

The effect on absenteeism and cost savings from a workplace pedometer-based intervention: UK Model

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Executive Summary

- Study sample size:** 400 (200 Global Corporate Challenge (GCC) participants, 200 non participants)
- Time of study:** 6 months and 12 days (4-months during the GCC and 2 months and 12 days after).
- Difference in absenteeism:** Non GCC participants took 287 more sick days during the 4-month event (a difference of 36.1%)
 Non GCC participants took 175 more sick days in the 2 months and twelve days after the event (a difference of 52.6%)
 Non GCC participants took 462 more sick days in 6 months and 12 days, a difference of 41%
- Cost savings:** The potential cost savings of the 23,356 employees involved in the 2007 GCC was 53,952 days, at a significant cost saving of £4,495,820. For every one pound spent on employees the return on investment saves £3.92.

Introduction

Employee attendance and absenteeism is at the heart of industrialised society. Where this bites most is the cost of production, however this loss of productivity has a ripple effect on the economy as a whole both directly and indirectly. It adds to the cost, or may reduce the quality, of public and private goods and services. At the workplace, it may place an additional burden on employers and workers especially at critically important times, or in key processes¹.

It has been estimated by various sources that the cost of absenteeism costs UK companies £478ⁱⁱ per employee, while in the USA it has been estimated at \$602USⁱⁱⁱ - \$789^{iv} per employee. According to the 2002 CCH Unscheduled Absence Survey, this costs small companies about \$US60,000 a year, while the largest employers up more than \$US3.6 million^v and the total cost to the global economy runs into the billions.

The purpose of this study was to investigate the impact of a team based workplace physical activity program on absenteeism and the potential cost savings. The Global Corporate Challenge (GCC) is a pedometer based corporate physical activity program that runs for four months and it targeted at everyday employees not athletes. The time frame for this investigation was six months and twelve days, which is inclusive of the 4-month program and 2 months and 12 days after the event.

De-identified data on employee attendance was collected from two large yet diverse companies. Scheduled absences, such as vacation, legal holidays, jury duty, personal time and bereavement leave were not included in the sample. The sample study population was 400, where 200 employees participated in the GCC and 200 did not. Data was collected by the HR officer of each company at random.

Results

The results are described in Table 1. A total of 508 absent days were recorded by GCC participants during the 4-month GCC, yielding an average 2.5 sick days per person. Employees who were not involved in the GCC amassed 795 absent days, yielding an average of 4.0 sick days per employee, a difference of 287 days and an average of approximately 1.5 sick days per person. In the two months and twelve days after the GCC, participants in the

GCC took a further 158 sick days at an average on 0.8 sick days per person, compared to 333 sick days taken by non GCC employees at an average of 1.7 sick days per person. In total people who undertook the GCC took 666 sick days at an average of 3.3 sick days per person, whereas non GCC employees took 1128 sick days at an average of 5.6 sick days per person, a difference of 41%

Table 1: The difference in sick days between employees involved in the Global Corporate Challenge and non participants.

| | SICK DAYS DURING GCC | | SICK DAYS 2.5 MONTHS AFTER GCC | | TOTAL SICK DAYS | |
|--------------|----------------------|------------------|--------------------------------|------------------|-----------------|--------|
| | GCC PARTICIPANTS | NON PARTICIPANTS | GCC PARTICIPANTS | NON PARTICIPANTS | GCC | NGCC |
| SAMPLE 1 | 265 | 332 | 83 | 165 | | |
| SAMPLE 2 | 243 | 463 | 75 | 168 | | |
| TOTAL | 508 | 795 | 158 | 333 | 666 | 1128 |
| AV SICK DAYS | 2.5 | 4.0 | 0.8 | 1.7 | 3.3 | 5.6 |
| % DIFFERENCE | | -36.1% | | -52.6% | | -41.0% |

Cost savings

The cost of a single sick day has been estimated at £83.33 per day^{vi}. Modelling this cost estimate it could be suggested that by being significantly more physically active the 200 employees saved 462 sick days (1128-666= 462), or £38,500. This yields a cost saving of £192.50 per person, and at a cost of entry fee into the GCC of £49 return on investment is £3.92 per pound spent. Further, it could be suggested that the 23,356 participants in the 2007 Global Corporate Challenge reduce the number of sick days during approximately 6.5 months by 53,952 days, at a significant

cost saving of £4,495,820. In 2008 forecast for employee participation is 80,000 plus, which could potentially reduce the cost of absenteeism by 184,000 days and save £15,400,000.

