

Feeling good by doing good – an investigation into the beneficial effects of altruism commissioned by Simplyhealth

Objective

To investigate how stress management and self-perception are affected by actively engaging in acts of generosity and altruism.

Introduction by Dr David Lewis-Hodgson

If you want to feel good about yourself then do good to others.

That's the clear message of this research, which shows that performing small acts of kindness increases one's own happiness, boosts self esteem and reduces stress. We've coined it the 'Helper's Halo'.

Making someone happy through a small act of kindness makes it more likely that they will then do the same for someone, so spreading those feelings of joy.

This is confirmed by a Japanese study, led by Keiko Otaki, that found happy people were *more* likely to carry out small acts of kindness and that, in doing so, they also increased their own levels of happiness.

They could also increase their happiness simply by counting how many acts of kindness they had performed in a week.

Studies have also provided convincing evidence that even hearing about another's good deeds increases one's own readiness to be altruistic. It leads to what some psychologists have termed 'elevation,' a positive emotion "experienced upon witnessing another person perform a virtuous act, principally one that improves the welfare of other people". (Schnall et al 2010).

People experiencing 'elevated' emotions report being inspired, uplifted and motivated to perform similar acts of kindness themselves.

In summary, therefore, being spontaneously kind is not only going to increase the happiness of those around you but also significantly enhance your own sense of wellbeing.

Psychological background

Altruism can be defined as the practise of unselfish concern for the welfare of others, without obligation or personal gain.

Altruistic behaviour is associated with religious morals and values, for example Christianity and Buddhism, and is a major interest for psychologists, evolutionary biologists and ethologists. There are many theories of altruism and these are mainly related to evolutionary models, whereby individuals act in an altruistic way in order to improve the survival rates of the group.

Research has shown that, when individuals anonymously donate to charities, an area of the brain which is associated with reward is activated in the same way as when monetary rewards are gained (Harbaugh et al, 2007, Moll et al, 2006). So selfless generosity activates a primitive part of the brain which is usually activated in response to basic human needs, which suggests that this kind of behaviour is actually basic to the brain, pleasurable and innate.

Altruism is also beneficial to the physical and mental health and wellbeing of individuals (Post et al, 2008, Schwart & Sendor, 1999). Research has found that individuals who act altruistically have higher levels of mental health, higher self esteem and better life adjustment skills (Brunier et al, 2002, Schwartz et al, 2003). In one study which followed 400 women over 30 years, 52% of those who did not engage in charity or volunteer work experienced a major illness, compared to 36% of those who did engage in volunteering.

Harvard psychologist David McClelland coined the term 'Mother Teresa effect', based on his 1988 study examining the effects of watching altruistic behaviour. During this study, McClelland and colleagues measured salivary Immunoglobulin A, an antibody which protects the upper respiratory tract from infection, in a group of medical students. Whilst watching altruistic behaviour, IgA levels increased, suggesting that altruistic behaviour is physiologically helpful, as well as psychologically. The physiological benefits of caring behaviour have also been noted by Rein, Atkinson, and McCraty (1995).

Altruistic behaviour is linked to an increase in the hormone and neurotransmitter Oxytocin (Baumgartner et al, 2008), which is related to maternal behaviour and bonding, and has been named as the 'cuddle hormone'.

Based on previous research, this study investigated the effects of altruistic behaviour on individual stress and emotional states.

Summary of results

- After a period of generosity, people are able to better deal with stress
- People who engage in active altruism are less likely to become stressed quickly and easily
- Participants' self esteem and self-perception increased and anger levels reduced after the period of altruistic behaviour

Methodology

Experimental work was carried out at the Mindlab International laboratory at the Sussex Innovation Centre in Brighton. The study was conducted 27 July- 4 August 2010. Six participants were recruited (3xmale & 3xfemale aged 18 to 55) to take part in the study.

In the laboratory, participants signed an informed consent and were connected to monitoring equipment to record their skin conductance (EDA) and heart rate. They completed a number of psychological tests relating to their current emotional states and personality traits.

Participants were then put through a series of stressful situations using standard active and passive stress techniques. These included quick fire mental arithmetic tests and time constrained Stroop tests (appendix 1).

Upon completion of the lab tasks, participants were instructed to spend the next nine days actively seeking out ways of being kind towards others in a selfless manner. Mindlab staff did not dictate what acts of altruism should be conducted or the frequency of acts. Each evening participants were contacted by a Mindlab researcher for a progress report and a written log of acts was also requested.

