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RELATIVE AGE EFFECT ON INVOLVEMENT PROGRESS AND
RANKING OF MIDDLE DISTANCE ATHLETES FROM 14
YEARS TO 21 YEARS

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Abstract

Pervious research has found relative age effect in many sports. The purpose of the current study was to look at relative age in athletics, as no other studies has have researched relative age in athletics to see if it exists. This study is an early attempt to look at the progress over time of athletes in their development, participation and performance in athletics. The event chosen to be analysed in athletics was a middle distance event of 800m. The study looked at male and females 800m runners whom were born in 1986, 87 and 88, who are registered on the website of www.athleticsdata.com. The data collected was their birth of month and personal best time of 800ms from the years of 2002 to 2007 of every athlete. There was significant difference for the male 800m runners ($p = 0.001$). However no significant relative age effect for female 800m runners ($p = 0.216$). Moreover 26% of H1 male athletes dropped out between 2002 and 2007 and only 21% of H2 male athletes. While for females 71% of H1 athletes dropped out and 72 % of H2 athletes dropped between 2002 and 2007. Also findings show that the H2 female athletes were faster than H1 athletes. Therefore relative age can influence overall participation in athletics and performance. There are psychological and physiological factors what effect relative age. Coaches need to take action to reduce attrition of athletes including potentially talented athletes born late in the competition year, to keep more athletes involved in athletics and not to drop out.

CHAPTER I

INTRODUCTION

1.0 Introduction

Season of birth effect is concerned with environmental factors affecting the developing foetus and having profound effects on lifespan, health and development, while relative age effect is concerned with the arbitrary cut off dates used when arranging young people into age bands. Relative age can influence on numerous aspects of life including academic attainment (Sharp, Hutchison & Whetton, 1994), lifespan (Doblhammer & Vaupel, 2001), occupation (Smithers, 1984), personality (Smithers & Cooper, 1978), self esteem (Thomson, Barnsley, & Battle, 2004) and health and development (Torrey, Miller, Rawlings, & Yolken, 1997). In sport, birth dates can play a large role for children succeeding in their sport from junior to the senior level or dropping out at junior level. Simmons and Paull (2001) stated that children born 1 day apart (e.g. 31 August and 1 September) can either be disadvantaged for being the youngest in their age group team sports or enjoy the benefits that are available to them by being the oldest in their age group. In addition Barnsley, Thompson and Barnsley (1985) found in minor ice hockey children born shortly after the cut off date are up to a full year old older than the late born children in their respective age group, whereas children born shortly before this date suffer from being placed in a higher age group almost a year earlier than those born only a few days later. Therefore, the higher age children born early in the competition year should have a competitive advantage over their younger peers. Also in talent identification, young people from the age group are faced with a problem; Brewer et al. (1995) showed that the increase selection opportunities appear to favour older and physically bigger children, especially in soccer. Barnsley and Thompson (1988) found an increased drop-out rate for those youthful hockey players who had been

disadvantaged by age in the past, suggesting that given the choice, younger children will seek to leave or avoid an activity in which their competitive position is hampered by their relative age.

1.1 Need for study.

Relative age has affected so many sports resulting in numerous children dropping out of the sport. It is important to look at other sports not yet investigated to find out if relative age affects other athletes. If relative age effect exists in elite sport there are implications for coaching for performance. It is important to look at more sports to see if there is a relative age effect and if it has affected athletes getting into the elite standards because of their birth date. Also no study so far has looked at drop out, only observed who is left in sport as seniors. Therefore this study is an early attempt to look at the progress over time of athletes in their development, participation and performance.

1.2 Purpose.

The purpose of the current investigation is to analyse the month of birth distribution of senior 800m middle distance runners, male and female, and to follow the progress of the athletes from 2002 to 2007 to see the drop out rate. There has not been any research done in middle distance running to see if there is any relative age effect whereas research has been done in many other sports.

1.3 Aims.

The aims of this study are as follows:

- a) To see if relative age exists in senior 800m runners.
- b) To examine the proportion of athletes competing in any year between 2002 and 2007 who are still competing.
- c) Look at participation and performance in 800m over a 5 year trend

1.4 Hypothesis.

Null hypothesis: (a) there is not a difference between observed distribution of athlete birth months and theoretically expected distribution based on national population in any year between 2002 and 2007, (b) there is no difference in the proportion of athletes competing in 2002 who are still competing in 2007, and between those born in the first and second halves of the junior competition year, (c) there is no significant difference between early and late born athletes in improvement in 800m performance from 2002 to 2007.

Alternative hypothesis: (a) there is a difference between observed distribution of athlete birth months and theoretically expected distribution based on national population in one or more years between 2002 and 2007, (b) there is a difference in proportion of athletes competing in 2002 who are still competing in 2007 between those born in first and second halves of junior competition year, (c) there is a significant difference between early and late born athletes in improvement in 800m performance from 2002 to 2007.

1.5 Scope.

The scope of this study is only looking at male and females UK 800m senior athletes. The data is recorded from www.athleticdata.com to see which month they were born in, in the years of 1986, 1987 and 1988, the athletes included are from the years 2002 and / or 2007 if any years between then excluded them.

1.6 Limitations

One of the limitations is the accuracy of the 800m lists of this nature which cannot be guaranteed, especially below about the top 50, but it is intended that the publication of "working" lists will provide a motivation for athletes and invite comment to help ensure the lists are as accurate as possible. It is updated every week, but some very recent performances may not be included. The website only puts information from a standard of performance, therefore only getting top performers. There is no limit to number of athletics on this website as everyone who is registered and have the correct standard for 800m running and is born in the years of 1986/87 and 88 will be looked at. One problem with this is there may not be enough people born in those years, to do a reliable study.

This study does not compare results with any other countries, only looking at Great Britain athletes, therefore larger comparisons cannot be made with other countries to see if it affects other countries. Also this study is only looking at 800m and therefore the results cannot be used to compare the birth effect for other middle distant events. Another problem is being able to back track everyone's records, this could mean they were not competing in sport and came to it later or that they were not at the standards required for the website, therefore their results are not recorded. Athletes may also

switch to 400m or 1500m or move to another sport altogether during “specialisation” (Côté 1999) stage of talent development resulting in dropping out from 800m.

1.7 Definitions of terms

Within the current study, athletes were split into:

Half one year (H1)- September to February

Half two year (H2)- March to August.

CHAPTER III

METHODOLOGY

3.0 Method

The purpose of the current research was to determine if there was relative age effect in male and female 800m athletes. This was accomplished using a quantitative approach.

3.1 Subjects

Everyone registered on the website of www.athleticsdata.com, for 800m for females or males in the outdoor season of 2002 or 2007 records have been collected. There were 719 male athletes register in 2007 and 628 male athletes in 2002, for the females 830 female athletes were register in 2007 and 628 female athletes in 2002. The data gathered for this study were the athletes born in 1986, 1987, and 1988. Altogether there were 469 subjects used for the study, once sorted from the website. To process all the data it took 10 min per person, getting there birthdates, personal bests, and back tracking their history of 800m running and recording their 800m times in each year they participated in.

3.2 Data Collection

The data gathered was categorical and numerical scales of measurements. The athletes selected for this study were selected from the website of www.athleticsdata.com, everyone from this website are elite performers of their events, as there are performance standards to get your name and your performance recorded onto the website. The data from www.athleticsdata.com is obtained using techniques to electronically read the results contained in Athletics Weekly. Use is also made of other sites including www.gbrathletics.com, [16](http://www.athletics-</p></div><div data-bbox=)

results.co.uk and other websites listed at www.runtrackdir.com/links and www.runtrackdir.com/ukclubs to both verify and obtain data (www.athleticsdata.com). This is an ongoing developing website with performances being both entered and checked daily. Everyone registered on this website for 800m for females or males in the outdoor season of 2002 and 2007 records have been collected. The data gathered for this study was for the athletes born in 1986, 1987, and 1988. Their dates of birth were recorded and sorted into months to see who was born when; this allowed seeing who was born early in the competition year and who was born late in the competition year. The athlete's performances over the 6 years from 2002 to 2007 inclusive to 6 years were recorded. Recorded 800m time and then converted into total seconds to allow numerical processing. Then by extracting the month of birth from the date of birth and then inserted data in to excel. By checking existing names from previous years of data and if any new subject a new row was added. From this, athletes were sorted into three groups, **1.**if the athletes were competing at junior level 5 years ago and still competing, **2.)**or if they started competing at senior level, or **3.)** Have they came in at junior level and have disappeared.

3.3 Checking

Data checking was done on the data by sorting on date of birth. Years can be checked and sorting it into months and proper months and years. By sorting on month, month can be checked and by sorting on 800m time (s), the time entered can be checked for feasibility. Athletes were sorted into alphabetical order as if any two names were spelt slightly differently and had the same date of birth then this would show up and could be checked to see if there was a mistake. 800m times were

converted into a single number unit. Data was checked for any mistype values, if any were found, and then went back to the original spreadsheet to correct the fault. After checking the data the website was checked again to clarify the data before data analysis.

