Coaches	4

Total Negative Comments for 11v11	477
Total Negative Comments for 4v4	392
Total Negative Comments for 7v7	109

Study Questions	**No. of Agreeable Responses**	**% of Agreeable Responses**
4v4		
The game was enjoyable	59	95.16%
The study was well organised	59	95.16%
Players had the chance to express themselves	55	88.71%
4v4 games are challenging	42	67.74%
There is less emphasis on winning	40	64.52%
4v4 improves techniques	55	88.71%
4v4 is a good learning environment	56	90.32%
The 4v4 is worthwhile	50	80.65%
4v4 Game improves decision making	44	70.97%
The lack of positions aids player development	32	51.61%
The 4v4 game is as competitive as 7v7 and 11 v11	32	51.61%
There was less pressure from the coaches during 4v4 games	45	72.58%
The game improves short passing	61	98.39%
In the 4v4 game there was less pressure from parents.	54	87.10%

	No. of Agreeable Responses	% of Agreeable Responses
11 v 11 Compared to Small Sided Games (7v7, 4v4)		
The game was enjoyable	60	96.77%
The study was well organised	61	98.39%
There is more emphasis on winning in the 11v11 game	41	66.13%
Players had the chance to express themselves	50	80.65%
The 11v11 games improves techniques more	30	48.39%
The 11v11 game improves dribbling skills	30	48.39%
11v11 games are challenging	44	70.97%
11v11 Game improves decision making	53	85.48%
The 11v11 game is as competitive as 7v7 and 4v4	55	88.71%
The game improves short passing	14	22.58%
In the 11v11 game there was more pressure from parents.	25	40.32%
The 11v11 game increases scoring opportunities	15	24.19%
The 11v11 game increases the number of touches per player	11	17.74%
The 11v11 game increases the amount of 1v1 play	14	22.58%

7 v 7 Compared to 11v11		
The game was enjoyable	60	96.77%
The study was well organised	61	98.39%
The game improves overall development	56	90.32%
There is more emphasis on winning in the 11v11 game	41	66.13%
Players had the chance to express themselves	50	80.65%
The 7v7 game improves dribbling skills	45	72.58%
7v7 games are challenging	44	70.97%
7v7 Game improves decision making	53	85.48%
The 7v7 game is as competitive as 11v11	55	88.71%
The game improves switching of play	47	75.81%
In the 7v7 game there was more pressure from parents.	14	22.58%
The 7v7 game increases scoring opportunities	44	70.97%
The 7v7 game increases the number of touches per player	49	79.03%
The 7v7 game increases the amount of 1v1 play	46	74.19%

7. The Model of Long Term Player Development (LTPD)

When evaluating the usefulness of player development in football through the use of the small-sided game, it is imperative that as coaches and educators we consider the 'Long Term Player Development' pathway. All activities must be appropriate for the age and stage of players where failure to take this into account could seriously affect the development of players further into their teens and adulthood. The following information has been adopted from research by world leading researcher, Istvan Balyi in his paper *Trainability in Children* (2003).

According to Balyi (2003) crucial to the development of children into competent players is the incarnation of the "Long-term Player Development Model". According to the research a specific and well-planned practice, training, competition and recovery regime will ensure optimum development throughout a player's career. Ultimately, sustained success comes from training and performing well over **the long-term rather than winning in the short-term**. There is no short cut to success in football preparation and overemphasising competition in the early phases of training will always cause shortcomings in players abilities later in their career.

Late specialisation sports, including football and all team sports require a generalised approach to early training. For these sports, the emphasis during the first two phases of training should be on the development of general motor and technical-tactical skills. This is especially relevant when we consider the overriding aims of small-sided games as a tool for developing appropriate activities and age specific football activities for children.

Scientific research has concluded that it takes eight-to-twelve years of training for a talented player to reach elite levels. This is called the ten-year or 10,000 hour rule, which translates to slightly more than three hours of practice daily for ten years (Ericsson, et al., 1993; Ericsson and Charness, 1994, Bloom, 1985; Salmela et al., 1998) Unfortunately, a significant number of parents and coaches in football still approach training with an attitude best characterised as peaking by the weekend where a short-term approach is taken to training and performance with an overemphasis on immediate results. We now know that a long-term commitment to practice and training is required to produce better players at all levels of participation, not just in football but in all sports. Coaches should gauge success in terms of player progress and not by the results of matches. Balyi outlined the stages of development as follows:

- √ FUNdamental stage
- √ Learning to Train
- √ Training to Train
- √ Training to Compete
- √ Training to Win
- √ Retirement / retainment

This part of the paper will focus on the Fundamentals and Learning to Train stages which are relevant specifically to this research and specific age groups. However it should be noted that the other stages of the LTPD are extremely important and themselves require a great deal more consideration in relation to how football in Scotland is structured in the future.

