An investigation into the correlation between parent's influence in their child's early specialisation in sport

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Abstract
This investigation was undertaken in order to establish if there is a correlation between parent's influences and the early specialisation in sport of their children. The study was conducted with 126 subjects aged 14-16 across three secondary schools in Northern Ireland. Questionnaires were issued to children in order to gather information regarding their level of sporting involvement as well as their parent's involvement. Information gathered was kept confidential and inputted into Microsoft Excel where it was analysed, and correlations were investigated. The study concluded mixed results, parents who were previously involved in sport had a positive correlation with their child's early involvement and continued involvement in sport, yet their sport of choice did not correlate.

Key words
Early Specialisation; parental influences; child involvement; sport; participation.

Introduction

Background to the Study

There has been much debate on the influence in which parents have over the specialisation in sport of their children. Research carried out by Zecevic et al (2010) confirmed that children who received greater parental support for their chosen sport were 6.3 times more likely to be highly active. This evidence indicates that parents with a more positive outlook on physical activity will have more active children. Parental encouragement is a big factor in a child's participation. However, this can be taken too far. "A growing number of coaches, parents and children believe that the best way to produce superior young athletes is to have them play only one sport from an early age and to play it virtually all year-round" (Finley 2006) [cited in Malina, 2009]. Gauging how much pressure parents put on their children during the early years is critical, in most cases too much pressure at an early age is detrimental to a child becoming an elite performer. The American Academy of Paediatrics (AAP) Committee on Sports Medicine and Fitness does not recommend specialisation in one sport before the age of 12 or 13 years (Callender, 2010). Children are encouraged to participate in a range of sports therefore gathering a range of transferable skills, although some parents do not abide by this. Perceptions would lead one to the belief that children who specialise early and are pushed by their parents are likely to become elite.

Need for Study

The topic of early specialisation poses many questions particularly from parents, such as what age is suitable to specialise, how many hours a week should a child train and how many sports should a child play are to name but a few. The topic of early specialisation in sport has been widely researched (Gould, 2010; Fraser-Thomas et al, 2005; Jayanthi et al, 2013). The research indicates a growing reasoning for the suspension of the onset of sport specialisation until after puberty has commenced. These studies also suggest a multi-sport approach from an early age as well as parents/coaches having an influence on a child's sporting participation and enjoyment levels. There are currently no Northern Ireland based studies or investigations focusing on the early specialisation in sport of a child and their parent's involvement. This leaves it as an area of study that will be original and exciting to investigate.

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The results of this study could be used to inform parents of children in both primary and secondary schools of their significant role in helping manage their children's sporting options and specialising.

Aims and Objectives

The aims of the research are as follows:

- To determine the extent of early specialisation in pupils.
- To examine how early specialisation presents itself in terms of hours engaging in activity.
- To explore the impact of parents' on children's current sporting habits, based on the perception of the child.
- These objectives will be met by:
- Investigating the variety of sports, time engaged in sport and parental impact in a questionnaire.
- Thorough analyses of the data through Microsoft Excel.

Review of Literature

Early Specialisation in Sport

To examine this area accurately there must be an understanding of what early specialisation is. Jayanthi et al (2011) described specialisation as intense, year-round training in a single sport with the exclusion of other sports. The effects of deliberate practice in expert skill acquisition has become a popular form of debate. Malcom Gladwell popularized the ''10,000 hours'' rule for achieving expertise in a skill set through his book 'Outliers'. Early specialisation is a risk as there is no certainty what body type a child may have once adolescence has been reached. (Gallan, D. 2015) If that is the case, there is no logic in investing whatever talent the young athlete may possess in only one sport. Balyi et al. (2005) introduced the idea of early or late specialisation sports. Early specialisation sports such as acrobatic sports (gymnastics) are sports in which early sport-specific training is required for athletes as young as ages of 5 to 7 for future excellence. In these sports, complex movement and skills should be acquired before the adolescent growth spurt which is approximately 14 years of age for males and 12 years of age for females. As a person cannot specialise late in early specialisation sport, some of the negative consequences are unavoidable, although can be manageable. Feeley et al. (2016) believe Gymnastics is an example of an early specialisation sport, the original international rules allowed for Olympic participation at age 14, but 16 since 1997. Practice schedules can range from 9 to 32 hours a week depending on the level of skill and facilities provided. Peak performance is believed to occur in adolescence or early adulthood; few elite gymnasts compete past their early 20s, so all their skill development and training occur early. In gymnastics there is organised competition available through USA Gymnastics at age 4, but not considered competitive until age 7. Some of the consequences of specialising in one sport too early are overuse injuries (Rugg et al 2017) and chronic injuries such as tennis elbow, rotator cuff injuries, stress fractures and ACL injuries, especially in female athletes (Harber, 2010). Early specialisation also adds to a one-dimensional self-concept because of "a constrained set of life-experiences" (Brady 2004). This can inevitably lead to an imbalanced lifestyle with children abandoning their social lives by spending all their time training and therefore deny themselves the opportunity to build the mental and social skills required for living a successful life off the playing field (Brady 2004).

