



## 'The Kelly Effect'

### Introduction

In February 2009 Aviva commissioned Dr Anna Waters, a BPS chartered performance psychologist from Chrianna Consultants, to undertake some research on 'The Kelly Effect' and the impact of 'On Camp with Kelly'.

The research examined the following areas:

1. Performance for OCWK athletes
2. Improvements in women's performance in the 800m and 1500m compared with the men's performances from 2000 to 2008
3. Retaining athletes in sport - comparisons of OCWK athletes and non OCWK athletes
4. GBR Women's results at the European Cross Country Championships

### 'On Camp with Kelly' - Athletes Performance Improvements

The performance of athletes joining OCWK was analysed. Firstly, the athletes' personal bests (PB) for the 800m and/or 1500m pre joining OCWK was compared to their PB for the same events in the first season post joining the scheme. It was found that 60% of athletes who raced during their first season with OCWK attained a PB.

A mean (average) time was calculated for each athlete's performance in the 800m and 1500m in the season prior to and post joining OCWK. This provides a measure of the athletes' consistency in times across a season, rather than simply a one off PB. It was found that 64% of OCWK athletes improved their mean performance time across their first season being involved in OCWK.

The athlete's performance across all events and across the length of time the athlete had been involved in OCWK was examined. It was found that 79% of OCWK athletes attained a PB in an athletics event during their time on the programme.

### Summary OCWK Athlete Performance Improvements

Percentage of athletes attaining a PB in the 800m or 1500m within first season after joining OCWK	60%
Percentage of athletes improving mean (average) performance time in the 800m or 1500m across the first season after joining OCWK	64%
Percentage of athletes setting PB across athletics events since joining OCWK	79%

## 'The Kelly Effect'

### UK Athletes' Performance in the 800m and 1500m Post Dame Kelly's two Olympic Gold Medals and starting OCWK in 2004

In order to examine possible effects from Dame Kelly's Olympic success in Athens and 'On Camp with Kelly' (OCWK) and its potential effects on middle distance running, the top ten times for the 800m and 1500m were examined for each year from 2000 to 2008. This provided the opportunity to investigate the times four years prior to Dame Kelly's success and starting OCWK, with the four years post.

Interestingly, the results demonstrated that the times in middle distance running, specifically, the 800m and 1500m have significantly improved by 2008 when compared to 2000 for the women athletes. However, the men's times had not improved significantly and in some age groups had actually deteriorated.

#### In Detail

A mean (average) top ten time was calculated for the 800m and 1500m for the age groups U20s, U23s and all ages. This was based on the mean (average) of the top ten times in that age group for that year. The mean time for 2000 was then compared to the mean time for 2008 and the differences calculated. The women's times had improved significantly more than their male counterparts, see tables and graph below.

**Table of Women's 1500m Mean Top Ten Times between 2000 and 2008**

Age Group	Mean Time 2000	Mean Time 2008	Change
All Ages	4:15.21	4:07.99	7.22 Seconds Improvement
U23s	4:26.13	4:18.24	8.29 Seconds Improvement
U20s	4:30.13	4:20.17	9.96 Seconds Improvement

**Table of Men's 1500m Mean Top Ten Times between 2000 and 2008**

Age Group	Mean Time 2000	Mean Time 2008	Change
All Ages	3:38.12	3:38.65	0.53 seconds Deterioration
U23s	3:44.08	3:45.49	1.41 seconds Deterioration
U20s	3:48.59	3:46.77	1.82 Seconds Improvement

