

# Change the game:

## can a non-traditional club increase participation in extracurricular physical activity?

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### ABSTRACT

The aims of this study are to investigate the impact of a 'non-traditional' extracurricular club on pupils' participation in physical activity, and what motivated pupils to attend. This action research intervention was carried out within a Greater London secondary school for girls, for four weeks during lunchtimes. To conduct the intervention, a dodgeball club was introduced as an extracurricular club, which was open to pupils in Key Stage 3. Pupils' attendance was monitored and some were asked to complete the Motives for Physical Activity Measure (MPAM-R), at the end of the intervention.

The findings indicate that the intervention had a positive impact within its environment, as an increase in pupils' participation was observed over the course of the study. Additionally, the interest/enjoyment of the club was recorded as the highest motivation for participation.

### INTRODUCTION

The disengagement of girls within physical education (PE) and physical activities (PA) is a widely researched topic (Lubans & Morgan, 2008; Enright & O'Sullivan, 2010; Murphy et al., 2014). For the purposes of this study, PE refers to what is provided through the English National Curriculum, whilst PA covers any extracurricular activity provided by the school. The Women's Sport and Fitness Foundation (2012)

reported that girls' participation levels dropped in primary school between Years 4 and 6, and that by Year 9 this decline became more pronounced. Research findings on the suggested reasons why this may be happening pointed to a lack of motivation and a lack of interest in the type of activities commonly being delivered (Enright & O'Sullivan, 2010; Mitchell et al., 2013). One of the aims of the 2013 National Curriculum for PE (NCPE) is to ensure that pupils lead healthy, active

### KEYWORDS

PHYSICAL EDUCATION

PHYSICAL ACTIVITY

GIRLS' PARTICIPATION

ACTION RESEARCH

EXTRACURRICULAR CLUBS

MOTIVATION

lives (DfE, 2013). The prospect exists of not fulfilling this aim, or at least having some impact on it, unless the next generation of teachers keep girls engaged within PE and PA throughout their time at school. Moreover, it is school PE teachers who arguably have the most contact time with pupils in a PA environment and therefore can be a pivotal force in fostering good practice among pupils, with the hope that they will continue to be active into adulthood (Lonsdale et al., 2009).

Taking into account these findings of PE and PA disengagement, this research will explore the impact of using a non-traditional club-based activity on Key Stage 3 girls' participation. I set out to achieve this by measuring attendance within this club, compared with other clubs currently on offer within this school. To gain greater understanding of the effect this club had, the motivations of the pupils who attended it were recorded, using the revised Motives for Physical Activity Measure (MPAM-R) scale developed by Ryan et al. (1997).

### CONTEXT

The school setting in which this intervention was carried out is an all-girls academy based in Greater London. It is a high-achieving school which currently offers BTEC qualifications in sport. Approximately 70% of the pupils are of the Muslim faith. This could potentially be a barrier to these pupils' learning if consideration for pupils' faith or culture is not acknowledged. Studies such as McGee & Hardman (2012: 30) have specifically looked at improving the participation of Muslim schoolgirls within PE. They state that participation in PE 'may conflict with the Islamic requirement for modesty'. The school's policies ensure that PE is accessible to all of their pupils; they employ only female staff within PE, pupils are able to rest when necessary during fasting, tracksuit bottoms and jumpers can be worn in PE and pupils can also wear their headscarves during outside PE lessons.

All pupils are expected to participate in PE; in Key Stage 4 (KS4), pupils choose their activities on a six-week rotation. The school feels that giving the pupils this choice has had a positive effect on participation levels. Prusak et al. (2004) support this idealism, saying that adolescent girls demonstrated significant differences in intrinsic motivation when given the choice to take part in an activity in comparison to a control group. In Years 8 and 9 the school's PE curriculum uses the multi-activity model (Metzler, 2017),

which includes invasion games, outdoor adventurous activities, striking and fielding as well as artistic activities. In Year 7, all of the activities during the first term are focused on fundamental movement skills. This was implemented into the school's curriculum as the department observed that the majority of pupils entered school with very low skill ability. Attendance at extracurricular clubs within the school is low, something that the department was trying to improve at the time of this inquiry, leading to its supportive nature. A new club was offered to KS3 pupils for two reasons; to arrest the decline in participation that becomes more evident by Years 8 and 9, and to promote good practice for the current Year 7.