Côté et al. (2009) suggest that late specialisation (older than 12) in sport may result in better athletic achievement than those who specialise early. Late specialisation is the idea that early specialisation is not necessary, and that specialising early in a late specialisation sport (particularly team sports) has its own negative consequences. Gullich and Emrich (2006) evaluated over 1500 German Olympic athletes and found that the elite athletes specialised later in life and were more likely to have participated in more than 1 sport after the age of 11. Similarly, Lidor and Lavyan (2002) assessed 63 elite and 78 'near-elite' athletes across a range of sports. It was found that the elite group was more likely to begin intense training after the age of 12 and to have played multiple sports during the

developmental stage (11 years of age). Moesch et al (2011) performed a study of elite Danish athletes who participated in multiple different sports. The study showed that the younger ages (9, 12, and 15 years), the elite athletes spent less time in intense training than those 'near-elite' athletes. However, by age 21, the elite athletes had gathered more time in training in their main sport. The critical question is, at what age young athletes should specialise? Professionals today are concerned that specialisation is occurring too early for some children. Moreover, very little scientific evidence is available to neither support nor refute the risks that are involved in early specialisation.

Parental Influence in Sport

As a child your parents will have the opportunity to have the biggest influence in your sporting career. When children are between the ages of 6 and 12, parents are mainly responsible for getting them involved in a variety of sports and activities. Côté et al (2009) refer to this significant period as the sampling years. Sampling a range of sports and activities gives a young athlete the opportunity to develop their fundamental movement skills and basic motor skills in a variety of environments. After this period of diversity and skill development then comes the specialising years when the athlete begins to focus on one or two sport activities and the parents' influence lessens as the child's own internal motivations take over. With more family time and resources devoted toward sports, there is opportunity for parents to provide feedback to children in the form of support and pressure which will, in turn, encourage participation. Encouragement is usually provided by the male parent (Anderson et al. 2003) with the belief that sons whose fathers were highly involved in sports are the most influential over their behaviour.

Encouragement from parents in the form of support through behaviours or verbal comments is perceived by athletes as confidence/moral boosting and increases participation (Ford 2009). Anderson et al (2003) found a positive correlation between parental support and an athlete's enjoyment whilst such support was also seen as being inversely associated with children's anxiety towards sport. It was also found that supportive parents were more likely to have children involved in more sports. Turman (2007) assessed parental comments at sporting events, and found clapping, demonstrating pleasure and other reinforcing gestures as the most significant form of parental support. The most generic form of parental pressure were negative comments that corrected how the child was playing or about their performance. Turman (2007) believes socialisation researchers are still relatively uninformed as to what exactly shapes the family environment, he explains that society is only beginning to comprehend the processes by which children are encouraged to participate correctly in sports. A positive message-centred approach would be beneficial in providing an understanding of the various techniques parents employ to influence young athletes in both participation and excelling.

The Relationship between Parental Influences on Early Specialisation in Sport

Specialisation in one sport contributes to "the progressive loss of freedom in exchange for increased excellence and precision" Balyi (2013). Athletes face not only high demands from themselves and their coaches to win, but also intense pressure from their parents. Dr Emily Dixon, a sports medicine practitioner recommends that parents of athletes who are under the age of 16 ensure their children are not overexerting themselves or training too much. "Bodies are not made to play a sport that long" she said. "The general rule of thumb I give parents is, the age your child is, is how many hours of the week they should be practising the sport. Specialising in sports, we don't recommend until after they're skeletally mature or have hit puberty".

Parents also shape a child's psychological development through their involvement in their child's athletic experience (Holt 2016). As Jayanthi et al (2013) describe, this may create a fundamental early disconnect where the goals and dreams of the parent and child are not correlating with that of the youth coach who is focused on success in a single sport. Research suggests that when athletes feel under pressure from their parents, they have higher drop-out rates, stress related problems, increased

sport anxiety (Anderson et al, 2003) and reduced self-concept. Research supports the fact that pressure from parents negatively influences the young athlete (O'Rourke et al. 2011). For some parents they see the child as an opportunity to live their dreams through and their focus on winning and losing often leads to a feeling of "unworthiness" by the child. Smoll et al. (2011) found a relationship between state anxiety and parental pressure when looking at young athletes. The investigations found high state anxiety was closely correlated with the athlete's concern about failure in competition and the parental pressures to succeed. When examining the negative repercussions of parental involvement, Myer (2015) found that children can develop the fear that their standing and opinion with their parents is based on their sporting performance, which can produce negative long-term effects that will inevitably influence the parent-child relationship.