After nine days, the participants were invited back to the lab and the psychological testing was repeated in order to compare their emotional states and beliefs to those before the study took place. Again, EDA and heart rate were recorded during stressor activities.

The first and second sessions were then compared to see if acts of kindness affect our ability to deal with stress or how we perceive ourselves.

Results

Psychological test results

Five written tests were given to the participants in both sessions. Session 1 relates to the lab work prior to acts of altruism and session 2 refers to after.



Figure 1. Self Esteem Scores.

As can be seen in figure 1, after a period of altruistic behaviour self esteem has increased in nearly all participants and on average self esteem has increased by 30.8%. This is consistent with academic research which shows that self esteem and self worth increases after selfless acts of kindness.

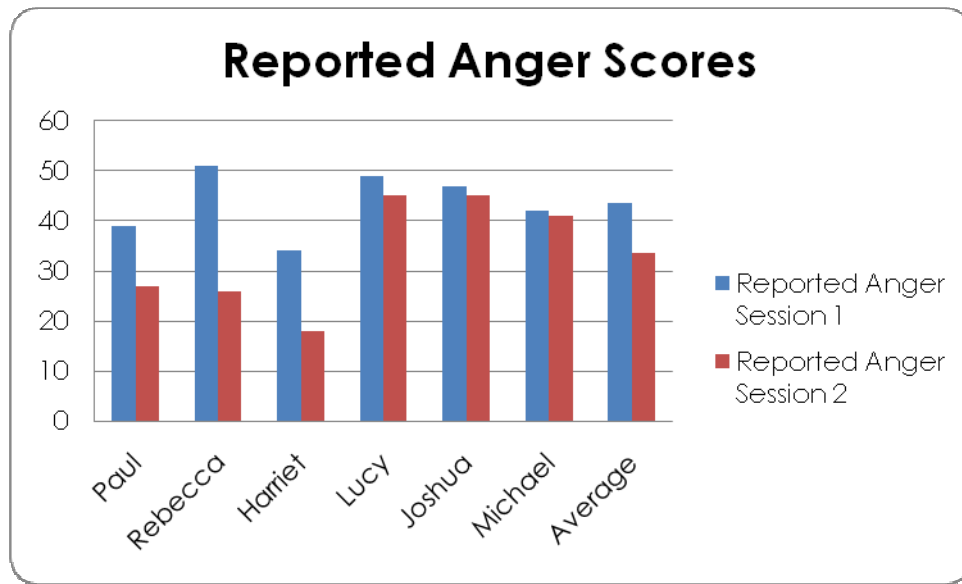


Figure 2. Reported anger scores.

This questionnaire asked participants to report how they would react in anger related situations. Reported anger had reduced in all six participants after altruistic behaviour, by 22.8% on average. This is shown in figure 2. As self worth and positivity based on current thought has increased, this is to be expected.

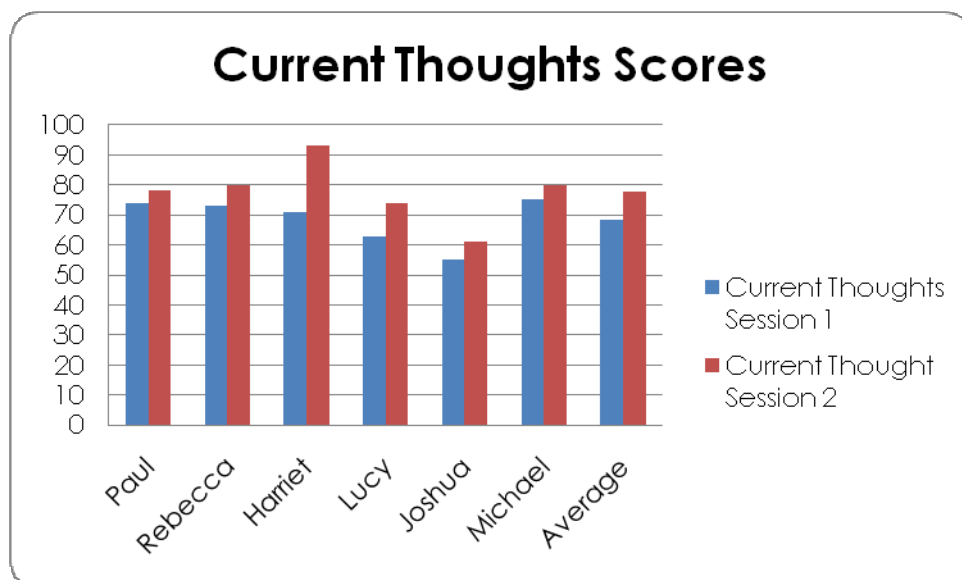


Figure 3. Current Thoughts (Introspective Analysis) Scale

The current thoughts scale is designed to measure thoughts and feelings about yourself at any one time. Based on this scale, 100% of participants had higher test scores, which indicates an increase in positive thoughts and feelings in subjects, shown in figure 3.