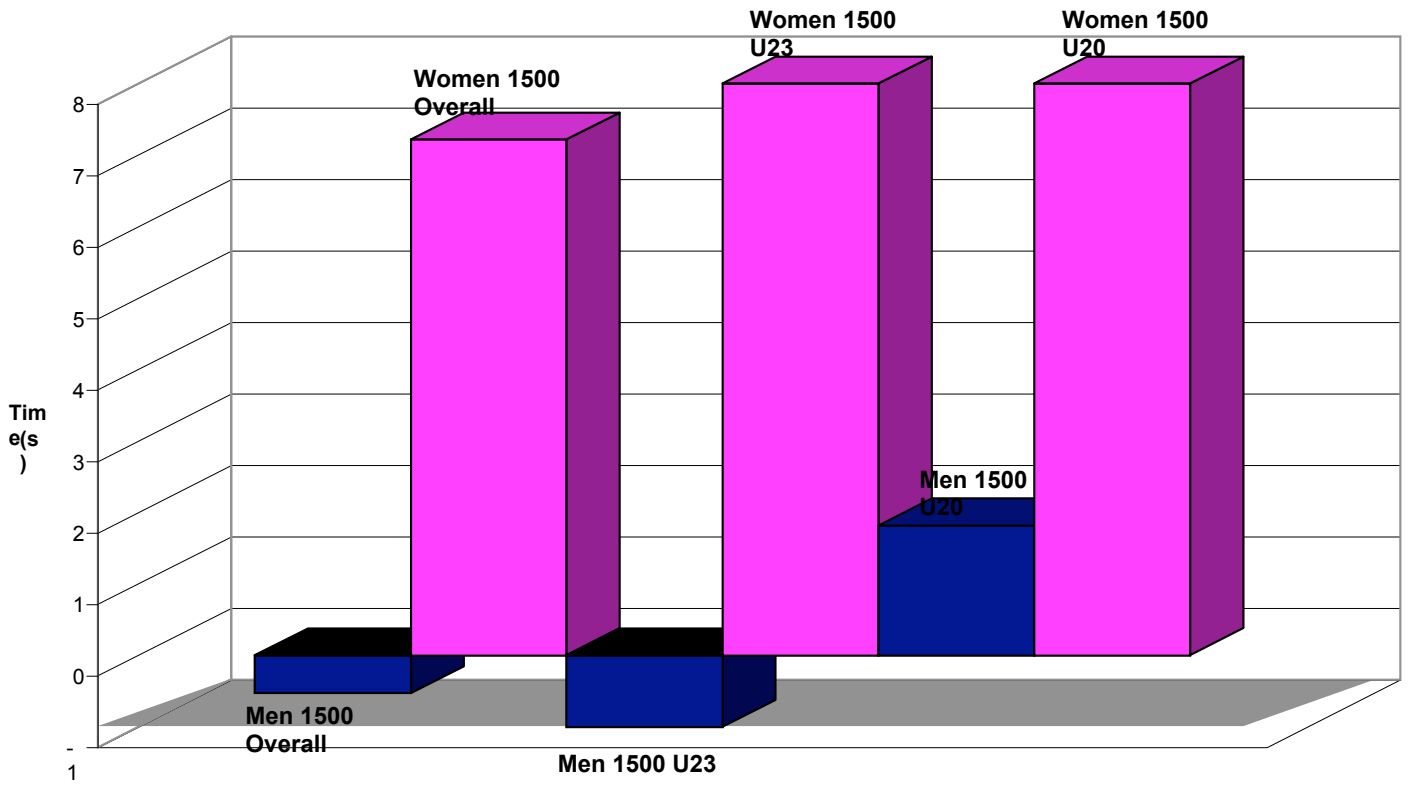
**Table of Women's 800m Mean Top Ten Times between 2000 and 2008**

Age Group	Mean Time 2000	Mean Time 2008	Change
All Ages	2:03.60	2:00.84	2.76 Seconds Improvement
U23s	2:08.65	2:05.49	3.16 Seconds Improvement
U20s	2:08.68	2:06.97	1.71 Seconds Improvement

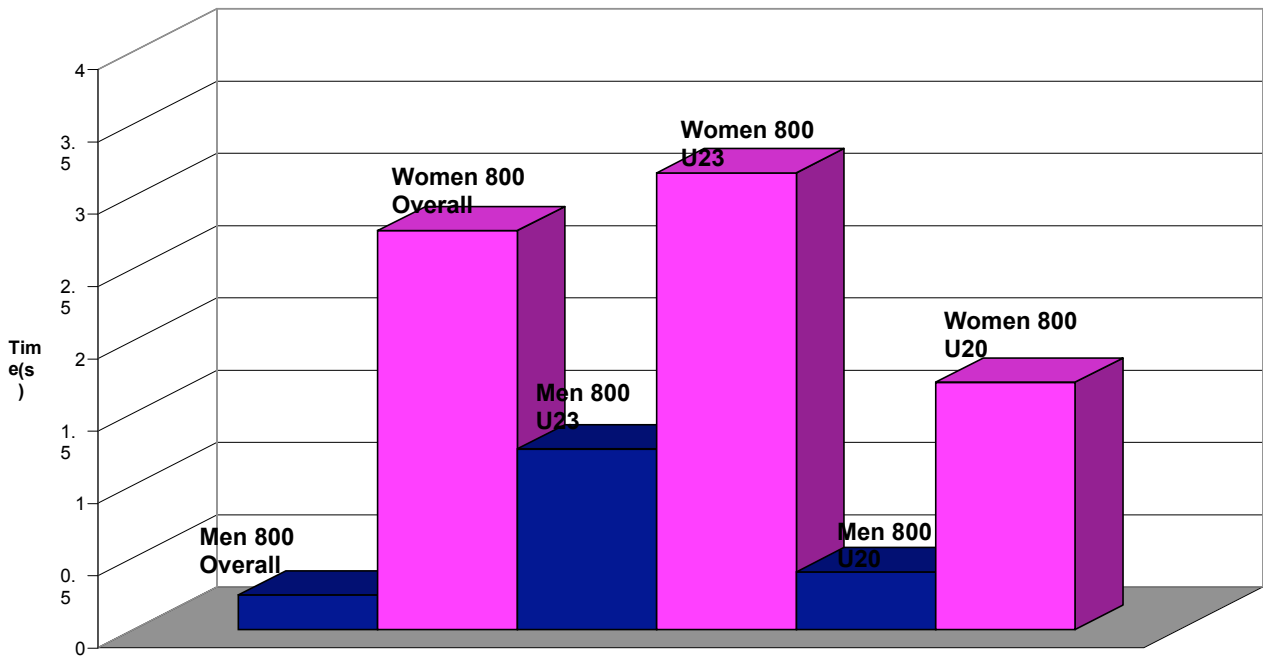
**Table of Men's 800m Mean Top Ten Times between 2000 and 2008**