Gould & Carson, (2004) have argued that many parents are taking a professionalised approach to youth sports involvement and overemphasizing winning, therefore downplaying the role of fun and enjoyment. While specialisation is certainly on the rise, Norton (2001) found that high school football coaches felt that athletes who specialise are more likely to have refined athletic skills, participate in an all-star game, and receive a college scholarship. However, these same coaches also indicated that athletes who specialise are under more pressure to excel, experience fewer meaningful social interactions, and experience a less diversified high school sports experience. With the vast number of Colleges across America and the small number of athletes who actually make the highs of the NBA, NFL Olympics etc., 98% of athletes who specialise young will never reach the highest levels of the sport (Wiersma, 2000).

Methodology

Research Design

The primary objective of this study was to investigate any potential correlation between the early specialisation in sport of children and their parent's involvement. Ultimately this study will determine how much of an influence parents have over their children's sporting choices with an interest in children competing at a higher level. This study involved the use of a questionnaire as it is the most suitable method for gathering qualitative data, with the intention of finding information on both the sporting involvement of the child and their parents.

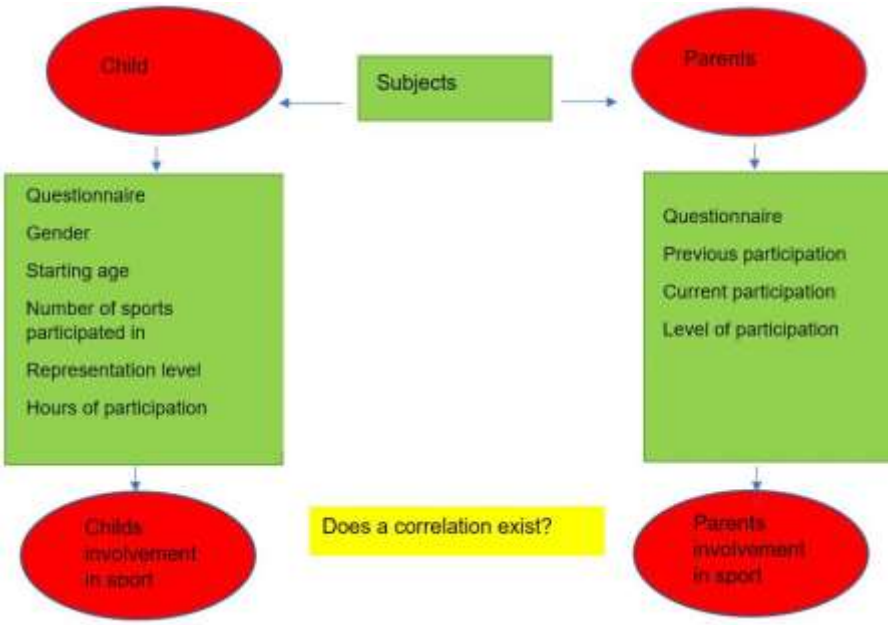

Figure 1. A graphical representation of the research design for the investigation. The graph highlights the process the subjects will undertake.

Subjects

Within the study there were 126 subjects (82 boys and 44 girls) who attend 3 different schools in Northern Ireland. The schools chosen for this study included one female school, one male school and one co-educational school. The subjects ages ranged from 14-16 years old and there was a strong tradition of Gaelic Games in each school.

Procedures

Before embarking on a study and gathering information it is vital to follow formal consent prior to the distribution of questionnaires. Firstly, an ethics review form must be completed to identify any potential risks. A letter of consent was sent to all school principals to ensure full consent before beginning the study. The parents/guardians of the subjects involved received a letter explaining the nature and intentions of the investigation and the role in which their child would have. Similar to the principal letter, confidentiality and the subject's anonymity were guaranteed. Letters ha a consent form attached at the bottom which had to be signed and returned by the parent/guardian of the subject stating that they gave permission to conduct the study.

Test

To assess the level of sporting specialisation and the involvement of parents, questions were asked to both subjects and their parents using a questionnaire. The questionnaire's intention was to gain an insight into the sporting involvement of the children and how their parents' sporting involvement influenced theirs. A questionnaire was the most effective method of gathering enough information with the time restraints set on the study. Subjects were given questionnaires individually and asked for them to be completed honestly while being assured confidentiality. Specifically, this questionnaire included information regarding subjects starting age in sport, number of sports participated in, hours of involvement and their level of representation.

Analysis

In order to accurately determine the extent to which a correlation was made between the subjects early sporting specialisation and their parents influence, information gathered from the questionnaire was inputted into Microsoft Excel. The data were input into a spreadsheet, data were analysed and compared before being presented in a graphical format. To conclude, the methods used in gathering and analysing data were considered and those chosen are the most appropriate for meeting the objectives of this study.