After the week of altruistic behaviour, self esteem increased, current thoughts were reported as more positive, and anger was reduced.

The Personal Attributes Questionnaire is designed to measure personal characteristics of the participant's personality, and is scored based on the masculinity (instrumentality) or femininity (expressiveness) of such qualities. Although the questionnaire is scored in terms of stereotypical gendered traits, it is important to note that these characteristics are considered desirable qualities for both men and women. For example, a masculine trait would be self confidence, whereas a feminine trait would be 'aware of feelings of others'. Prior to testing, we considered that expressive traits may be positively correlated with altruistic behaviour, due to the empathic and emotional nature of these qualities.

Tests showed that, consistent with prior estimations, expressive attributes increased on average by 10% from 71% to 81%. Instrumentality decreased very slightly by 2%. Therefore participants were more empathetic and aware of other people's feelings.

A fifth test was used as a psychological baseline for the other tests.

EDA stress levels

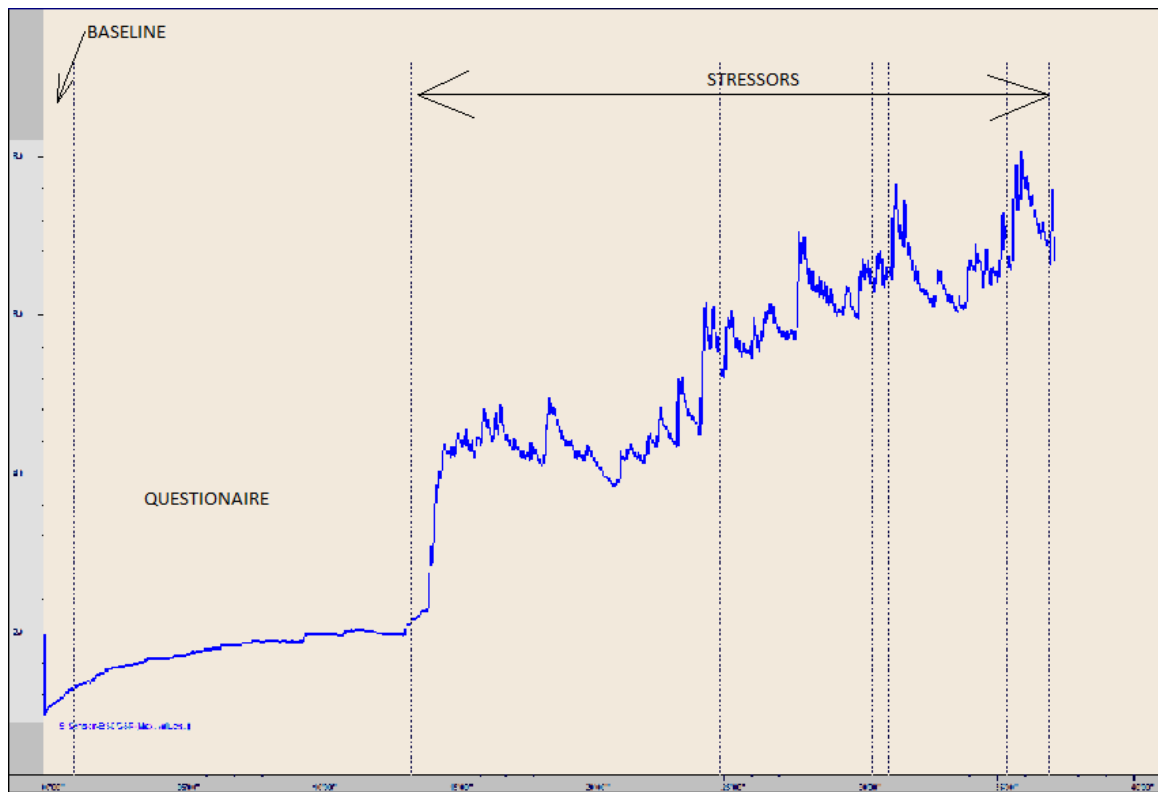


Figure 4. Example of raw EDA data during test

EDA is a sensitive measure of stress levels in humans. It can be reported as phasic and tonic. Phasic response refers to immediate response to a stimulus where stress levels are seen to spike momentarily and then drop off again. Tonic refers to the gradual overall increase in stress levels over time during a stressful situation. This can be seen in figure 4, an example taken from