3.4 Data Analysis

Analysis was done on both female and male data on all athletes. Athletes were sorted into months and into what half of the year they were born (H1 and H2). Count and Countif functions were used to identify athletes that had participated in particular years. It was also possible to determine the number of athletes who participated in all 6 seasons, and the number of seasons the athlete participated in if it was less than 6. Boolean (Y/N) fields were determined for whether athletes participated in each year 2002-2007.

Frequencies were determined for H1 and H2 groups within male and female subjects for each year's data to allow chi square tests to be performed. The total for any group was multiplied by $182\frac{1}{4} / 365\frac{1}{4}$ to determine the expected proportion in H1, the number of days of the calendar month was to determine for the sub sample. A chi square goodness of fit test was used to compare observed distribution of birth months with a theoretically expected distribution, and the Chi square tests of independence was used to compare nominal categories between 2 individual groups (H1 and H2 born). The chi square test of independence also looked at the risers, fallers, entering athletes and drop outs for both male and females. The chi square test of independence was also used to compare the proportion of H1 born athletes

between pairs of consecutive years. Some chi square tests were for quarters (3 DF) while others were for half years (1 DF).

A two way ANOVA was used for those subjects competing in each of the 6 years, it was used to see (a) if there were differences between the H1 and H2 group's performances, (b) differences over time – 2002-2007, (c) different change over time between H1 and H2 groups. Post hoc tests were used to compare performances between individual pairs of years.

CHAPTER IV

RESULTS

4.0 Results

Figure 1 and 2, shows that there are more athletes born in the season of September, October and November than any other months, especially for the males. April, May and June are the lowest for the female born athletes and for the male. This also shows that more males are involved. There was a significant relative age effect for male 800m runners ($\chi^2_3 = 17.2, p = 0.001$). However no significant relative age effect for female 800m runners ($\chi^2_3 = 4.5, p = 0.216$).

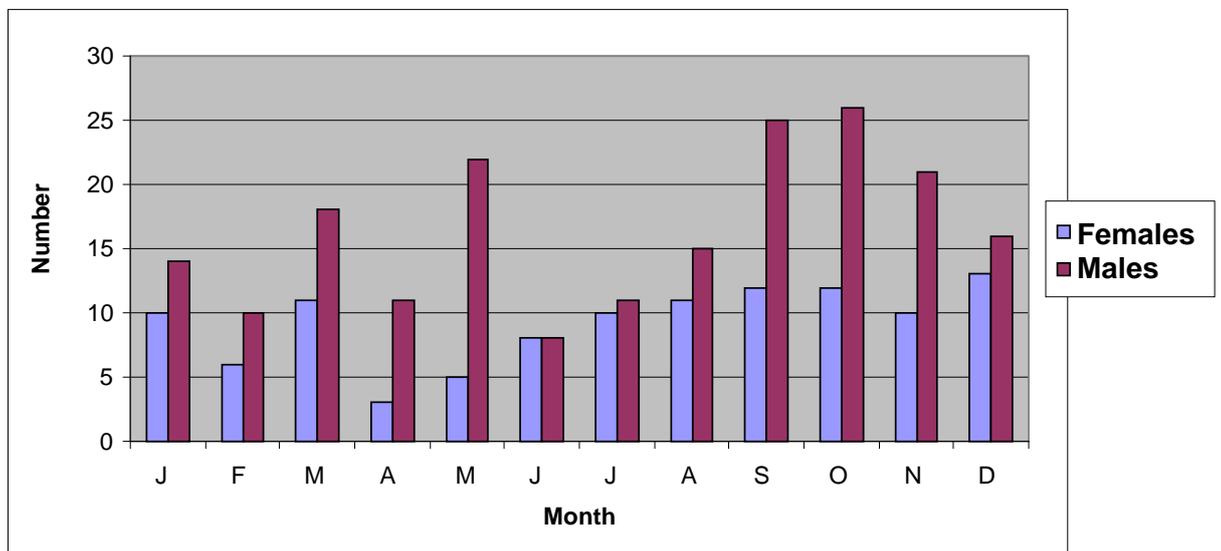


Figure 1. The number of male and female athletes in 2007

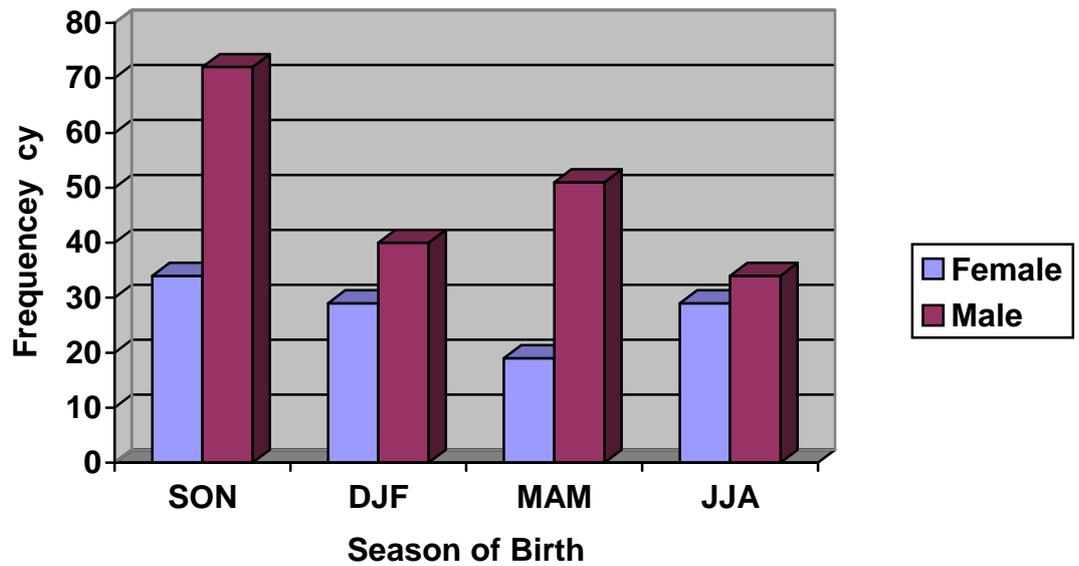


Figure 2. Participating on 2007

Table 1. Number of male athletes in each year who were born in H1 and H2

Males						
Observed	2002	2003	2004	2005	2006	2007
H1	50	43	40	36	35	37
H2	39	31	32	32	31	31
Goodness of Fit Test						
χ^2_1	1.5	2.1	1.0	0.3	0.3	0.6
p	0.216	0.144	0.314	0.584	0.580	0.430
Test of Independence						
χ^2_1		0.4	0.0	0.7	0.6	0.2
p		0.542	0.855	0.406	0.447	0.650

Table 2. Number of female athletes in each year who were born in H1 and H2

Females						
Observed	2002	2003	2004	2005	2006	2007
H1	108	79	65	45	36	31
H2	88	62	54	39	27	25
Goodness of Fit Test						
χ^2_1	2.3	2.3	1.2	0.5	1.4	0.7
p	0.125	0.128	0.275	0.469	0.233	0.391
Test of Independence						
χ^2_1		0.2	0.0	0.1	0.1	0.0
p		0.676	0.901	0.782	0.769	0.973

Tables 1 and 2 show of those athletes born in 2002 over the following 5 years. Male and female runners the proportion of H1 and H2 athletes who remained in the sport was not significant different at any of the following years. Furthermore, no significant different between the proportion between H1 and H2 athletes at any year from 2002 till 2007. There is a large drop out rate for the females, what is illustrated in figure 3 and a steadier drop out rate for the males, illustrated in figure 4.