Results

Introduction

In this section the findings of the early specialisation and parental involvement questionnaire are detailed and discussed. The study investigated early specialisation in sport and how it relates to the children's perceived perception of their parent's activity levels. It will also outline whether there is a correlation between the results of the two study areas. The information was gathered by the subjects, so their answers are personal and directly related to themselves. To determine if there is any correlation between early specialisation and parental involvement, results in each element will be examined individually and also collectively. The areas of questioning have provided a good platform for examining the topic in a range of ways.

Subjects

There were 126 subjects from three schools and included an all-boys school, all-girls school and a co-educational school. There were 82 boys and 44 girls in the study aged 14 or 16 All the data were collected in November 2017.

Early specialisation

This section details research gathered on early specialisation with an insight into the influence parents have on the matter. This includes statistics regarding the number of sports played, hours spent and the level of participation by both subjects and parents. McGuirk and O'Neill (2016) also believe that questionnaires are one of the more practical research tools as they are cost-effective and can enable extensive research over a large geographical area which suited as the same questionnaires were utilised in varying schools.

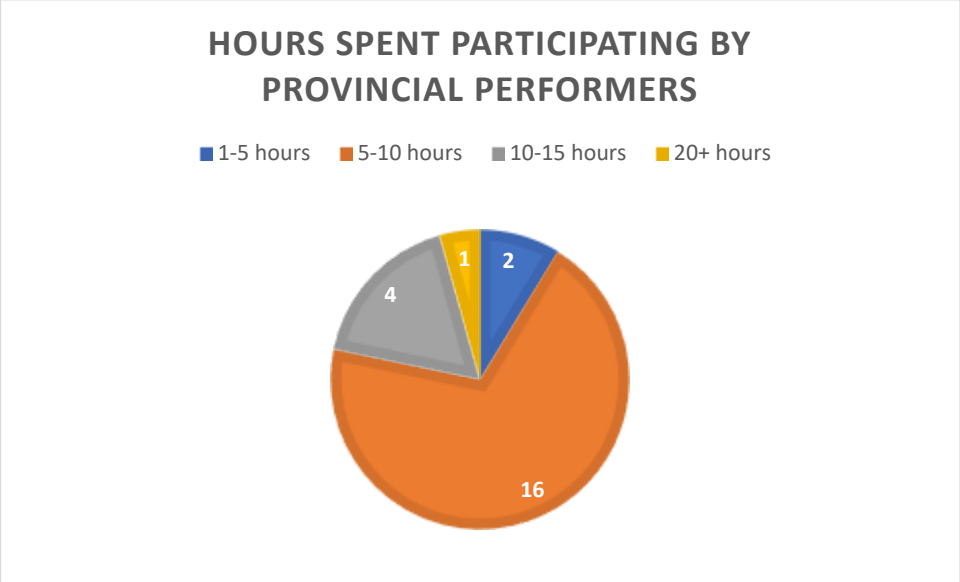

Figure 2. Representation of the number of hours spent participating in sport per week by provincial performers.

Figure 2 shows that most subjects participated in 5-10 hours of sport per week. One subject competed in 20+ hours of sport per week across the numerous sports they participated in. Two subjects only participated for 1-5 hours per week and both were competing in individual sports. This would show that subjects who participate in more sports accumulate more hours of practice, if the sports interlink this practice can lead to more transferable skills and a higher level of representation. Early sports specialisation includes higher rates of injury and increased psychological stress (Jayanthi et al 2013). The subjects in this study were aged 14-16 therefore in accordance with The Science of Sports (2017) research suggests the subjects should be accumulating 8.14hours per week at ages 12-15 and 14.43 from ages 15-18 to become elite. At this 15-18 stage it is believed subjects need to specialise to become elite. Moesch et al (2011) backs up this point as they performed a study of elite Danish athletes who participated in multiple different sports. The study showed that for the younger ages (9, 12, and 15 years), the elite athletes spent less time in intense training than those 'near-elite' athletes. However, by age 21, the elite athletes had gathered more time in training in their main sport. Equally one could argue that if the skills gathered from certain sports correlate and are transferable, then accumulating extra hours through participation in those sports is still beneficial whilst decreasing the risk of boredom.