### THEORETICAL FRAMEWORK

#### Action research

Action research, the method used to facilitate this inquiry, looks at investigating everyday actions, with the aim of improving systems and practice (Lambert, 2012). Kurt Lewin, who is often referred to as the founder of action research, is known for the statement, 'if you truly want to understand something, try to change it' (Cherry, 2018: para. 3). The questions that form the basis for this study were identified based on a problem within the school (low participation in PA). From the research carried out, an intervention was designed that engaged the pupils within this environment. A potential weakness of this type of study is that because it is designed specifically to meet the needs of pupils in one particular school, the results it may produce could be valid within that context, but their reliability and transferability beyond this could be questioned (Baumfield et al. 2013). Implementing this intervention into other schools to draw a comparison could rectify this. Action research has been referred to as cyclical in nature: the results may provide further questions, leading to further research, and essentially the process starts again (Efron & Ravid, 2013). Thus, the strength of this enquiry

will be determined by not only producing relevant results but also how the data is then used to inform pedagogical practice and aid others.

Both quantitative and qualitative data can be supportive measures in action research. These both come with their strengths and weaknesses. Quantitative data can be used to carry out statistical analysis and therefore measure if there are significant differences in the data (Research Methodology, 2019). A disadvantage of this is that the data does not explain why these results may have occurred. By contrast, qualitative data does explore the data, which may enable a greater understanding with in-depth contributions from participants, but it is largely reliant on the interpretation of the researcher. This can be time-consuming and subjective, bringing into question the data's reliability and validity (McLeod, 2017). For this study, only quantitative data was collected.

### LITERATURE REVIEW

The literature discussed below explores the themes that are identified throughout this paper, with the aim of supporting the development of this intervention to increase girls' participation in PA.

Lubans & Morgan (2008) set out to investigate the impact of an extracurricular sports programme on PA in adolescents. This programme was offered in school because the school environment is key to the promotion of physical activities, in that it often has the facilities needed. The study involved 116 pupils in Years 8 and 9 from three schools in Australia. Research in the UK has shown a substantial decrease in girls' participation by Year 9. Lubans and Morgan's (2008) chosen sample may suggest that this is also evident in Australia.

Their programme was referred to as 'Learning to Enjoy Activity with Friends' (LEAF). It included physical activities such as circuit training, a spin session and strength training, which were completed

over eight weeks. The intervention group differentiated from the control group, in that it included 15-minute information sessions such as goal setting and principles of training. The measure that was of interest from this study was the mean number of steps per day. For the pupils classified as low active, their steps per day were significantly different to their baseline measurement and significantly different from those in the control group. This suggests that the intervention had a positive effect on this group and is a result that I would expect when targeting less active pupils. Interestingly, no significant effect was identified in the active groups, and their mean total of steps showed a decrease post-intervention. This result may have occurred because the pupils reduced their PA elsewhere whilst taking part in the intervention, even though they were advised not to. Consideration with regard to results bias should also be given to the pedometers: if they were not worn correctly, this could affect the data collection.

A study by Mitchell et al. (2013) looked at factors that changed girls' participation in and perceptions of PE and whether their competence needs were being met. They explored three factors associated with the disengagement of girls in PE: psychological, social/environmental and choice/consultation. From their research, there emerged an age-related decline in participation. The paper focused on five females who, based on questionnaires, were identified as disengaged. The age of the pupils at the end of the study was not specified; however, they were interviewed three times individually over an 18-month period. The programme varied across schools; this school opted to change its curriculum PE by offering the girls a variety of activities after consultation. These activities included gym, dance, softball and dodgeball. Linking to observations, this school previously offered the typical games-based activities. The pupils could also choose which activity they took part in. The initial findings from the interviews prior to the intervention found that

reasons for not wishing to participate included that the girls felt that they did not have the 'skills' to participate, that they did not know their peers when starting secondary school, and the lack of choice in activities. The results post-intervention showed that the girls felt valued when consulted and listened to, and therefore enjoyed PE more. This study further supports why dodgeball will be beneficial in my study as I am attempting to eliminate many of the reported issues raised for girls' disengagement.

Both pieces of literature identify with the problem that this paper seeks to address: the reasons for the disengagement of girls in PE and PA and how we, as researchers, can implement change to encourage girls to partake. Although the paper by Lubans & Morgan (2008) was based in Australia, it stood out because the intervention did not use games-based activities. This design was chosen to promote lifestyle and lifetime activities. Thus, it was thinking beyond the intervention. This is an important consideration; games-based activities require other people, space and equipment. These could potentially be more difficult to pursue in the long term, whereas the activities they opted for could be done in a gym. Similarly, the activities chosen by pupils in the Mitchell et al. (2013) study included gym-based activities. The studies contrast in their methods; however, a consistent theme is the type of activities that were offered. The results of both of these studies demonstrate that the changes that were made proved successful. Thus, they are supportive of the method used in this study to change the game.