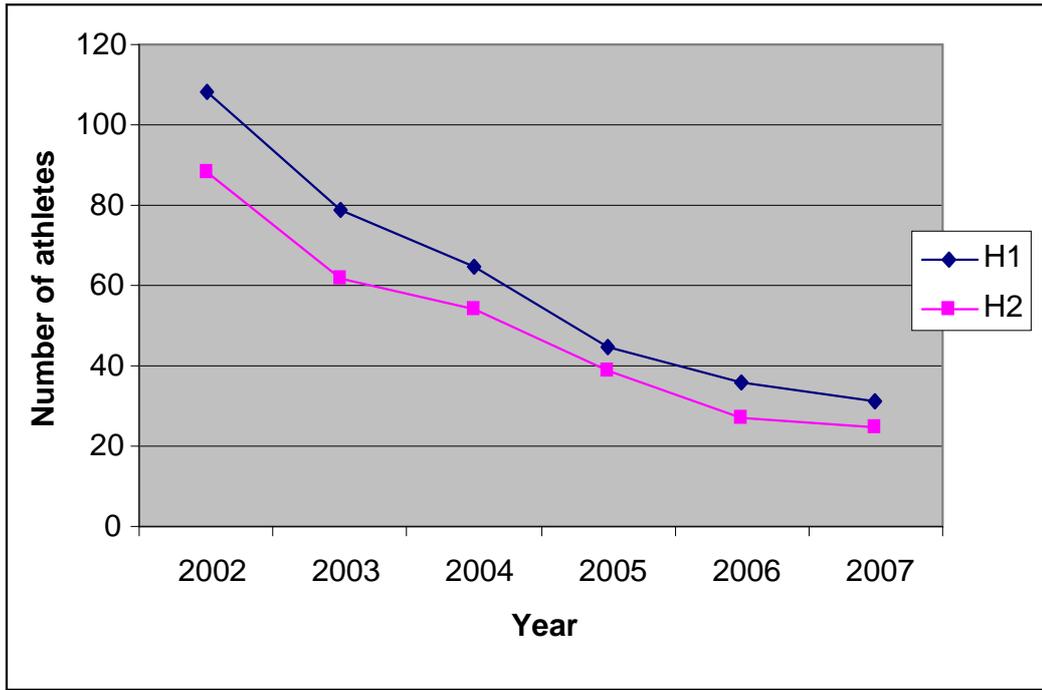


Figure 3. Number of female athletes from 2002 to 2007

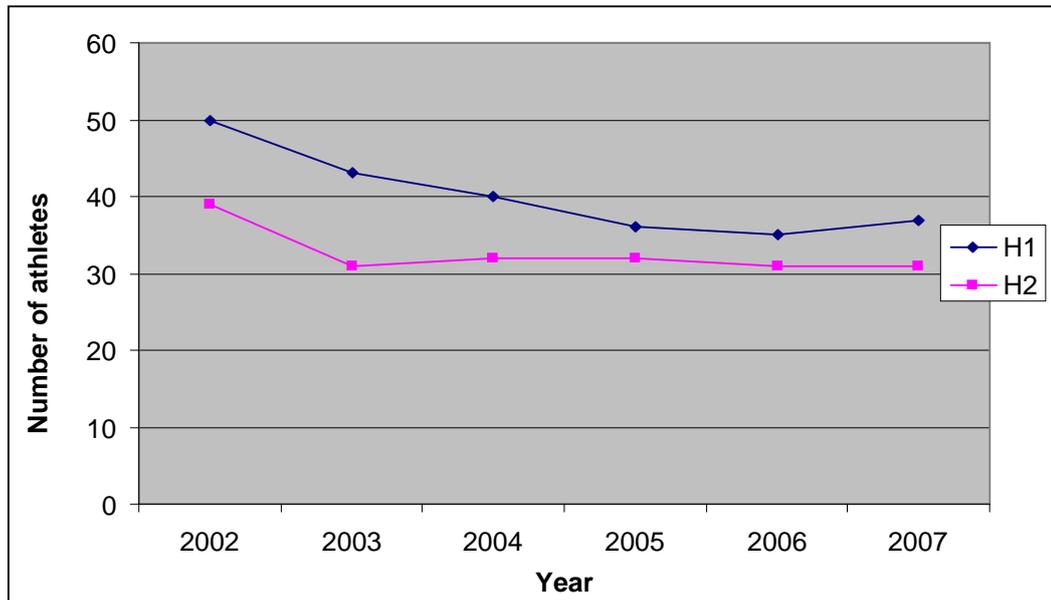


Figure 4. Number of male athletes from 2002 to 2007

Table 3. The risers, fallers, entering athletes and drop outs athletes for females

Female			
	H1	H2	Total
Ran in 2002 and dropped out by 2007	77	63	140
Fell in rankings from 2002 to 2007	16	13	29
Same ranking in 2002 and 2007	0	3	3
Rose in rankings from 2002 to 2007	15	9	24
Did not run in 2002 but entered by 2007	32	23	55
Total	140	111	251
χ^2_4	4.4		
P	0.356		

Table 4. The risers, fallers, entering athletes and drop out athletes for males

Male			
	H1	H2	Total
Ran in 2002 and dropped out by 2007	13	8	21
Fell in rankings from 2002 to 2007	19	15	34
Same ranking in 2002 and 2007	1	0	1
Rose in rankings from 2002 to 2007	17	16	33
Did not run in 2002 but entered by 2007	75	54	129
Total	125	93	218
χ^2_4	1.4		
P	0.837		

Tables 3 and 4 show that there is no significant difference between H1 and H2 athletes male ($\chi^2_4 = 1,4$, $p = 0.837$) or females ($\chi^2_4 = 4.4$, $p = 0.356$) with respect to the profile of athletes entering and withdrawing from 800m running between 2002

and 2007. Mode female athletes participate in 2002 but dropped out of the sport by 2007 (N= 140). However the mode male athlete was not running 800m in 2002 but had enter afterwards and participate till 2007.

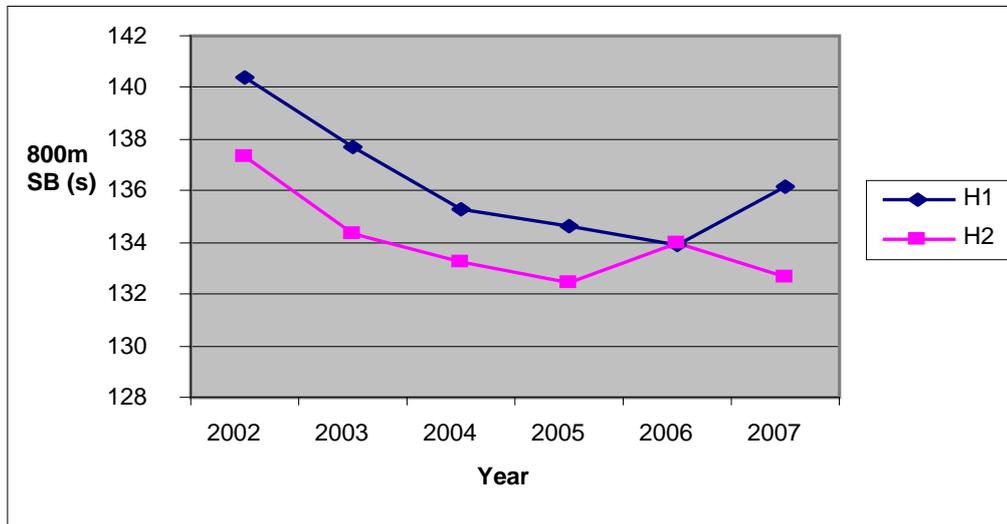


Figure 5. 800m season best for the female athletes who participated on the 800m during each of the 6 seasons.

Figure 5 shows the trend in 800m season best for the female athletes who participated in the 800m during each of the 6 seasons. There was no significant difference between H1 and H2 ($F(1,33) = 2.8, p=0.106$), nor was there a significant interaction between half year of birth and season ($F(5,165) = 1.2, p=0.305$). However, season did have a significant influence on 800m best time ($F(5,165) = 10.8, p=0.001$) with Bonferonni adjusted post hoc tests revealing significant differences between 2002 and 2003 ($p<0.05$), 2002 and 2004 ($p<0.05$), 2002 and 2005 ($p<0.05$), 2002 and 2006 ($p<0.05$), 2002 and 2007 ($p<0.05$). Although no significant interaction, need to note that the H2 athletes improved their season best by over a second in 2006-2007. While H1 athletes slowed down by over 2 seconds.

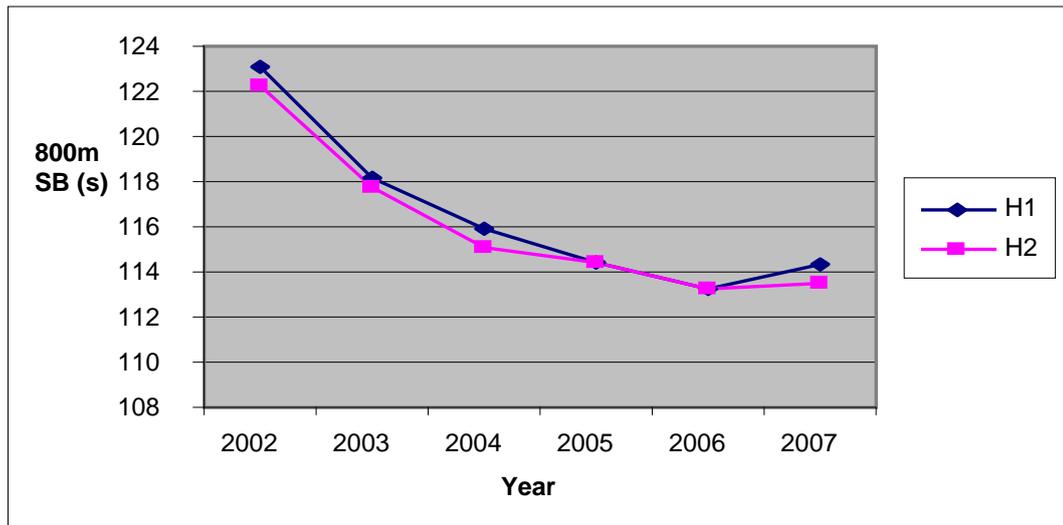


Figure 6. 800m season best for the male athletes who participated on the 800m during each of the 6 seasons.