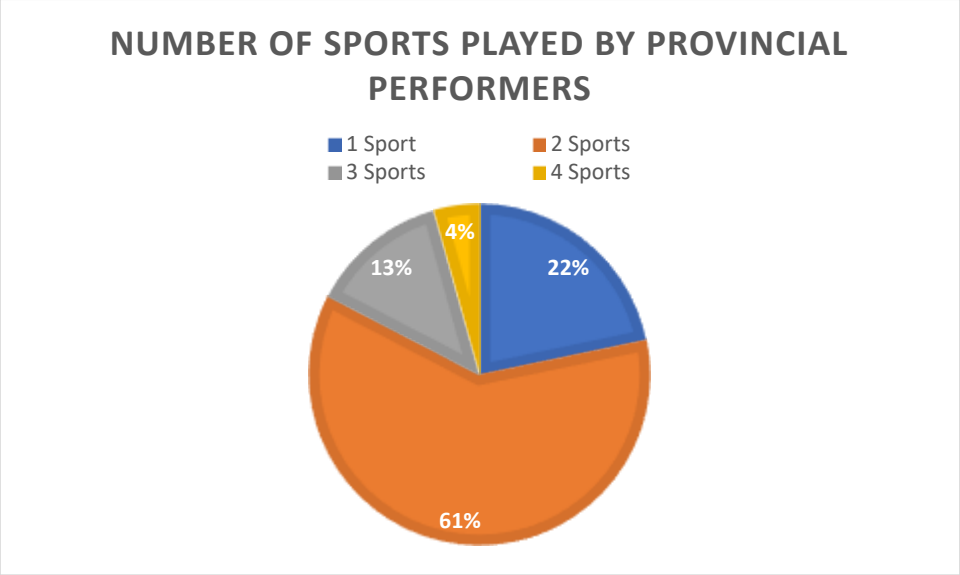

Figure 3. Representation of the number of sports played by performers competing at a provincial level.

Figure 3 indicates that most subjects (78%) competed in at least 2 sports. It can also be seen that subjects competing in 4 sports had the lowest percentage of 4% which represented 1 subject. Subjects competing in team sports were found to have played other team sport as well, whereas subjects competing in individual sports tended to focus more so on one sport. The subject who participates in 4 sports accumulated 20+ hours per week, competing at a provincial level in 3 of them. The numbers of hours gathered through their sports were able to correlate and benefit them in their other sports. There were 5 subjects competing in one sport only, 4 of whom were competing in individual sports. Some form of specialisation is required to develop elite level skill development. However, intense training in one single sport and exclusion of other sports should be delayed until late adolescence according to Jayanthi et al (2013) who believe it will inevitably optimise success while minimising injury, psychological stress and burnout. A study by Kail (2018) discussed the value of participation in team sports, "Sports can provide children with a chance to learn important social skills such as how to work effectively as a team. It also allows children to use their emerging cognitive skills as they devise new playing strategies or modify the rules of the game."

Parental Involvement

The parental involvement information was gathered through the use of a questionnaire. The information gathered included previous and current involvement in sport and trying to correlate how this may play a factor on their children's involvement. Questions included asking what sports the parents participated in as well as their level of representation in their sport/sports.

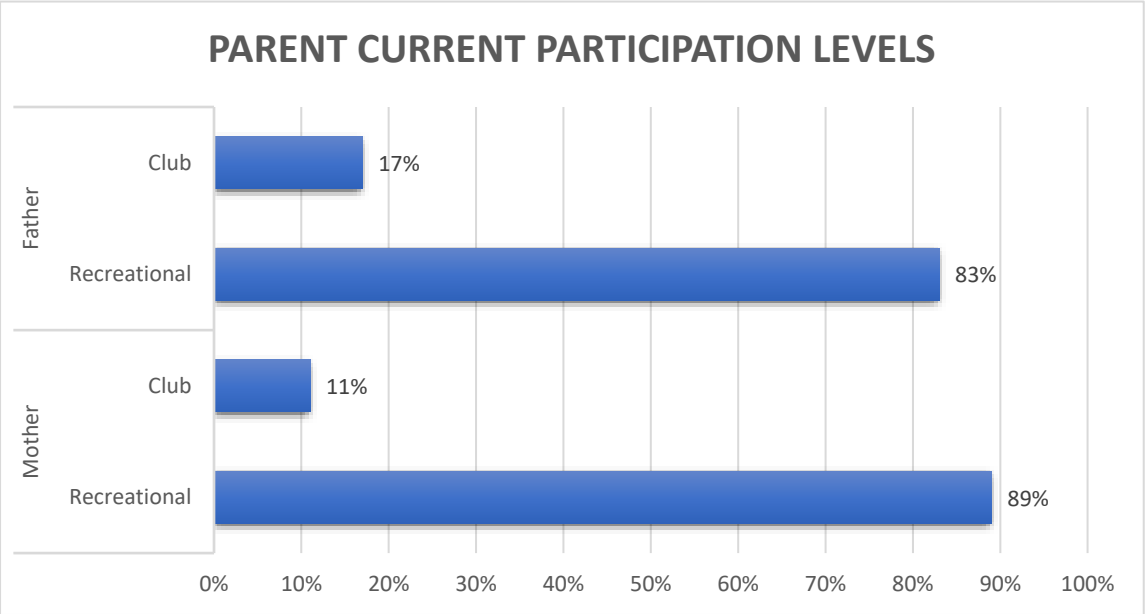

Figure 4. Representation of the level of participation that parents are currently participating in.