The objective of the Fundamental stage (Males 6 - 9 / Females 6 - 8 years) is to learn all fundamental movement skills (build overall motor skills) Fundamental movement skills should be practiced and mastered before sport-specific skills are introduced. The development of these skills, using a positive and fun approach, will contribute significantly to future sporting achievements. Participation in a wide range of activities is also encouraged. This emphasis on motor development will produce players who have a better trainability for long-term, football-specific development. Fundamental movement skills are observable as locomotor, manipulative and stability skills. There are three stages of fundamental movement skill development: initial (2-3 years), elementary (4–5 years) and mature (6–7years).

The “FUNdamental” phase should be well structured and fun. The emphasis is on the overall development of the player’s physical capacities and fundamental movement skills, and the ABC's of athleticism - Agility, Balance, Coordination and Speed. Participation in as many activities as possible is encouraged. Speed, power and endurance are developed using FUN games. Appropriate and correct running, jumping and throwing techniques are taught using the ABC's of activities.

The Learning to Train stage (Males 9 – 12 / Females 8 – 11 years) is especially relevant within this study of the small-sided game. Focusing on the development of children between 9 and 12 years of age, the key objective is to learn all fundamental football skills (build overall football skills). Specialised movement skills are developed from age seven to age eleven, and are specialised sports/football skills. By passing the fundamental and specialised skill development phase is likely to be detrimental to the child’s future engagement in football and sport. Early specialisation into the eleven a side game can also be detrimental to the proceeding stages of skill development.

One of the most important periods of motor development for children is between the ages of nine to twelve. During this time children are developmentally ready to acquire general overall sports skills that are the cornerstones of all sporting development. Following on from the findings within this study, it can be concluded that this is best achieved through the development of small-sided games where children will receive repeated touches of the ball, repeated decision making experience, repeated experience of basic tactical situations, more individual responsibility – every player must attack and defend, the game is easier to understand and players will develop a freedom of expression – no positions in early stages.

This is the ‘window of accelerated adaptation to motor coordination’. All fundamental movement skills should be further developed and general overall sports skills will be learned during this phase. If fundamental motor skill training is not developed between the ages of eight to eleven and nine to twelve respectively

for females and males, a significant window of opportunity has been lost, compromising the ability of the young player to reach his/her full potential. The present environment in Scotland would not allow the few players through playing the full-sized game where examples exist from the age of eight upwards to master this stage of their development and will have a serious impact on the future development/ability of players at a later stage of youth development.

The "Training to Train" phase addresses two of the critical or sensitive periods of physical development. Players who miss this phase of training will not reach their full potential, as these critical periods have been missed. The "Learn to Train" and "Training to Train" stages are the most important phases of player preparation. Therefore the emphasis on the small-sided game should be paramount to the development of players and certainly, must be continued to be emphasised through the Scottish Coach Education system. In particular, the use of the 4v4 game whether as a training or match tool should be considered imperative to youth football in Scotland.

8. Evidence Value of Small-Sided Games

As well as the focus of this study being through observational analysis, it is important to understand that other methods exist for determining the worth of small-sided games for children. This can be achieved through;

- Mathematical formula
- Physiological data
- Biological stages of growth
- Cognitive stages of growth
- Social/Emotional stages of growth

The move to small-sided games for children/youth players is based on educational research on the way children learn. Just as with their academic education their football education is progressive. Empirical studies have been conducted into the improvement in the game environment for children in small-sided games as opposed to the adult version of the game. Mathematically, levels (or lines) of interaction are the possible passing connections between players. Each time another player enters the field of play the level of complexity of the game environment increases. The interactions are tactical possibilities. This obviously has an impact depending on the age and stage of the player. Pre-teen children find it difficult to understand complex patterns of play and the more players that are added to a game, the more difficult the learning experience becomes. Ultimately, this could stifle the child's ability to develop their technical and tactical abilities. According to Snow (2005), the number of possible passing interactions increases significantly depending on the number of players added to a game/training situation. The levels of interaction can be viewed below:

Possible Passing Interactions by Number of Players			
2-players	2	10-players	90
3-players	6	11-players	110
4-players	12	12-players	132
5-players	20	13-players	156
6-players	30	14-players	182
7-players	42	16-players	240
8-players	56	18-players	306
9-players	72	20-players	380
		22-players	462

Therefore it can be easily seen that the increase in passing interactions between the 4v4, 7v7 and 11v11 games increases from 12 to 42 to 110 respectively. In terms of the number of players in a team [and opposition], will determine the complexity of the decision making process and will have a direct correlation to success rate. It would seem feasible that using small-sided games would be more appropriate to the age and stage of children and youth players.