Figure 6 shows the trend in 800m season best for the male athletes who participated in the 800m during each of the 6 seasons. There was no significant difference between H1 and H2 ($F(1.44)=0.3$, $p =0.579$), nor was there a significant interaction between half year of birth and season ($F(5.220)=0.3$, $p =0.746$). Moreover, season did have a significant influence on 800m best time ($F(5.220)=96.9$, $p < 0.001$) with Bonferonni adjusted post hoc test revealing significant differences between all years ($p < 0.05$) expected 2007 v 2006 and 2007 v 2005. Although fewer H2 born athletes in each year these athletes are slightly faster than their H1 counter parts.

CHAPTER VI

CONCLUSION

6.0 Conclusion

It was found that relative age effect only in male athletes and not female athletes in the study. Therefore the alternative hypothesis cannot be rejected. There was a difference between H1 and H2 female athletes in their 800m performances over 2002 and 2007 and the H2 were faster while the H1 got slower over time. There was only a slight difference for males in their performance but both H1 and H2 got slower in time, what is a concern as the athletes still need to keep improving. Moreover there is a large amount of athletes dropping out from the years of 2002 to 2007 especially for the female, therefore strategies to keep athletes in the sport need to be analysed.

6.1 Limitations

The study has a number of limitations as there are other factors besides relative age that influence athlete's participation in athletics. These include anthropometric factors (Edwards, 1994), parental support (Côté, 1999), coaching (Baker, Côté & Abernethy, 2003) and sponsorship (Lyle, 2003). The current investigation as it was not possible to obtain valid and reliable data relating to these factors. Another limitation in the method used in the current investigation is that when athletes do not appear in the rankings, it may be due to injury or them competing in another event in athletics; therefore assuming they have left the sport. Also by using a quantitative study it is not known why they left the sport, therefore a qualitative approach would give these answers as we can only assume they left the sport or moved to another event. Another limitation is that this study is only looking at GB runners, therefore no large comparisons can be made with other countries, as this would give added information to see if relative age has effect other countries or not. This study had

only looked at 800m runners, therefore other events would need to be looked at, to see if any relative age effect has occurred in other events in athletics.

6.2 Practical Recommendations

A range of solutions to skewed birth date distributions in other sports have been proposed. Barnsley et al. (1985) have proposed rotating the cut off date, which may produce a more even birth date distribution in senior players. However many young athletes will still be disadvantaged. Brewer et al. (1995) argued that 1 or 2 year bands typical of most sports are too much and a shorter 9-month period as suggested by Boucher and Halliwell (1991) would be better as it would rotate cut off dates and reduce the size of relative age effect. Moreover Baxter-Jones (1995) described alternative junior age banding schemes that have been proposed based on anthropometric data, sex, height, body mass and parental heights (Roche, Tyleshevski & Rogers, 1983). Simmons and Paull (2001) suggested a remedial action proposed for soccer. Young players who may be disadvantaged by the relative age effect should be encouraged to continue participation if they show genuine talent.

6.3 Future recommendations

This study does not compare results with any other countries. Only looking at Great Britain athletes for that reason larger comparison cannot be made with other countries to see if there is a relative age effect. Therefore for future studies, other countries would need to be taken into count for a larger comparison. Also the study is only looked at the 800m event and therefore the results cannot be used to compare the birth effect for other middle distant events like the 1500m. A further future direction is to look at other events in athletics to see if relative age has affected them.

Moreover a longitudinal study would be beneficial, looking at juniors and following them up to senior level over a 3 year or 5 year period like O' Donoghue (2006) study of elite tennis players. Alternative recommendations would be to look at elite versus non-elite (club level athletes) to see if relative age exists there. UK athletics is trying to change the athletic system to encourage more athletes into athletics and are changing the age group system (See appendixes A & B). Therefore hopefully this will gain more athletes into athletics and the change in age groups will be more beneficial to athletics.

CHAPTER VII

REFERENCES

Reference:

Anderssen, N. (1993). Perception of physical education classes among young adolescents: do physical education classes provide equal opportunities to all students?. *Health Education Research*, **8**, 167-179.

Bale, P. (1992). The function performance of children in relation to growth, maturation and exercise. *Sports Medicine* **13**, 151-159.

Baker, J., Côté, J., & Abernethy, B. (2003). Learning from the experts: practice activities of expert decision makers in sport. *Research Quarterly for Exercise and Sport*, **74**, 342-347.

Baxter-Jones, A. (1995). Growth and Development of Young Athletes- Should competition levels be age related?. *Sports Medicine*, **20**, 59-64.

Barnsley, R. H., & Thompson, A. H. (1988). Birthdates and success in minor hockey: The key to the NHL. *Canadian Journal of Behavioural Science*, **20**, 167-176.

Barnsley, R. H., Thompson, A. H., & Barnsley, P. E. (1985). Hockey success and birthdate: The relative age effect. *Journal of the Canadian Association of Health, Physical Education and Recreation*, **51**, 23-28.

Buckner, J. (2006). Changing athletics competition. Cited in www.athleticsweekly.com, accessed on 16/01/08.

Brewer, J., Balsom, P. D., & Davis, J. A. (1995). Season of birth distribution amongst European soccer players. *Sports, Exercise and Injury*, **1**, 154-157.

Boucher, J., & Halliwell, W. (1991). The Novem System: A practical solution to age grouping. *Journal of the Canadian Association for Health, Physical Education and Recreation*, **57**, 16-20.

Boucher, J. L., & Mutimer, B. T. P. (1994). The relative age phenomenon in sport: Replication and extension with ice-hockey players. *Research Quarterly for Exercise and Sport*, **65**, 377-381.

Brustad, R.J., Babkes, M.L. and Smith, A.L. (1993). *Youth in Sport. In Handbook of Sport Psychology 2nd edition.* (edited by R.N. Singer, H.A. Hausenblas and C.M. Janelle), pp. 604-635. John Wiley & Sons, Inc.

Côté, J. (1999). The influence of the family in the development of talent in sport. *The Sport Psychologist*, **13**, 395-417

Cross, N & Lyle, J (2003). *The coaching process: principles and practice for sport.* Edinburgh, UK: Butterworth Heinemann

Doblhammer, G., & Vaupel, J. W. (2001). Lifespan depends on month of birth. *Proceedings of the National Academy of Science*, **98**, 2934-2939.

Dudink, A. (1994). Birth date and sporting success. *Nature*, 368, 592.

Edgar and O'Donoghue, (2005). Season of birth distribution of elite tennis players. *Journal of Sports Sciences* . **23**, 1013-1020.

Edwards, S. (1994). Born too late to win? *Nature*, 370, 186.

Giles, R. (1993). The effect of date of birth on performance within the secondary school. *School Science Review*, **75**, 133-135

Gill, D.L., Gross, J.B., Huddleston, S. (1983). Participation motivation in youth sports. *International Journal of Sport Psychology*, **14**, 1-14

Gould, D., Feltz, D., Horn, T., & Weiss, M. (1982). Reasons for attrition in competitive youth swimming. *Journal of Sport Behaviour*, **5**, 155-165.

Gould, D., Udry, E., Tuffey, S., & Loehr, J. (1996). Burnout in competitive junior tennis players: I. A quantitative psychological assessment. *The Sport Psychologist*, **10**, 322-340.

Helsen, W. F., Starkes, J. L., & Van Winckel, J. (2000). Effect of change in selection year on success in male soccer players. *American Journal of Human Biology*, **12**, 729-735.

Houlihan, B. (2003). *Sport and Society: A student introduction*. SAGE Publications London.

Joll, A. , G. O' Donoghue. (2007). Relative age distribution of welsh netball players. *International Journal of Coaching Science*, **2**, 1-18.

Langer, P., Kalk, J. M. & Searls, D. T. (1984). Age of admission and trends in achievement: a comparison of blacks and Caucasians, *American Educational Research Journal*, **21**, 61 – 78.Cited in, Thompson, A, Barnsley, R, and Battle, J. (2004). The relative age effect and the development of self esteem. *Educational Research*. **46**, 313-320.

Maddux., C, D. Stacey, D. and Scott , M. (1981). School entry age in a group of gifted children. *Gifted Children Quarterly*, **25**, 180-184.

Malina, R, M. (1990). *In Exercise fitness and health: a consensus of current knowledge*. Campaign II: Human Kinetics.

Malina, R., (1994). Physical growth and biological maturation of young athletes. *Exercise Sport Review*, **22**, 389-534.

Musch, J., & Grondin, S. (2001). Unequal competition as an impediment to personal development: A review of the relative age effect. *Developmental Review*, **21**, 147-167.

Musch, J., & Hay, R. (1999). The relative age effect in soccer: Cross-cultural evidence for a systematic discrimination against children born late in the competition year. *Sociology of Sport Journal*, **16**, 54-64.

O'Donoghue, P.G. (2006), Season of birth effects on elite junior tennis players' world rankings, Book of Abstracts, World Congress of Science and Racket Sports IV, Madrid, Spain, 21st-23rd September 2006, 37.

Orlick, T.D. (1974, November / December). The athletic dropout: a high price for inefficiency. *Canadian Association for Health, Physical Education and Recreation Journal*, **41**, 21-27.