## THE ENQUIRY

Prior to the introduction of the new club, five extracurricular clubs were already offered within the school setting. These activities all focused on traditional team games (such as football, netball and basketball). This enquiry set out to use the game dodgeball as a non-traditional extracurricular club to increase participation in girls' PA. Dodgeball was

chosen because it was an activity often asked for by pupils and can involve a large number of pupils playing at one time. Another reason for this choice of activity was because it is inclusive of all and suited to the abilities of the pupils. Throwing, catching and dodging are the three main skills used within the game, and a high skill level is not necessary. Perceived competence is a factor that has been measured as influential in PA in adolescents. Timo et al. (2016) reported it as a statistically significant predictor of participation later on in life. It was hoped that every pupil had the opportunity to be successful in this activity, and as a result, pupils' confidence and perceived competence may increase. This may not be the case for the team games most often offered in schools as they can require more complex skills and techniques. It is important to note that dodgeball is widely becoming a banned activity within PE. A suggested reason is because the game involves eliminating players, which results in limited physical activity (Reed, 2014). Other concerns raised included bullying and injury (Thompson, 2017). To try and limit the impact of this during club, pupils were never permanently removed from the game; their team members could bring them back in by catching the ball from an opponent's throw. If pupils were out for too long, a point was awarded to the team with the most players and the game was restarted. The rules were always adhered to and the activity was supervised at all times.

The motivational factor in this intervention was also important to consider, as I had hoped that this would present to me the reasons why these pupils were attending this club. Those who are intrinsically motivated may partake due to interest in and enjoyment of the activity whereas those who are extrinsically motivated often partake for what they may obtain, such as rewards (Ryan et al., 1997). As a PE teacher I believe it is important to foster both through personal goals, the school rewards system and providing meaningful PE.

The MPAM-R questionnaire developed by Ryan et al. (1997) assesses the strength of five motives: Fitness, Appearance, Competence/Challenge, Social and Enjoyment. This is measured using a seven-point Likert scale that ranges from ‘not at all true for me’ to ‘very true for me’. This measure was chosen to use within this study, as a method of attempting to understand what motivated the pupils who took part.

The theme chosen which informed this enquiry was learning outside of the classroom. This can be defined as teaching and learning that occurs outside of the classroom (Council for Learning Outside of the Classroom, 2019). In PE, an example of this is evident in the provision of extracurricular clubs. Clubs can be used to increase PA in pupils, teach new or more advanced skills, to provide different activities and to develop sports teams. Dodgeball is not an activity that is delivered in this school during lessons; however, it is a game that encourages development of some of the fundamental skills (Thompson, 2017), which is something that has been identified as low-level in this school. As a result, it is hoped that the pupils will be building on skills that will be beneficial to improving their performance within PE whilst increasing their PA. The social element is a great positive factor too as pupils get to engage in activities with pupils outside of their form and year groups; they may not have talked to or become friends with these pupils outside of this environment (Massoni, 2011). It is hoped that through this enquiry they share a common interest, which aims to build a cohesive environment.

## METHODOLOGY

### Action steps

The first step in carrying out this research was to look at the current provisions. There were three clubs at lunchtime and two after school. From the attendance registers, the total number of pupils who attended clubs was recorded for two weeks prior to the intervention (see Table 1).

**Table 1. Attendance at extracurricular clubs before intervention**

	Week 1		Week 2	
	Lunch	Afterschool	Lunch	Afterschool
<b>No. of pupils</b>	54	18	59	20
<b>Total</b>	<b>72</b>		<b>79</b>	

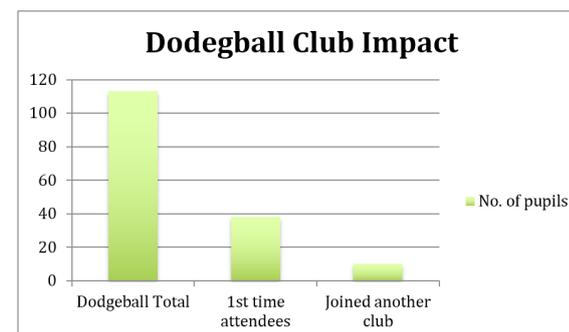
It was decided that the dodgeball club would be offered at lunchtime because not many pupils attend after-school clubs during the winter months. The club was then advertised to KS3, because, from our research, this is when the reduction in girls’ participation is clearly evident (Women’s Sport and Fitness Foundation, 2012). Attendance was then measured across all of the clubs for a total of four weeks (see Table 2).