There is also evidence, from exercise physiology studies, of improved physical fitness due to the small sided games environment (for adults as well as children). This study involved the support from the Scottish Institute of Sport who assessed the physiological impacts of the 4v4, 7v7 and 11v11 games on the players. This was conducted using Global Positioning System (GPS) technology linked to heart rate monitors. It is important to point out at this stage that findings again supported the argument for small-sided games being more appropriate to the development of young footballers.

8.1 Gp Sports Analysis System

Gp Sports analysis is a software package providing football coaches, fitness trainers and players, the potential to develop a comprehensive database of game related performance data, using the GP Sports SPi10.

Specific physical aspects of the players were measured, such as distances covered, speed of movement, heart rate and positional information. Results showed that involvement in small-sided games either as part of a match programme or within a training context, players are more likely to produce quality movement patterns at higher intensity levels, thus providing more physiological benefit as part of the long term player development process.

9.1 Summary

The results from the study clearly demonstrate that the small-sided games (SSG) principle is based on sound educational and developmental evidence. Children learn in a progressive and sequential way using a building block approach through a combination of technical and tactical skill development as well as physiological and psychological development of the young players involved.

In terms of the key differences of the small-sided game over the eleven-aside game and the benefits of the 4v4 and 7v7 formats, this observational research study has demonstrated:

- Far more repeated touches of the ball by all players
- More touches throughout all areas of the pitch
- More passes attempted are in a forward direction in the Small Sided Game. In the 11-a-side game, the majority of passes are in a backward direction
- More attacking 1 v1s, final third and penalty area entries
- More shots on goal and technical skills by goalkeepers
- Repeated decision making experience
- The ball is in play far more in the in the Small Sided Game
- Repeated experience of basic tactical situations
- More active participation is directly related to fun and enjoyment
- More experience in all phases of the game. There is no hiding or dominant player hogging the ball. Every child has to participate in all facets of the game, attack and defend. The emphasis is on PLAYER DEVELOPMENT.
- More active participation leads to an optimal fitness load
- Better success rate leads to better quality of play and player retention
- Better success rate leads to better self esteem and self confidence
- More individual responsibility – every player must attack and defend
- The game is easier to understand
- Freedom of expression – no positions in early stages
- Less perceived stress on the player when playing the small-sided game
- Less negative comments on the small-sided game
- 80% of children believe that they touched the ball more often in the small-sided game
- There was less perceived pressure from parents in the small-sided game
- It is apparent that children enjoyed all the game formats

Research shows that the ability of children to make decisions in a difficult, ever changing environment will be dictated very much by their developmental age, their preparation and the complexity of the situation (Vygotsky 1996). Clearly within this study, the children who participated had a better opportunity to develop in line with the Long Term Player Development model, where more touches, more attacking play and decision making experience amongst others will lead to increased development of their technical skills through appropriate activities based on age and stage of their development.

The small-sided game allows coaches the best opportunity to observe and analyse the individual and group responses of players under quick game-like conditions. If fundamental motor skill training is not developed between the ages of eight to eleven and nine to twelve respectively for females and males, the opportunity has

been lost, compromising the ability of the young player to reach his/her full potential. Researchers are agreed that the small-sided game is advantageous to coaches in a number of ways:

- √ There is less space required to play
- √ A chance for more individual coaching
- √ A better standard of play as the children will be more successful performing in the small sided format
- √ The coach can have more children playing (at least 42 or more on one pitch)
- √ The coach is following the accepted developmental pathway for children and can be confident that he/she is given their players the best chance at success
- √ Players are more likely to stay in the game if they feel successful, therefore the coach will have less player retention issues
- √ Less pressure on the coach to win when playing trophy free development football

The study is very much the starting point for future discussions about the development of youth players in Scotland and a great deal work must be done by all those involved in the game. However, it is very clear that the research agrees with all previous work and concludes that the use of the 4 and 7-a-side games are the best means of teaching the technical and tactical [decision making] parts of the game in preparation for the adult game. The researchers would therefore like to make the following recommendations:

9.2 Recommendations

- The evidence from the research clearly demonstrates the benefits of children playing small-sided games at U12 age group as opposed to the full eleven-a-side equivalent.

- In agreement with a number of researchers and the Long Term Player Development Pathway, the 11 v 11 game is a game designed by adults for adults and should be seen as the last part of the learning journey. The 4 v 4 game is the first step in the ladder and the 7 v 7 game is the intermediate step.

- The use of the 4 and 7-a-side games are the best means of teaching the technical and tactical [decision making] parts of the game in preparation for the adult game.

- The physiological benefits of participating in small-sided games are a valuable physiological training tool for all players, also allowing the improvement of technical, tactical and psychological skill development at the same time.

- However, if benefits are as clear as research indicates, the question begs as to what age children/youths should continue to participate in small-sided games, eg. U15?