Figure 4 provides an insight into what level of participation the parents are currently competing at. The graph shows us that both mothers and fathers have dramatically higher percentages (>80%) when competing at recreational activities such as walking, jogging and going to the gym. These activities were recreational as they did not involve clubs and were not participated in competitively. Some of the reasons that parents may compete in recreational activities now rather than clubs include, time restraints due to work or taking their children to sporting events. According to Livingstone (2003), more than 80% of the men and more than 90% of the women are now engaged in sedentary occupations. Some parents may feel they are too old to participate at a competitive level. Ease of use of some of the recreational activities is another but these particular activities may include very little to no equipment and can be done at any time of the day. For many families, the enactment, consumption, and performance of sports consume a significant portion of their leisure activities (Kassing et al., 2004). For parents still involved in clubs they may find it easier to stay active when they are involved in a club with set times and training regimes. What's positive though is that the parents are participating at some level, today there is a greater understanding of the health benefits that go along with participating in sport.

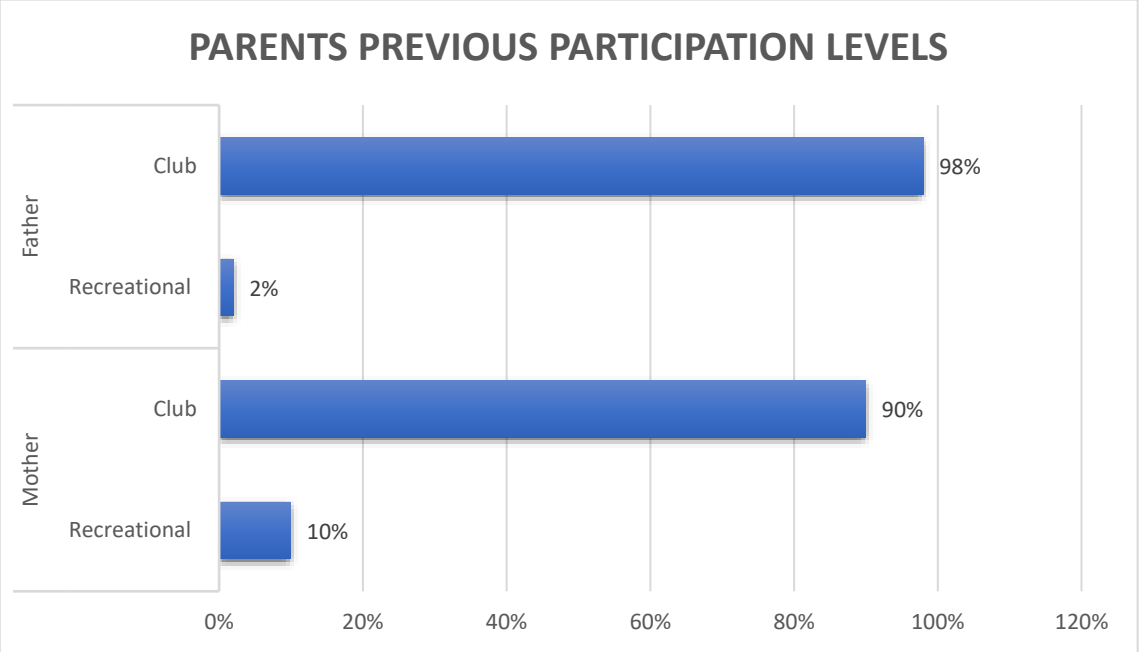

Figure 5. Parents' previous participation levels.

Figure 5 shows that both mothers and fathers had drastically higher percentages in club participation rather than recreational (>90%). From the parents who previously participated, fathers had the highest level with a score of 98% involved at a club level. The percentages shown here in Figure 5 are the opposite of that in Figure 4 which shows the current level of participation by parents. Reasons for this may include the freedom of time parents may have had before having children or work commitments, when being part of sport clubs was more accessible. Previously parents may not have had enough knowledge of the benefits of recreational activities. Club/school involvement was the highest percentage of participation by subjects, therefore I would argue that it may be the case that parents who previously found club involvement beneficial are more likely to influence their children's decisions when getting involved in sporting clubs. Bailey et al (2010) believe parents can clearly have a positive influence on their children through modelling. One of the key points made by Bailey et al (2010) is that those who have family members either previously or currently involved in sport are more likely to be involved themselves. Parents previously involved in sport tend to continue to keep active and in accordance with Figure 4 it tends to be through recreational sport. Springer et al (2013) found children who are physically active and fit when they are young usually grow into fit active adults.

