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The effect of British Summer Time on outdoor physical activity

Owen Haswell, Liam West, Bryn Savill, Robert Whitham, Rhodri Martin

Abstract

Background Physical inactivity is a major public health concern of recent times. The provision of opportunities for the population to be physically active is therefore a public health priority. Greater health benefits have been shown to be gained from being physically active outdoors. There is a sudden reduction in the available daylight evening hours at the end of British Summer Time (BST). This study aimed to assess the effect of this sudden reduction in daylight hours on levels of outdoor physical activity.

Methods Data were collected by observation for 1 week before and 1 week after the end of BST (Oct 28, 2012) at Roath Park, Cardiff, Wales, a popular place for outdoor recreation. Observations were made between 0630 h and 0900 h and between 1700 h and 2000 h on every working day. Additionally observations were made between 1200 h and 1400 h on each Tuesday and Thursday. Data collection was done by one individual per observation period, who recorded the number and sex of individuals exercising at a specific location at the outdoor recreation area (categorised as walking, faster than walking, cycling).

Findings The total number of observed exercisers in the week before and after the end of BST was 3668 and 3180, respectively. The mean total number of daily evening exercisers decreased significantly in the days after the end of BST (from 434.6 [SD 141.0] to 299.8 [105.3], 95% CI 207.5–392.1; $p < 0.0001$), as did the number of morning exercisers (175.4 [47.4] to 135.8 [41.6], 99.3–172.3; $p < 0.0001$). By contrast, the mean total number of people exercising between 1200 h and 1400 h increased from 309 (SD 39.2) to 501 (62.1) (95% CI 414.9–587.1, $p < 0.0001$).

Interpretation This preliminary study suggests that the number of people engaging in physical activity reduces abruptly after the end of BST, with reductions seen in both the evening and the morning observation timepoints. Despite the overall reduction in exercisers witnessed after the end of BST, there was a relative increase in the number of individuals engaged in activity at lunchtime. These changes suggest that daylight is an important determinant of outdoor physical activity behaviour. A larger study is warranted to explore the association between the determinants of the population's level of outdoor physical activity and available daylight hours.

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Contributors

All authors entered, analysed, and interpreted the data. OH wrote the abstract and designed the poster. LW, BS, and RW designed the study and collected the data. RM collected and interpreted the data, wrote the abstract, and designed the poster.

Declaration of interests

We declare no competing interests.

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Cardiff University School
of Medicine, University Health
Park Campus, Cardiff, UK
(O Haswell, L West MBBCh,
B Savill MBBCh,
R Whitham MBBCh,
R Martin BM)

Correspondence to:
Mr Owen Haswell, Cardiff
University School of Medicine,
Cardiff University Health Park
Campus, Cardiff CF14 4YS, UK
owenhaswell@hotmail.co.uk