Roche, A, F., Tyleshevski, F., Rogers, E. (1983), Non-Invasive measurement of physical maturity in children. *Research Quarterly for Exercise and Sport*, **54**, 364-371.

Russell, R.J.H., & Startup, M.J. (1986). Month of birth and academic achievement. *Personality and Individual Differences*, **7**, 839-846. Cited in Thompson, A., Barnsley, R., & Stebelsky, G. (1991). "Born to play ball": The relative age effect and major league baseball. *Sociology of Sport Journal*, **8**, 146-151.

Sapp, M. & Haubenstricker, J. (1978). Motivation for joining and reasons for not continuing in youth sports programmes in Michigan. Paper presented at the American Alliance for Health, Physical Education, Recreation and Dance National Conference, Kansas City, cited in, Gill, D.L., Gross, J.B. and Huddleston, S (1983), *International Journal of Sport Psychology*, **14**, pp. 1-14.

Sharp, C. (1995). What's age got to do with it? A study of pattern of school entry and the impact of season of birth on school attainment. *Educational Research*, **37**, 251-265.

Sharp, C., Hutchison, D., & Whetton, C. (1994). How do season of birth and length of schooling affect children's attainment at key stage 1? *Educational Research*, **36**, 107-121.

Simmons, C. & Paull, G. C. (2001). Season-of-birth bias in association football. *Journal of Sports Sciences*, **19**, 677-686.

Singer, R.N., Hausenblas, H.A. and Janelle, C.M. (2001). *Handbook of Sport Psychology*. 2nd Edition. New York: Chichester

Smithers, A. G & Cooper, H. J. (1984) Social class and season of birth. *The Journal of Social Psychology*, **124**, 79-84.

Smithers, A. G & Cooper, H. J. (1978) Personality and Season of Birth. *The Journal of Social Psychology*, **105**, 237-241.

Smoll, F., Magill, R., & Ash, M. (1988). *Children on Sport*. Human Kinetics, United States of America.

Thompson, A., Barnsley, R., & Stebelsky, G. (1991). "Born to play ball": The relative age effect and major league baseball. *Sociology of Sport Journal*, **8**, 146-151.

Thompson, A, Barnsley, R, and Battle, J. (2004). The relative age effect and the development of self esteem. *Educational Research*. **46**, 313-320.

Torrey, E,F., Miller, J., Rawlings, R., & Yolken, R,H. (1997). Seasonality of births and schizophrenia and bipolar disorder; a review of literature. *Schizophrenia Research*, **28**, 1-38. Cited in Joll, A. , G. O' Donoghue. (2007). Relative age distribution of welsh netball players. *International Journal of Coaching Science*, **2**, 1-18.

Williams, P. (1964) Date of birth, Backwardness and Educational Organisation. *British Journal of Educational Psychology*, **34**, 247-255.

Wold, B. and Kannas, I. (1993), Sport motivation among young adolescents in Finland, Norway and Sweden. *Scandinavian Journal of Medicine and Science in Sports*, **3**, 283-291. Cited in Joll, A. , G. O' Donoghue. (2007). Relative age distribution of welsh netball players. *International Journal of Coaching Science*, **2**, 1-18.

Website

www.welshathletics.org (accessed on 14/09/07)

www.athleticdata.com (accessed on 14/09/07)

APPENDICIES

APPENDIX A

Consultation on Age Group Rule proposals

Dear Club Secretary/Competition Provider

The attached paper is the result of feedback from many within the sport on the Competitions Paper published in September. In that document UK Athletics proposed to introduce some recommendations for age group rule changes.

The attached paper along with this letter constitutes the formal consultation process for these rule changes. A separate paper proposing other rule changes for the 2008 book has already been issued, but this is such an important area, we wished to focus attention on the proposed changes and the thinking behind them. We have also again clarified that any change would be implemented from 2009.

Your views can be logged by letter response to UKA Competitions Dept (rule changes) at the address below or by email to comptemp@ukathletics.org.uk. Every organisation that responds will have their preference logged on a public document available for viewing on the UKA web site under the Competitions area, where the review is currently published.

Deadline for feedback is 31st March 2008. This will allow time to further finalise technical considerations and plan implementation.

Changes to Age Groups for Competition in the UK

Background:

In suggesting that the sport of athletics review its rules regarding age groups, UK Athletics has taken account of a number of factors:

1. There is no single system for athletics now. The earliest age of competition can be 10 on track and field but 11 on cross-country and road. Northern Ireland already operates calendar year cut off. Off track running considers age at beginning of competition year, track and field takes age at end of competition year. Fell running operates calendar year cut off for U12/U14/U16/U18/U20. The net effect of this as I described to clubs at the recent NJAL AGM was that a Belfast based distance athlete belonging to Sale Harriers who turns 17 in autumn of this year faces the following turmoil: U20 in NI XC pre Xmas; U17 in ECCA XC relays, U20 in pre Xmas XC Challenge; U20 post Xmas in Inter Counties/NI XC and indoor track; U17 in Eng National XC.
2. The cut off for the age groups is 31st August but the Competition Year runs 1st October to 30th September. So athletes currently compete in 2 age groups in track and field across the English school year. An athlete turning 18 in September will be U17 on track until end September, then U20 if they compete indoors in December- March, but U17 still on cross country.
3. The biggest drop off in competitors is from age 16-18 with significant decreases in the 2 years post English GCSEs.
4. There are already a number of other sports that that we can look at for age group examples. Interestingly, the bulk use year of birth as the UK age group rule; in the UK Northern Ireland Athletics already applies this rule.
5. The international rules of our sport use U18 and U20 age categories which dictates the age rules for GB/NI aspirants. No young athlete should feel excluded from that pool when they first join our sport.

This being said, then no change at all is an unattractive option as the chaos that exists for newcomers and age group participants to our sport does not do athletics any favours. As the competition paper highlights and many PE teachers have agreed, we are in an increasingly competitive environment and whilst there is little research on the impact of the different age group systems being followed by sports, athletics in the UK stands alone in offering such a jumbled picture for a single sport.

Guiding Principles:

All of that being said, before proposing solutions, we need to establish some principles that we should strive to work within:

- A single age group system for athletes in all disciplines that operate under the sport of athletics
- A system that provides greater clarity and ease of operation for competitors, team managers and competition providers
- A system that offers some universal benefits over the current system, since a large proportion of the sport will be changing
- A recognition and respect for the different education systems across the UK – which may mean that flexibility for certain competition providers is required

Reactions to Initial Competition Paper Proposals:

It is fair to say that there has been a diverse response to the paper and its initial recommendations. These roughly fall into a number of concerns:

- There was almost universal concern that if the new age groups were adopted, that 11 year olds would not be formally catered for. We have amended the proposals to include an U12 age group to address this.
- No major objection to U20...but XC/road is the real issue. (our thanks to Mr. Paver for pointing out the error in the competition year/age group definitions)
- U18 is somewhat contentious – however a number of those corresponding can see benefits of aligning with IAAF. The National Junior League officers could see benefits of removing youngest age U17s (15 year olds) from competing against top age U20s
- A growing number of individual performance coaches, Scottish Athletics and Northern Ireland athletics, and the endurance event management group favour year of birth cut off (i.e. more radical than our original thinking)
- English schools (and a number of county/club secretaries) have written and are concerned that grouping the year “pairs” differently will cause further confusion and would prefer to stay with current age groups and current dates.

Rule Change Recommendations

UKA deliberately did not propose any rule change initially and simply allowed people to respond to the competitions paper. This has given us the opportunity to consider our approach very carefully. We have already confirmed that NO age group rule change would be imposed in 2008, and we are repeating this for clarification.

The recommended process moving forward is:

- UKA to propose two alternative rule change options for age groups (attached)
- All clubs and competition providers to be invited to register their views (this information will be published via the UKA website to ensure transparency)
- The preferred proposal to be reviewed by the National Event Groups for technical recommendations (draft summary of issues/categories on website)
- A final rules proposal to be enacted from 2009.

Anyone wishing to discuss the process or engage in further dialogue on the Competitions paper itself can email us at UKA on:

zhydepeters@ukathletics.org.uk
calexander@ukathletics.org.uk

Attachment 1 – Participation statistics

Source: R.Whittingham November 2007

Table 1 – Age Group Participation Analysis by Calendar Year

By Age	% of all U20
19 (born in 1988)	3.91
18 (born in 1989)	5.57
17 (born in 1990)	7.47
16 (born in 1991)	9.99
15 (born in 1992)	12.16
14 (born in 1993)	13.72
13 (born in 1994)	13.69
12 (born in 1995)	13.51
11 (born in 1996)	11.54
10 (born in 1997)	6.82
Under 10	1.63
	100.00

Table 2 - Age Group Participation Analysis by Current UK Age Gp (T&F rules excluding NI)

By Age Group	% of all U20
U20 (31/12/88-31/8/90)	13.86
U17	20.69
U15	27.23
U13	26.24
	100.00

Note: the U11 age group does not exist in national rules, but many local competition providers do support U11 competition. Of the U13 category, 11.98% are U11s.