The Relationship between Parental Influences on Early Specialisation in Sport

The following section links both the subjects to their parent's involvement in sport. From these graphs, correlations will be made regarding levels of representation from both subjects and their parents. Particular interest will be paid to subjects competing at provincial level. This data information gives the most complete picture regarding findings in this current study.

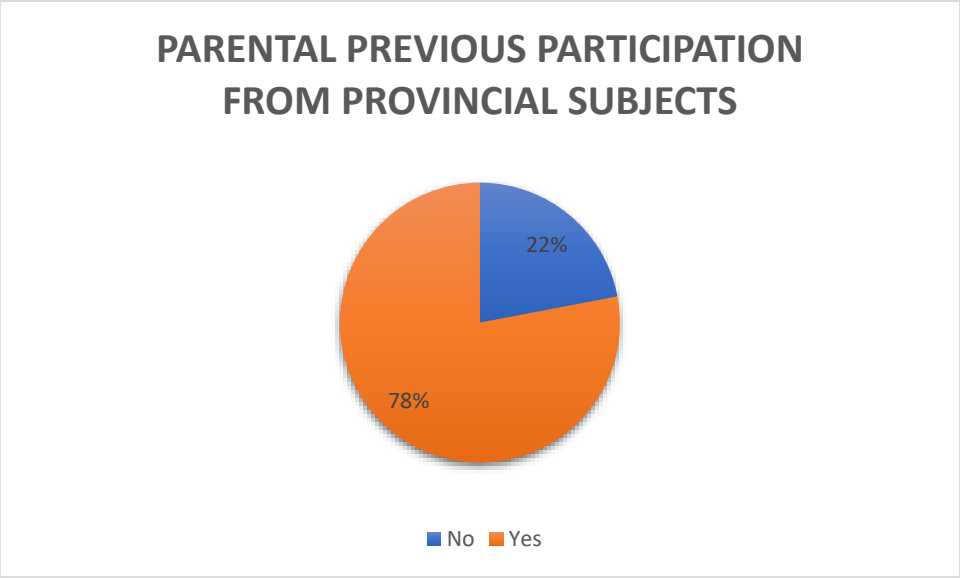

Figure 6. Represents whether parents of subjects participating at a provincial level, previously competed at the same level.

Figure 6 represents the parents of the provincial level participants; this pie chart shows if one of the parents of the subject also competed at a provincial level. The Pie chart shows that 78% of the subject's parents did compete at a provincial level at some point whilst 22% of the parents did not compete at the same level as their child. This would automatically suggest that if parents who have previously competed at a provincial level, their child will be more likely to follow suit. Natale et al (2014) believe children imitate their parents' behaviours including sporting aspects, therefore when a child sees/hears about their parent competing at a high level they to want to, as they see it as an achievable goal. This is not always the case however and how the child is nurtured plays a vital role. For some parents they see the child as an opportunity to live their dreams through. In some cases, this can be a positive thing and in others their focus on winning and losing often leads to a feeling of "unworthiness" by the child. Smoll et al. (2011) found a relationship between state anxiety and parental pressure when looking at young athletes.