Age Group	Mean Time 2000	Mean Time 2008	Change
All Ages	1:47.43	1:47.19	0.24 Seconds Improvement
U23s	1:49.33	1:48.08	1.25 Seconds Improvement
U20s	1:50.79	1:50.39	0.40 Seconds Improvement

### Improvements in Men & Women's Mean Top Ten Times in 1500m between 2000 & 2008



### Improvements in Men & Women's Mean Top Ten Times in 800m between 2000 & 2008



The data and results above would indicate that there has been a significant effect on women's middle distance running following Dame Kelly's double Olympic Gold in Athens and starting OCWK, especially as the improvements have not been found in the men's events.

I have only reported comparisons from 2000 and 2008 above for simplicity of reporting. Please find below summary tables of the data year by year.

### Summary of Mean Top Ten Times by Age Category and Year from 2000 to 2008

#### Women 800m All Ages

Overall 2000	Overall 2001	Overall 2002	Overall 2003	Overall 2004	Overall 2005	Overall 2006	Overall 2007	Overall 2008
2:03.60	2:03.17	2:01.49	2:01.92	2:01.93	2:02.51	2:00.44	2:00.86	2:00.84

#### Women 800m U23

U23 2000	U23 2001	U23 2002	U23 2003	U23 2004	U23 2005	U23 2006	U23 2007	U23 2008
2:08.65	2:08.66	2:06.59	2:05.76	2:05.03	2:04.54	2:03.94	2:03.75	2:05.49

#### Women 800m U20

U20 2000	U20 2001	U20 2002	U20 2003	U20 2004	U20 2005	U20 2006	U20 2007	U20 2008
2:08.68	2:07.52	2:07.42	2:05.48	2:06.43	2:06.87	2:06.42	2:06.46	2:06.97

#### Women 1500m All Ages

Overall 2000	Overall 2001	Overall 2002	Overall 2003	Overall 2004	Overall 2005	Overall 2006	Overall 2007	Overall 2008
4:15.21	4:10.88	4:09.31	4:09.04	4:08.47	4:10.80	4:08.81	4:08.97	4:07.99

#### Women 1500m U23

U23 2000	U23 2001	U23 2002	U23 2003	U23 2004	U23 2005	U23 2006	U23 2007	U23 2008
4:26.13	4:24.32	4:25.60	4:19.98	4:20.04	4:17.39	4:21.65	4:14.56	4:18.24

#### Women 1500m U20

U20 2000	U20 2001	U20 2002	U20 2003	U20 2004	U20 2005	U20 2006	U20 2007	U20 2008
4:30.13	4:24.28	4:22.59	4:22.18	4:23.12	4:24.63	4:20.16	4:18.89	4:20.17

#### Men 800m All Ages

Overall 2000	Overall 2001	Overall 2002	Overall 2003	Overall 2004	Overall 2005	Overall 2006	Overall 2007	Overall 2008
1:47.43	1:48.10	1:47.23	1:46.92	1:47.16	1:47.69	1:46.16	1:46.91	1:47.19

#### Men 800m U23

U23 2000	U23 2001	U23 2002	U23 2003	U23 2004	U23 2005	U23 2006	U23 2007	U23 2008
1:49.33	1:49.54	1:49.23	1:48.67	1:48.35	1:48.97	1:47.37	1:48.08	1:48.08

#### Men 800m U20

U20 2000	U20 2001	U20 2002	U20 2003	U20 2004	U20 2005	U20 2006	U20 2007	U20 2008
1:50.79	1:50.77	1:50.48	1:50.37	1:50.12	1:49.59	1:50.10	1:49.30	1:50.39

### Men 1500m All Ages

Overall 2000	Overall 2001	Overall 2002	Overall 2003	Overall 2004	Overall 2005	Overall 2006	Overall 2007	Overall 2008
3:38.12	3:39.08	3:38.53	3:39.18	3:38.28	3:37.63	3:38.91	3:39.39	3:38.65