Attachment 2 – Data from Other European Nations Age Groups

Category	Finland	France	Germany	UK
Senior	x	X	x	x
U23		X		x
U20	x	X	x	x
U18	x	X	x	
U17				x
U16	x	X	x	
U15	x		x	x
U14	x	X		
U13	x			x
U12	x			
U11	x			
U10	x			
Cut off date	31st Dec	31st Dec	31st Dec	Mixed

Note: Sweden operates same rules as Finland but with no U13 or U15 categories.

NI is aligned with the Irish age group rules, which match IAAF, although they hold “odd” and “even” year pair championships to allow greater opportunity for young athletes to compete.

Attachment 3 – Proposed Age Groups in Athletics post 2009

Option A:

The Competition Year is retained as the current UKA rules book.

Age Gp	Definition
U20	U20 and O18 on 31st December in competition year
U18	U18 and O16 on 31st December in competition year
U16	Aged 14 or 15 on 31st August at end of Competition year
U14	Aged 12 or 13 on 31st August at end of Competition year
U12	Aged 10 or 11 on 31st August at end of Competition year

Assessment Vs Guiding Principles:

This will provide a two system solution in the club sector. N.Ireland will retain current all Ireland age groups so there will still be 2 systems within the UKA rule group. Whilst it will retain an alignment with English school years, the overlapping competition year and age group cut off will continue to cause some confusion amongst the sport. The introduction of U18 and U20 with calendar year cut off gives clarity for international age group aspirants which is a benefit over the current system.

Option B:

The Competition Year will become the calendar year in line with IAAF rules.

Age Gp	Definition
U20	U20 and O16 on 31st December in competition year
U18	U18 and O16 on 31st December in competition year
U16	Aged 14 or 15 on 31st December in competition year
U14	Aged 12 or 13 on 31st December in competition year
U12	Aged 10 or 11 on 31st December in competition year

Assessment Vs Guiding Principles:

This will provide a single UKA rule book solution, but it will almost certainly earn more support if schools competition can choose to operate under school year rules for closed schools competition. This also has a further benefit over the above system that the U18 and U20 age groups together absolutely align with the

IAAF definition of Junior athlete. This system wins the simplicity vote for parents new to the sport and team managers working with age group teams.

APPENDIX B

Changing athletics competition

Part 1 - analysis and principles for change

Preface

During the implementation of the Foster report there were approximately 30 open forums regarding the changes proposed in the report. A common plea across the country was, “we need to do something about competition. It’s a mess.” In the vigorous discussions that followed there were many disparate views, a genuine desire to change and an overwhelming sense that the sheer complexity of athletics competition meant that meaningful change without alienating some sections of the sport was impossible.

Furthermore there have already been two significant reviews of athletics competition since 2000. Both reviews involved widespread consultation and were communicated throughout the sport. Implementing the changes has been challenging. Our sport remains better at individual initiative than collective agreement, but, despite the challenges, many changes, such as event specific competitions and the UK challenge have been initiated, and these have been broadly welcomed within the sport.

This project will build upon some of the previous recommendations contained within the 2000 and 2004 reviews but will contain some significant differences.

Firstly the project will concentrate on the provision of athletics competition for young people – defined as 11 – 20. It will not address senior competition above 20.

The overall objective for the project is increasing participation and improving standards for young people.

The project will also target athletics and athletes below the elite. The assumption is made at the outset that elite performance is identified and tracked on an individual basis. At the same time the hopeful results of an improved competition pathway will see more athletes aspiring to the elite level so the connections across the pathway will need to be consistent through the sport.

Secondly the initial perspective for the project will be broader than athletics. Previous reviews have begun with the world of athletics as currently exists. This review will look at the changes in the sporting and social landscape and how this impacts upon competition in athletics. Inevitably this leads to broader questions about our sport and this report poses some of them. Our sport needs to improve its image. We need to look beyond athletics to see why our sport has declined.

Thirdly the project will be split into three distinct phases. Changing athletics competition is a huge and complex task. The sport will need to reflect as it embarks on the change process. The first phase is this report. This report contains background analysis and some outline principles for change. These will be discussed across the sport before a second report is compiled. This will contain a vision for the future of athletics competition and more detailed recommendations to reach that vision. The third phase of the project will be implementation – working to achieve the vision. A more detailed timetable of the process is included at the end of this report.

Finally, and most importantly, this project wants athletics to become fun again. Our sport is amongst the most physically demanding of all sports but that should not prevent the overall experience being both motivational and enjoyable. The best competitions provided by our sport – Sportshall Athletics, the Great North Run and the London Marathon manage to combine challenge with entertainment. Too often current athletic competition misses the entertainment factor and that is a key reason for the sports decline.

Introduction

The current landscape of athletic competition has emerged over a long period of time in an uncoordinated fashion. This means there is plenty of athletic competition around the country and this is the result of the incredible hard work done by volunteers. Any competition review should start by paying tribute to all the many volunteers who give up so much time to provide competitive opportunities. At the same time many of the volunteers feel frustrated by the sheer complexity that has emerged within the sport and when I talked to them there was considerable disenchantment with the current situation where events are often poorly attended and it is a struggle to find enough athletes to compete.

There are at least 50 different providers of athletics competition in this country and that number does not include the huge number of road races and local activities within every region and county. The consequence of this complexity is that the delivery of competition is patchy and whilst there are many well-organised events,

many competitions exist on a knife-edge with barely enough athletes to complete the schedule and officials supervising jumps and throws with hardly any entrants.

Furthermore the piecemeal development of athletics competition means that the development of athletes (the athlete pathway) is often lost amongst the many stakeholders within the sport - clubs, team managers, coaches, officials, organisers, schools, parents and many others. All have many strong and often different opinions. Over the summer I have been meeting and talking to many groups and individuals, however I make no apologies that most of my time has been spent in discussions with young people themselves. These are the athletes and if our sport is to improve we need to listen to them and understand them.

In listening to young people and observing the changes in society the logical conclusion is that the sport of athletics is in a far worse state than indicated by the Foster report. The 2012 Olympics may provide a life raft but it is no exaggeration to state that unless athletics is prepared to change significantly in this country it will dwindle and become a minority sport. In many parts of the country this has already happened. If this happens the post 2012 environment for athletics is very bleak indeed.

The conclusions of this report are not critical of any individual or organisation. The sport of athletics is characterised by hugely committed individuals with incredible energy and enthusiasm for our sport. But, in true athletics fashion, many of us have been so focused on athletics that we have missed the wider changes in society, which

have contributed to our sport's decline. This report seeks to address this by analysing that wider social context.

If we really want more people to take part in our sport and be committed to improving standards it will depend upon generations of youngsters accepting the challenge and organising their lives (and probably those of their support network) around the sport of athletics. Currently we are asking them to compete in a framework that has changed little in the last 30 years. Thirty years ago - before mobile phones, the Internet, Nike, CDs, police checks, skateboarding, computer games, Sky Sports, the national curriculum, the road race boom, the Premiership and the sale of school playing fields.

If we want them to do this, we need to understand them and their lives.

The social and sporting context

The environment young people are growing up in today is vastly different from that of thirty years ago. We have all experienced many of the changes in society that impact upon young people. A headline list would include:

- Different work patterns
- Fragmentation of family life
- Opportunity to travel
- Speed of communications
- Availability of information
- Choice of activities and lifestyle

- Insecurity of employment
- Changing opportunities within education

This section analyses some of the changes and their impact upon athletics.

School

Until the end of compulsory education (approximately 16), school is the most common feature in young people's lives. All of the children in this country will have some experience of sport through school. The national curriculum ensures that physical education is compulsory. However athletics is not compulsory within the school curriculum and it is often squeezed into the few weeks of a summer term during and after exams.

Unless a school has a PE staff that sees the value in athletics it is under pressure within the curriculum. The new teaching resource "Elevating Athletics" has begun the process of updating school resources, but athletics still struggles in its delivery and communication within schools. If schools are unable to deliver athletics and athletics competition the pressure quickly falls on athletic clubs who usually do not have the resources to develop the sport within the school environment. And the chances are that many youngsters with potential talent in the sport never find that out.

There are many changes currently in motion such as competition managers supported by the Youth Sport Trust but athletics has fallen significantly behind other sports within the school curriculum. Some other sports have developed substantial initiatives within schools usually targeted at recruitment or identifying talent.

Developing a coherent competition pathway through an improved relationship between schools and clubs is critical to the future of athletics.

Clubs

Beyond schools it is the athletic club that is the source of the majority of athletics competition. As society has changed the traditional athletic club has been under ever increasing pressure. A complex network of associations and committees has maintained the current competition structure but this often causes huge conflict within the club itself. Coaches, team managers and club committees frequently struggle to make sense of the competition environment.

The result is a network of clubs across the country offering very different experiences and with different motivations. Some new clubs have rejected the traditional model of athletics competition. Road running clubs have emerged with a clear focus on the increasingly popular mass participation events. Traditional athletics clubs continue to service athletics as it currently exists but are often under-resourced. Many clubs are split between a desire to develop athletes and an outdated competition structure that requires incredible efforts to fulfil.