**Table 2. Attendance at extracurricular clubs**

Club L – Lunchtime A – Afterschool	Dodgeball (L)	A (L)	B (L)	C (L)	D (L)	E (A)	F (A)	Weekly Total
<b>Week 1</b>	22	10	12	20	23	14	7	<b>108</b>
<b>Week 2</b>	23	10	12	23	16	18	5	<b>107</b>
<b>Week 3</b>	36	6	11	29	14	23	2	<b>121</b>
<b>Week 4</b>	32	10	14	20	21	20	10	<b>127</b>
<b>Total</b>	<b>113</b>	<b>36</b>	<b>49</b>	<b>92</b>	<b>74</b>	<b>75</b>	<b>24</b>	

The impact of this club in increasing participation was broken down to record how many of the pupils who attended dodgeball had never previously attended any other club. This was extended to look at how many of these new pupils then attended any of the other clubs at any point during this four-week period (see Figure 1).

**Figure 1. Impact measures of the dodgeball club**



**Table 3. MPAM-R average scores**

Motives	Average score
Interest/Enjoyment	6
Competence	5
Appearance	3
Fitness	5
Social	4

To create a measure of why this club may have had an effect, all of the pupils who attended the dodgeball club more than once were asked to complete the MPAM-R questionnaire at the end of the intervention. The average score was then calculated for each of the motives measures (see Table 3).

## FINDINGS

### Evaluation of the intervention

The introduction of the dodgeball club demonstrated that the weekly participation of pupils in clubs was continually increasing. This is evidenced in Table 1 (prior to intervention) and Table 2 (throughout the intervention). This may have been due to pupils encouraging their friends to come. During the four weeks, the highest attendance recorded was in week 3 with 36 pupils, which was the highest number recorded in one club

since the start of this academic year. This was a very positive result, as the aim for this intervention was to increase pupils’ engagement in PA. Beyond this, after analysing each register, it was found that 113 pupils attended throughout the duration; 38 of these were first-time attendees at extracurricular clubs during this academic year. It was also found that 10 out of these 38 pupils then attended at least one other club during this time. This suggests a double effect of this intervention: it increased PA for pupils who already attended clubs and

engaged new pupils, thus increasing their PA beyond curriculum PE.

The results of the MPAM-R (table 3) showed that the interest/enjoyment factor was the highest motivation, followed by competence and fitness. These findings were supportive of what it was hoped the pupils would gain from this specific choice of activity. This intervention is not a one-fits-all type of model; it was likely to have been effective within this environment for a variety of reasons. One of these was the fact that, overall in this school, the skill level was very low, so this specific activity gave the pupils an opportunity to perceive competence. Also, it was something different that was being offered which may have encouraged pupils who might otherwise never have considered coming. Potentially, in a different environment it may have become more competitive, taking away the fun element.

If I were to explore this idea further, I would have first carried out a longer intervention, as I am aware that this was something new to the pupils and

I was also new to them, and this may have influenced the numbers. A longer intervention would also have provided more data to analyse. In order to gain a greater insight, a comparative measure using the MPAM-R could have been achieved by implementing it into the other clubs. Other measures that could be considered are: analysing whether this had an effect on their attitudes towards curriculum PE, attainment in PE and behavioural changes within PE.

## CONCLUSION

This study aimed to explore whether a non-traditional activity could be used to increase the participation of girls in extracurricular PA. The results of this intervention demonstrated a positive effect: 113 girls engaged with the club, 38 of whom were first-time attendees. Of these 38 pupils, 10 attended another club, which was a positive additional outcome. It was also found that interest/enjoyment was the highest motivating factor. These findings, support current literature that has identified that it is important to

consider the provisions for girls, within both curriculum PE and extracurricular PA, in order to try and eliminate many of the reported factors that discourage girls from participating.

As a result of carrying out research and implementing this intervention, it has become evident that low PA, especially in girls, is a common trend not just within the UK. This is also an issue that has been identified for many years. There are a few factors that contribute to the overall issue that have been reported by pupils rather than assumptions of researchers. Some of these I may never have considered before, largely because I have always enjoyed partaking in any form of physical exercise and also because I had a positive experience of PE and extracurricular activities whilst in school. As I continue to develop my teaching practice through experience, reflective practice and further action research, a positive progression from this would be to transform our traditional practices, which is achievable through collaborative PE and inclusion of the student voice. ■

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