### Men 1500m U23

U23 2000	U23 2001	U23 2002	U23 2003	U23 2004	U23 2005	U23 2006	U23 2007	U23 2008
3:44.08	3:44.16	3:43.72	3:43.78	3:43.75	3:42.62	3:42.70	3:44.44	3:45.49

### Men 1500m U20

U20 2000	U20 2001	U20 2002	U20 2003	U20 2004	U20 2005	U20 2006	U20 2007	U20 2008
3:48.59	3:48.03	3:47.97	3:47.77	3:48.10	3:50.21	3:49.19	3:49.54	3:46.77

## Retaining Athletes in Athletics

### General Sporting Participation and Health Statistics

- Women are 32% less likely to participate in sport compared to men (Sports Equity Index 2001, Sport England).
- 40% of girls drop out from PE and sport by the age of 18 (Youth Sport Trust, 2000).
- One in three girls aged 11 in the UK is overweight and between the ages of 16 and 24 women are twice as likely to be obese (YWCA, 2001)

### Overall

There have been 50 female athletes involved in OCWK since 2004, 45 are still involved in the programme. Of the original 50 athletes, 48 are still involved in athletics demonstrating a retention in the sport of **96%**.

### First 10 OCWK Athletes from 2004/5

In order to examine retention in athletics more closely, the 10 athletes who joined OCWK in October 2004 and April 2005 were paired with an athlete of the same age (within a couple of months) and most closely ranked to them in 2004. We then looked at each pair in 2008 to see if they were still competing in the 800m or 1500m or involved in athletics in any other events.

It was found that for:

- The OCWK athletes - 80% were still competing in the 800m or 1500m in 2008.
- The non OCWK paired athletes - 20% were still competing in 800m or 1500m in 2008.

Athletic performances across athletics events were then examined to identify athletes still competing but in other events. It was found that for:

- The OCWK athletes - 90% were still competing in athletics in 2008.
- The non OCWK paired athletes - 30% were still competing in athletics in 2008

### Results from pairing first 10 OCWK Athletes with Non OCWK Summary Table

Involved in OCWK from 2004/5	2008 Still competing in 800m or 1500m	2008 Still competing in Athletics in any event
Yes	<b>80%</b>	<b>90%</b>
No	<b>20%</b>	<b>30%</b>

## General Drop out Rates in Women's Athletics

In order to examine general drop out rates in women's middle distance running prior to Dame Kelly winning her two Olympic Gold medals and the commencement of OCWK, data for the top 50 ranked athletes for the year 2000 was investigated.

Specifically, the top 50 ranked U23 athletes for the year 2000 in the 800m and 1500m were examined and the athletes tracked to identify general drop out rates. It was found that:

- By 2004 in the 800m 46% of athletes had dropped out of athletics, and
- By 2008 in the 800m 64% had dropped out of athletics
- By 2004 in the 1500m 42% of athletes had dropped out of athletics, and
- By 2008 in the 1500m 62% had dropped out of athletics completely

### Drop out Rates for U23 Athletes in the 800m and 1500m

	Percentage Athletes Dropped Out of Athletics by 2004	Percentage Athletes Dropped out of Athletics by 2008
Top 50 U23 800m Athletes in 2000	<b>46%</b>	<b>64%</b>
Top 50 U23 1500m Athletes in 2000	<b>42%</b>	<b>62%</b>

OR

### Retention Rates for U23 Athletes in the 800m and 1500m

	Percentage Athletes Still Competing in 2004	Percentage Athletes Still Competing in 2008
Top 50 U23 800m Athletes in 2000	<b>54%</b>	<b>36%</b>
Top 50 U23 1500m Athletes in 2000	<b>58%</b>	<b>38%</b>

## Performance by GBR Women at European Cross Country Championships

Most middle distance runners compete in cross country during the winter months. The number of GBR athletes finishing in the top ten at the European Championships has improved consistently from 1 in 2004 to 6 in 2008. In fact, in 2008 the first six athletes across the line in the Junior Women's European Cross Country Championships were all GBR athletes.

### Data Table for Number of GBR Athletes finishing in the Top Ten in the Junior Women's European Cross Country Championships by Year

2000	2001	2002	2003	2004	2005	2006	2007	2008
3	1	3	3	1	3	4	5	6

In comparison, the number of junior men finishing in the top ten in the European Cross Country Championships has not improved significantly.

### Data Table for Number of GBR Athletes finishing in the Top Ten in the Junior Men's European Cross Country Championships by Year

2000	2001	2002	2003	2004	2005	2006	2007	2008
2	2	0	0	2	1	0	2	1

**Number of GBR Junior Female Top Ten Athletes in European Cross Country Championships**