- Next stage of research must look at different age groups and effectiveness of small-sided games, whilst ensuring a longitudinal approach to the development of youth level football in Scotland.

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Scottish Youth Football – Small Sided Analysis									
	4 V 4			7 V 7			11 V 11		
	Performance Game Total	**Juvenile Game Total**		**Performance Game Total**	**Juvenile Game Total**		**Performance Game Total**	**Juvenile Game Total**	
Total Touches Per Game (PG)	917	933		769	796		489	569	X
Total Touches Per Player (Av) PG	115	117		55	57		22	26	X
Total Touches Per Forward (Av) PG	N/A	N/A		55	58		20	22	X
Total Touches Per Midfielder (Av) PG	N/A	N/A		62	58		23	34	X
Total Touches Per Defender (Av) PG	N/A	N/A		51	56		23	23	X
Average Touches Per Minute Per Player	2.86	2.91		1.4	1.42		0.74	0.86	X
Total Passes Per Game (successful)	223	261		175	242		114	139	X
Total Passes Attempted	352	288		241	380		180	208	X
Successful Passes Rate (%)	63.3%	90.6%		72.6%	63.6%		63%	67.0%	X
No. of successful passes (short/medium/long)	Short – 86 Medium – 83 Long – 54	Short – 140 Medium – 79 Long – 42		Short – 68 Medium – 58 Long – 49	Short – 117 Medium – 88 Long – 37		Short – 46 Medium – 46 Long – 22	Short – 53 Medium – 58 Long – 28	x
First Time Passes (total number & % success rate)	74 / 33%	98 / 34.0%		47 / 27%	76/20.2%		29 / 25%	66 / 31%	X
Attempted 1 V1s	113	93		79	60		50	28	X
Attempts at Goal	57	67		28	37		12	11	X
Total Goals per Game	26	33		11	11		2	5	X
Goals Conceded per Game	26	33		11	11		2	5	X

No. of goals per game (average per min)	1 min 30 Secs	1 Min 12 Secs		3 min 37 Secs	3 min 37 Secs		20 Mins	8 Mins	X
Passing Direction (% Breakdown)	Forward - 42% Backwards – 31% Sideways – 27%	Forward- 63% Backwards – 27% Sideways – 10%		Forward – 36% Backwards – 27% Sideways – 37%	Forward–45% Backwards – 37% Sideways 18%		Forward – 34% Backwards – 38% Sideways – 28%	Forward 28% Backwards – 43% Sideways – 29%	X
Receiving a Ball (no. of touches) Av per Player	2.5	3.0		2.4	2.4		2.1	2.1	X
Total No. of Times in Possession (in Game)	411	480		199	190		230	258	
Turnovers of possession	211	266		178	175		190	180	
Average no. of touches taken per possession (per player or team average)	3.0	3.0		3.1	2.4		2.1	2.1	X
Ball out of play	Ball out of play 3 Min 7 secs	Ball out of play 3 Min 10 secs		Ball out of Play 3 min 27 sec	Ball out of Play 5Min		Ball out of Play 13 Min 55 secs	Ball out of Play 13 Min 04 secs	X
Contact time on ball per player (average, how often a player touches the ball)	4.1 Secs	3.7 Secs		4.3 secs	5.4 Secs		5.1 Secs	4.55 Secs	X
Team Possessions in Area of pitch (Any pitch split you wish)	N/A	N/A		N/A	N/A		See Page 21/22	See Page 21/22	X
Number of Crosses	Left – 8 Right – 6 Total – 14	Left – 5 Right – 9 Total – 14		Left – 12 Right – 6 Total – 18	Left – 15 Right – 10 Total – 25		Left – 2 Right – 7 Total – 9	Left – 5 Right – 3 Total – 8	
Number of Headers	4	12		14	5		17	9	
Technical skills by goalkeepers	N/A	N/A		GK Touch – 41 Gk Saves – 14 GK Throw – 20 GK Kick – 7	GK Touch – 34 Gk Saves – 11 GK Throw – 18 GK Kick – 5		GK Touch – 20 Gk Saves – 3 GK Throw – 4 GK Kick –3	GK Touch – 18 Gk Saves – 3 GK Throw – 4 GK Kick – 5	X
Final 3rd Entries	69	84		44	34		25	17	X
Penalty Area Entries	N/A	N/A		31	20		8	11	X
Overall Possession %	Ball out of play 7.7%	Ball out of play 8.0%		Ball out of Play 14.0%	Ball out of Play 12.5%		Ball out of Play 34.7%	Ball out of Play 32.8%	X
Fouls	0	0		11	6		4	1	
Off-sides	0	0		0	0		0	2	
Touches Per M2	2.03	2.07		0.39	0.41		0.08	0.09	X

X – indicates the information that has been used graph format in the results section