Table 2 describes the potential cost savings to companies based on this study. Companies from the UK involving just 20 teams in the GCC, at a cost of £6,860 could potentially save 322 sick days worth and estimated £26,833, and saving £19,973. Companies involving 400 teams (2800 employees), costing £137,200, could save 6440 sick days costing £536,666, and saving £399,467.

Table 2: The potential cost savings to UK companies based on numbers of employees participating in the GCC.

| NUMBER OF TEAMS | NUMBER OF EMPLOYEES | SICK DAYS SAVED IN ~6.5 MONTHS | \$ AU SAVED IN ~6.5 MONTHS | COST OF GCC PARTICIPATION | TOTAL COST SAVING |
|-----------------|---------------------|--------------------------------|----------------------------|---------------------------|-------------------|
| 1 | 7 | 16.1 | £1,342 | £343 | £999 |
| 10 | 70 | 161 | £13,417 | £3,430 | £9,987 |
| 20 | 140 | 322 | £26,833 | £6,860 | £19,973 |
| 50 | 350 | 805 | £67,083 | £17,150 | £49,933 |
| 100 | 700 | 1610 | £134,167 | £34,300 | £99,867 |
| 400 | 2800 | 6440 | £536,667 | £137,200 | £399,467 |
| 1000 | 7000 | 16100 | £1,341,667 | £343,000 | £998,667 |

Discussion

The GCC is a pedometer based corporate physical activity initiative. The ethos of the event is that teams of seven are comprised of average everyday people and not athletes. The cornerstone of the event is teamwork. Employees support, encourage and motivate each other to set goals, rise to the challenge and achieve breakthrough results. The effect of this unity is heightened company morale sustained through the ongoing incentive and encouragement from the event's multi-award winning website. These features contribute to the long-term sustainability of the event, and the large amount of physical activity undertaken by participants.

The mean step count for the 2007 event was 10,526 steps per day, median step count 9285 steps per day, and only 10% of teams obtained step counts lower than 5000 steps per day. Interestingly 26% of teams averaged more than 11,000 steps per day during the event. Previous qualitative data strongly suggested that the vast majority of participants in the GCC consider themselves to be much more active (66%) than prior to the event, while 79.2% agreed that by taking more than 10,000 steps/day they feel healthier^{vii}, and hence anecdotal evidence existed to suggest absenteeism decreased during the event. This study however is the first to accurately measure absenteeism during the GCC.

Conclusion

Physical activity has been shown to improve health while the lack of it has been clearly linked to the progression of ill health^{viii, ix, x}. This study demonstrates the powerful relationship between

long term sustained physical activity via the Global Corporate Challenge, and the significant decrease in absenteeism (41%). This further translates to significant cost savings for companies.

References

- i WORKPLACE ATTENDANCE AND ABSENTEEISM. A report prepared by THE AUSTRALASIAN FACULTY OF OCCUPATIONAL MEDICINE December 1999 Royal Australasian College of Physicians
- ii http://news.bbc.co.uk/1/hi/business/the_economy/407775.stm
- iii http://findarticles.com/p/articles/mi_m1272/is_2659_128/ai_61586737 1999 CCH Unscheduled Absence Survey by CCH Inc., Riverwoods, Ill
- iv 2002 CCH Unscheduled Absence Survey conducted by CCH INCORPORATED (CCH)
- v 2002 CCH Unscheduled Absence Survey conducted by CCH INCORPORATED (CCH)
- vi Direct Health Solutions Annual Health and Absence Survey www.dhs.net.au
- vii Global Corporate Challenge® 2005 Medical Survey Report. **David Cameron-Smith** http://www.heart-diabetes.org.au/images/05_Sum.pdf
- viii **Booth FW, Chakravarthy MV, Gordon SE, Spangenburg EE.** Waging war on physical inactivity: using modern molecular ammunition against an ancient enemy. *J Appl Physiol.* 2002 Jul;93(1):3-30. Review.
- ix **Booth FW, Gordon SE, Carlson CJ, Hamilton MT.** Waging war on modern chronic diseases: primary prevention through exercise biology. *J Appl Physiol.* 2000 Feb;88(2):774-87.
- x **Booth FW, Lees SJ.** Fundamental questions about genes, inactivity, and chronic diseases. *Physiol Genomics.* 2007 Jan 17;28(2):146-57. 2006 Oct 10.