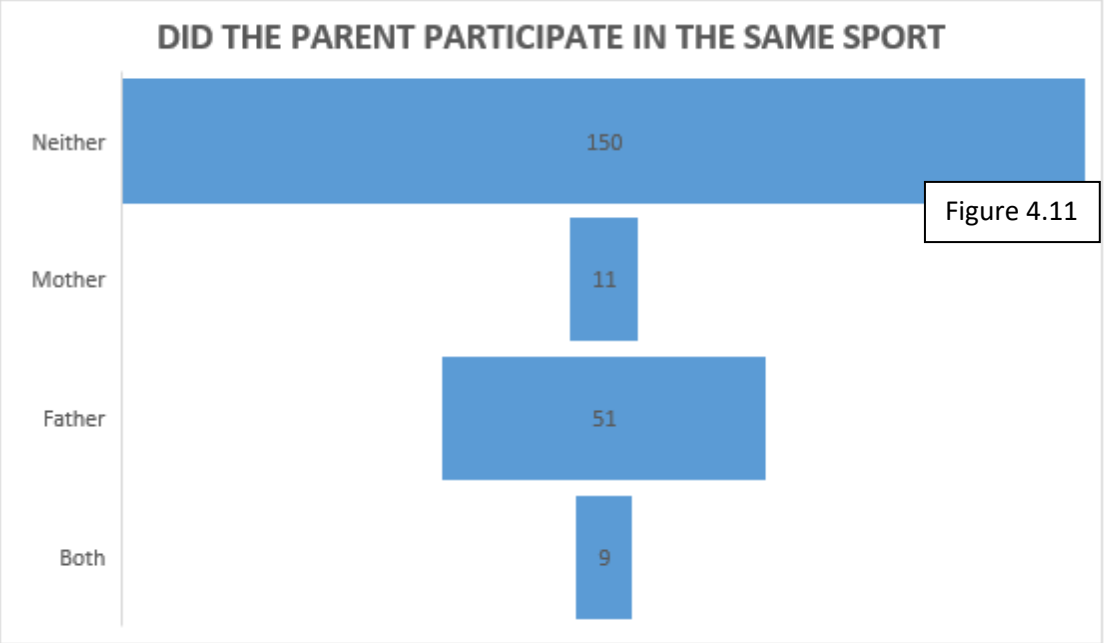

Figure 7. Represents the sport that subjects were competing in and if their parent competed in it also.

Figure 7 suggests that on a whole parent's previous involvement in sport does not generally influence their child's choice of sport. This can be said as 150 of the subjects are competing in different sports than their parents did. The graph also shows that fathers have more of an influence into their child's choice of sport than mothers (51 fathers who previously participated in the same sport and only 11 mothers). Anderson et al. (2003) believed encouragement is usually provided by the male parent with the belief that the fathers whose sons were highly involved in sports were the most influential over their behaviour. Factors relating to the results in the graph may include aspects such as the area the subjects live in compared to that of their parents and the provisions available to the parents when they were younger. In towns and cities, there are more provisions and more sports being offered to children. As well as the area they live in, the school children attend will have a determining factor and what sports are more prominent in that particular school. This graph would suggest that subjects are deciding on what sports to play on their own accord without external influence. Research supports the fact that pressure from parents negatively influences the young athlete (O'Rourke et al. 2014). Anderson et al (2003) have also found parental pressure to be inversely correlated with athlete enjoyment toward their sport. Children of a younger age must enjoy their sport, therefore having a say in deciding what sport they want to participate in will hopefully enhance their enjoyment levels.

Conclusion

In conclusion, from the research it is evident that accumulating more hours of training leads to a higher level of representation. The two factors found that will increase the number of hours accumulated in training are, (1) the number of sports the subject plays and (2) the starting age of subjects. Research also suggests that children of parents who had previously represented at a high level of sport (sons in particular) were more likely to participate at a similar level themselves. The sport in which the parent competed had no correlation to the sport their child played.

Conclusion

After closely examining and analysing all the data into early specialisation and parental influence, it was found that the subjects who accumulated more hours of training were more likely to perform at a higher level of representation. Factors which correlated to a higher number of training hours were, the starting age of the child and the number of sports the subject participated in. It was also found

that subjects did not need to perform a particular sport from a young age to become elite at that sport. Jayanthi et al (2013) believe the optimum time for specialisation is during the onset and end of the child's growth spurt. The subjects competing at a provincial level were all involved in at least one sport before the age of 10. These provincial level subjects also tended to participate in more than one sport, in particular the subjects who participated in team sports. Urban Meyer (cited in Lynch 2016) states multi-sport participation is scientifically recommended, both medically and psychologically, in developing all-around athleticism.

From the research, it is evident that children whose parents who previously participated at a high level of sport (fathers in particular), were more likely to participate at a high level of sport. Parents occupy a privileged position in terms of having an influence over their children and their sporting decisions. Natale et al (2014) believe children imitate the behaviour of their parents including sporting aspects, therefore children of parents who have participated at a high level in sport can see this level as an attainable and achievable goal. One particularly interesting finding from the research was that the sport in which the parents participated had no correlation to the sport in which their child participated in.

In summary it is clear that parents have a direct influence on their children's sporting careers. However, my study has shown that the decision of what sport/s subjects participate in and what one sport they then specialise in, have little influence from parents. Parents will be responsible for taking children to and from training as well as influencing how often children get to train, particularly at a younger age. The study has shown though that the children who become elite performers tend to play a number of sports at a younger age accumulating more hours of practise and will specialise in one sport later in adolescence.

Recommendations

- For more accurate and reliable results when investigating the correlation between early specialisation in sport and parental involvement:
- A larger scale study across a wider range of schools with more subjects would be required.
- A more equal number of subjects; male and female would produce a more precise study.
- Monitoring subjects level of participation and representation from their current age of 14-16 to an older age of 21 would give a more rounded look into specialisation.
- Re-questioning would identify how specialising in one sport affected their hours of participation, enjoyment levels and what factor their parents played in all of this.
- *Limitations*
- This investigation had a number of limiting factors which must be noted:
- It was carried out on a small scale with restricted resources and budget.
- It was carried out by a first-time researcher with a limited period of time.
- All data was collected in a small number of secondary schools across Northern Ireland.
- Using a questionnaire meant subjects had less capacity to provide accurate and full responses.

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