All the challenges outlined in this report manifest themselves most acutely in the club environment. Young people will often make their first tentative steps along the athlete pathway through an athletic club. If their experience here is not motivating it is unlikely they will stay for long. This means our athletic clubs need to have the

resources through coaching, competition and organisation to attract and retain young people.

A well-developed club sector is critical to the development of athletics.

Young People

Choice and the experience economy

Young people today have significantly more choice in their leisure pursuits than any previous generation. There is more competition for their time and more pressure to fill that time with activities that increase their social acceptance amongst their peer groups. In this context athletics is a sporting activity that will be evaluated against other sporting and lifestyle options, such as skateboarding, football, computer games, activity weekends, ten-pin bowling, theatre clubs or the cinema.

Young people will select from a multitude of lifestyle choices and quickly reject those that are not instantly engaging. Expectations are high and the boredom threshold is low. Likewise the carers of young people lead equally demanding and complex lives. If sports pursuits require excessive amounts of time or travel, the chances are they will be rejected in favour of other sports for their children.

The Experience Economy (Pine and Gilmore) explores the high expectations we all have from our lifestyle choices. Successful organisations and activities understand the importance of creating an exciting and motivating environment. The same holds true for sport. Sports need to capture the imagination of young people. Unless they are motivated by their experiences in a sport they will quickly move on somewhere else.

In our sport this experience is best exemplified by events like the London Marathon, the Great North Run and Nike Run London. These are mass participation events targeted at adults but acutely conscious the whole experience of sport needs to be inspirational. It is not surprising that the youth events around these road races are proving much more popular than traditional athletics.

With so much more choice available young people will sample sports and then move on. This means that sampling a sport or event is not the same as making a lifelong commitment to it. Athletics is a sport requiring considerable dedication; therefore we need to find methods to continually motivate young people if we want them to stay with our sport.

Sports that fail to engage young people quickly and provide rewarding experiences will be rejected in favour of other sports or leisure pursuits.

Brands, the team and the individual

Young people are increasingly sophisticated in their understanding of brands. As society fragments brands become increasingly important in defining an individual's identity. Brands can be the clothes you wear, the team you support or the sport you play. Young people today have more personal power and more attention focused on them than any other generation before them, affecting close to 60% of all brand decisions taken by their parents. Young people's lives are very different from any previous generation. 30% of 8-14 year olds text several times a day, whilst spending on average 2 ½ hours on the computer. (Brand Child – Martin Lindstrom).

As there is so much choice, young people have strong opinions about the clothes they wear and the sports they play. At the same time their choices need to gain acceptance within their wider social group. Often their social group is critical in determining what is and what is not acceptable. Social groups often express stronger opinions on what is NOT acceptable than what is acceptable. In other words social groups will very quickly define what is “out” rather than what is “in”. The work of Richard Elliott (Being Like or Being Liked) explores this critical area of young people’s development. Why is this relevant to athletics competition? Because if social groups of young people define athletics as “out”, they won’t do it.

For these reasons young people are often more comfortable with the team rather than the individual sporting environment. The team environment offers more security and less exposure to failure. All of us from traditional athletics backgrounds know that ultimately athletic success is based upon individual effort but we need to be very conscious that today’s young people are very sensitive to failure in this environment. During the early phases of athletics development we need to recognise the importance of the team and social experience.

Athletics needs to offer a strong social environment in the early teenage years.

The material world

Awareness of salaries and financial rewards has significantly increased in the lives of young people. Transfer fees, salary caps and wage bands are the common currency of the playground. It is often stated that the preparation of an Olympic athlete is

similar to that of a Doctor – 10 plus years of dedicated graft. When we seek to inspire youngsters to move from participation towards excellence in athletics we need to be conscious they will ask what the financial rewards will be? Why should I train to be an Olympic athlete when other sports or careers offer more money or more secure prospects?

On a journey to school my two teenage sons asked me where I finished in the Olympics? Sixth. How much money did you get? Nothing. Why did you bother Dad? Apart from almost crashing the car it made me realise that the idealism of an older generation has been replaced by a harder-headed analysis of risk and reward.

Athletics needs to be aware that money and career options are legitimate concerns when evaluating the pursuit of excellence.

Decline in physical activity

There has been a well-documented general decline in fitness levels amongst young people and an associated rise in obesity. The DCMS annual report for 2006 estimates a 0.5% rise in obesity amongst young people. By 2020 if current trends continue 20% of all boys and one third of all girls will be obese. Our sport is one of the simplest forms of physical activity and can play a broader role in the health agenda. The need for athletics is probably greater than ever, but at the same time our current sport is intimidating to the broader population.

Athletics needs to be more aware of the broader health agenda and determine what our role should be with young people.

Other Sports

Football is the sport that dominates the national landscape. In terms of resources, popularity and media exposure no sport can compete with football in this country. From the Premiership through to local leagues and school teams, football will continue to be the most influential sport for the foreseeable future. Athletics cannot compete with football. The challenge for athletics and all other sports is to find a method of living alongside football. We need to work with football clubs to find ways of using our athletics expertise and to make our sport available as an alternative choice should football be rejected.

Almost every major sport is currently reviewing their competition model. A key impetus for this is the Long Term Athlete Development (LTAD) model that is popular amongst all sports. There is concern about attracting and retaining greater numbers of young people, competitor burnout, over competition at young ages and the problems over 16. All sports are very conscious of keeping young people motivated and engaged through their sporting development.

Many sports (hockey, cricket, rugby and netball) are adopting the principles of LTAD. There is a challenge to athletics because most sports are looking at “athleticism” and how it can be delivered in a creative format (often competitive) within their sporting environment during the earlier years of development. The rationale is that LTAD involves fundamental movement skills linked to agility as a basis for developing sports specific skills. Therefore hockey may offer periods of the year when you can train in an athletic manner for hockey: likewise rugby, and to an

extent cricket. These sports are becoming more year round and are looking to develop more “athletic” formats.

The underpinning principles of athleticism are traditionally associated with our sport of athletics. Our coaches and clubs could have the capability to develop fundamental athletic skills, but unless we change our approach and competitive format in the early years (11-14) we shall lose this to other sports very quickly. The current coaching format encourages specialisation at an earlier age than advocated by LTAD. A real dilemma for our sports and coaches development is at what stage to move from “athleticism” to event group to event specific coaching.

Other sports are also ahead of athletics in offering alternative competitive formats. These formats are often short, fast and fully involving. 20/20 cricket has had a huge impact on the sport but other sports (hockey and rugby) are also planning new formats where they can deliver the sport in a shorter time period on a more local basis.

Furthermore as stronger sports expand their programmes to encompass a more complete approach to athlete development, there will be less opportunity for weaker sports to attract and retain young people. If rugby, football and cricket can offer year round programme including phases of training, summer camps and improved all round skills, where is the time for athletics?

Most sports identify schools as the most fertile recruitment ground. Cricket and rugby have programmes targeted at schools. Cycling is a good example of a sport

where an entertaining recruitment programme has been developed by the NGB, delivered through schools and linked closely to the local club network (Go-Ride).

Basketball (which has huge potential) is currently under review by Sport England. Basketball suffers from poor delivery but is the sleeping giant of urban communities. It has a compact, entertaining and flexible format as well as offering strong cultural, music and social links.

Many sports are reforming their competition programme to more closely reflect the lives of young people. Athletics risks losing out to other sports.

Young people and athletics

The scope of this project covers 11 – 20. Within this age range there are huge changes in behaviour and lifestyle. In order to evaluate the lifestyles and experiences of young people the target audience was split into three age groups. Interviews were then conducted in a range of schools around the country with groups within these age groups. I have visited 8 different schools around the country and met with approximately 400 young people. I have also visited clubs, talked to current athletes, athletes who have dropped out, coaches, officials, and schoolteachers and attended a range of athletic meetings.

Sportshall to Boredom

I define this as ages 12 – 14, school years 7 – 9 (S1 to S3). During this period most young people will have some athletic experience through schools. Sportshall athletics is the most compelling indoor format for this age group but there is a huge gap between this experience and the transition to “real” athletics. There is little progression from a fun, team oriented athletic experience to competing in track and field meetings organised as a small-scale version of the traditional Olympic format. At this age the social and team experience is critical within sport and athletics does not offer a compelling environment.

Many youngsters talked about their enthusiasm for Sportshall and then their disappointment with “real” athletics. Often they were persuaded to go to an athletics club and then pushed into an event specific group early in their athletic development.

At this age many other sports are offering more attractive alternatives to athletics. Time and time again the social atmosphere is mentioned. It is unlikely at this age that youngsters have the confidence to take up athletics without the support of a social group. Reception is critical if we want youngsters to take up our sport.

Some quotes from youngsters included:

“I got fed up with waiting around for ages.”

“I got smashed and didn’t go back.”

“Prefer team games.”

“Athletics is really, really scary.”

The teenage (and parents’) pressure zone

I define this as ages 14 – 16, schools years 10 –11 (S4 – S5). This is the period of increasing specialisation within sport, when sports are competitive with each other. This was recognised as the most desirable age for athletes to begin the process of event specialisation.

Again the social experience is critical as is time. As young people prepare for exams they are under time pressures and sports need to offer formats that encourage athlete development whilst not consuming disproportionate amounts of time. For young people to remain seriously committed to any sport within this age group, there will probably be a major time investment from primary carers. In this context athletics is amongst the most demanding sports not just of young people but also of their support network.

Mention should be made of schools championships. Everyone I spoke to who had attended the English Schools (or a similar home country event) mentioned it as a critical experience in their athletic development. “I wouldn’t be in the sport if it wasn’t for the English Schools.” However the delivery of schools athletics at the local level is very patchy.

If there is a highly motivated county schools organisation working closely with highly motivated teachers and a highly motivated club sector, Schools championships work and can provide an outstanding example of sporting development, but if any of the three organisational pillars is weak (either clubs, schools or county) the delivery at the local level can collapse. For every athlete who speaks highly of his or her schools experience there are more who miss it, through poor communication or a poor local experience.

In these age groups athletics becomes very difficult to understand to young people or parents wanting to take part in our sport. Confusion exists over competition and what it means. Athletics often seems overly complex and inaccessible. Entry procedures are often complex, there is little linkage between events and athletic meetings can last almost the whole day. One parent of a talented and enthusiastic youngster described athletics as a “secret society.”

As well as disappointing experiences there are many examples of great practice at this age group. Usually this occurs where a well-organised and motivated club works closely with the athlete and the individual athlete’s support structure. Many

clubs want to do more for young people but do not have the resources or capability. Young people come to athletics with high expectations based upon other sports or other areas of their lives. If athletics cannot motivate them they will often drift back to other sports or leisure activities.

Some quotes from this age group included:

“I wouldn’t know where to start to go.”

“I’m better at 400m but football is everything in my family.”

“I got invited to the club but it clashed with football.”

“I just sat there all day.”

“I wouldn’t go back to the club by myself.”

“How come you can’t get scholarships in it?”

“It got embarrassing because my Mum had to hang around for hours and watch.”

“I’d think about it but there’s nobody to take me.”

“My coach packed it in. I don’t know whether to call him or not.”

Club Nights to Night Clubs

I define this as 16 – 20, breaking into 2 broad groups 16 – 18 and 18+ (defined according to the most likely age when young people go to college). This is the period of greatest challenge to all sport and to athletics in particular. The lives of today’s post GCSE students offer as many lifestyle choices through education and work as were previously experienced at 18. “All sport drops off the cliff after GCSEs” – a quote from a PE teacher at a specialist sports college where, by any standard, the support structures for sport are outstanding. Social pressures, parties,

the need to earn money, the drinking culture and the fragmented delivery of sport all militate against the extra commitment required to improve as an athlete as this stage of development.

It is an irony that within sports development in this country the school and social environment fragments at precisely the age group where increased specialisation and dedication is most required. Above 16 is the time when most sports require extra time and effort. Above 16 is when the distractions become greatest.

Statistician Ian Hodge has done some fascinating work on English Schools medallists. He chose a year (2000) and an age group (under 15's) at random and then tracked their performance through the sport. Of the **eighty** medallists at the English schools in 2000 only **twenty-eight** (35%) competed in 2006. Of the remaining fifty-two, forty-nine of them had packed it in with just three on the injured list.

There will be a story to tell for each of those talented individuals. For some this will underline the often-quoted story that successful youngsters don't make successful seniors, but this ignores the many lifestyle and sporting forces identified through this report.

There is huge wastage within athletics. The retainment and motivation of young people through the teenage years is critical to raising standards of performance within our sport. Further research into this group of athletes indicated that more disappeared in the year 2000 (when they were still U15's) than in any year

subsequently. Twenty-nine of the forty-nine who have slipped through our fingers did so between 2000 and 2002 (in other words prior to them moving into the under 20's). Although the data represents just one season this does endorse the viewpoint that we lose most of our better prospects before they are 18.

There is a huge challenge in providing the support structures to young people during this time period. Some sports identified a small number of talented young people and find a method either through scholarships or academies of nurturing the talented few. By definition this is the very elite and the support structures quickly deteriorate below this level. Often young people who fail to achieve academy status are lumped into adult competition and this can stifle their long-term development and interest.

As there are so many changes in lifestyle and physical development competition at this age becomes less about age and more about standards. This is also the time period when many young people leave home; therefore the sport needs to find ways of communicating on a more individual basis.

There is often conflict at this age between the club league structure and the event specific pathway. This is often most distressing to the athletes themselves. Somehow our sport needs to find the maturity to reconcile the best interests of the athlete together with our ambitions for the athletic club.

Above 16 there is so much to distract young people away from athletics, our responsibility is to ensure that the sport becomes attractive and offers progressive competition opportunities that keep individuals wanting to be involved.

Some quotes from this age group included:

“The travel was a nightmare.”

“It was all too much effort.”

“Everyone has to earn money. There’s no time for serious sport.”

“There are two clubs. We talked about sharing a javelin coach but they just kept arguing, so I packed it in.”

“The English Schools was the best thing that ever happened to me.”

Summary of research and other sports

In summary:

- Young people have very high expectations of their sporting experience.
- There is lots of competition for their time from sporting and non-sporting activities.
- They are very sophisticated in their understanding of brands, technology and sport.
- The social environment of sport is critical.
- Team sports are often more attractive than individual sports.
- Sampling a sport is very different from making a commitment to the sport.
- Many other sports are becoming year round and have developed new formats to be more interesting and involving to young people.
- Long Term Athlete Development encourages the development of “athleticism” within sports specific environments and this is a potential threat to athletics.
- The delivery of sport in schools is very patchy.

- Young people are growing up faster – they face the lifestyle choices at 16 previously experienced at 18.
- All sport “falls off the cliff” after GCSEs.

Athletics: -

- Is a complicated sport that is difficult to understand?
- Takes up a disproportionate amount of time.
- Has a demanding and complex competition framework.
- Is not as fun and engaging as many other sports
- Provides a mini-Olympic format that may not be in the best interests of the athlete.
- Often encourages event specialisation at an early age
- Does not value the social team experience sufficiently.
- Has not evolved as society and the lives of young people have changed.

In terms of current competition provision, athletics is a supply driven sport. The existing competition model is fragmented, historic and assumes athletes will turn up. This needs to change to a structured demand driven model where the sport provides competition to fulfil the needs of athletes. If we can make the competition model attractive and motivational then we shall start attracting and retaining more young people. In turn this will lead to improved overall standards

Principles for competition change

This report recognises the complexity of athletic competition provision in the UK. It also argues that athletics is in far more serious decline amongst the young people of

this country than has been recognised by many of those closest to the sport. If athletics is to reverse this decline the changes in competition provision need to be of a level unprecedented in the sport's history.

The sport needs to recognise the huge changes in the lives of young people and adapt accordingly or else it will be marginalized. However, lasting change in athletic competition will only be achieved by a combined effort at the local and national level. It will require partnerships between current competition providers, regional councils, local networks and the governing bodies. In some parts of the country these partnerships are well established or already emerging.

Some will want to move ahead quickly with competition change, others will want to reflect before moving on. Therefore this report concludes with some outline principles for change. Once these are agreed the more detailed vision for the future can be developed.

The core principles for athletics competition are:

- Athletics competition exists for athletes.
- Athletics competition should be fun and motivational
- Athletics competition should offer a simple and logical pathway that allows every athlete to fulfil his or her potential.

- Clubs and schools must co-ordinate their athletic competition programme.
- Athletics competition must embrace today's consumer.
- Athletics competition must be inclusive, flexible and imaginative.

These principles should be applied to all competition within the sport. There are additional age specific recommendations for athletics competition. These are:

Principle	Rationale
At all ages the primary athletic experience should be local, fun, within the region and recognise the importance of a strong social framework	This reflects the lifestyles of young people and their carers – this will reduce travel times, make the sport more accessible, exciting and motivating whilst providing the security of a team environment where appropriate.
Under 13 national competition should be by exception only	Vibrant local and regional competition should be sufficient to cater for this phase of athletic development
Between 13 – 15 there should be an emerging co-ordinated schools and clubs framework to the national level	This should provide a clear, logical pathway through the sport, open to all, encouraging broader recruitment and be more motivating to young people.
Over 15 this framework should be supported by graded competition with	This will enable athletes to find appropriate levels of competition and

open meetings and event specific activity.	event specific development as they progress through the athlete pathway. This will help develop the individual athlete beyond the team environment.
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Next Steps

Once these principles have been agreed the next stage of competition reform is to develop a vision for athletic competition. This vision will be based upon the principles. It will contain an outline of how athletic competition could look in the future and a timetable for moving towards that vision.

The vision will be published in spring 2007 after consultation with the home countries, regions and competition providers.

The final phase this project will be implementing the vision. This will begin in the summer and autumn of 2007.