this study. The stress levels stay low during the baseline time and the time in which the participant is left to fill out subjective questionnaires, but then start increasing as soon as stressors are applied; showing tonic stress is increasing throughout the test. The phasic levels can be seen as the jagged spikes, showing instantaneous stress peaks.

In this experiment, tonic stress levels are of most relevance. It is a good indication of how the participant is able to deal with the whole test in terms of stress. The results of each section of the study can be compared to participant

baselines to give a good indication of how much stress levels have altered since the start of the test.

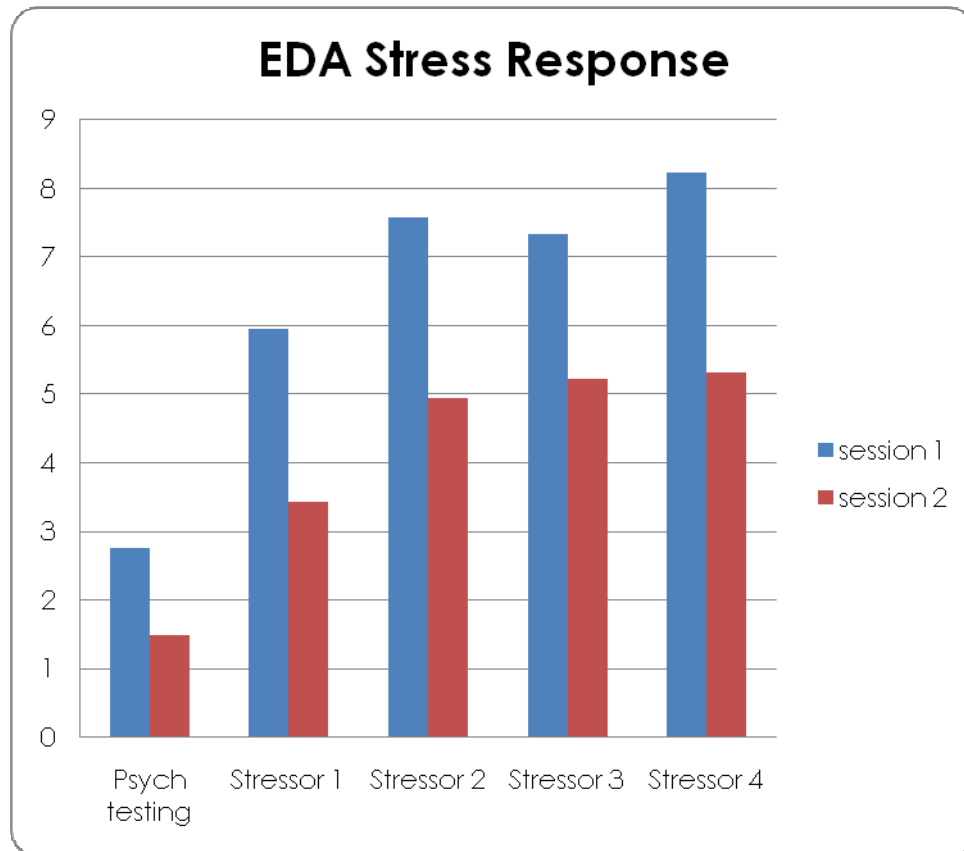


Figure 5. EDA Stress Response

Figure 5 shows the average tonic stress levels during each activity in relation to the participants' 'baseline' levels (the level achieved when the participant is relaxing in a stimulus free environment).

It can be seen that the stressors increased stress in both sessions as expected. However, it can clearly be seen that in the session before performing altruistic acts of kindness, the participants become more stressed more quickly in all activities. It is particularly interesting to note the difference in stress levels during the questionnaire task. This section required each participant to answer various questions about themselves on topics such as self perception, self esteem, anger perception etc. The EDA data suggest that they found answering questions of this nature to be much less stressful in the second session, suggesting a higher level of self confidence and ease.

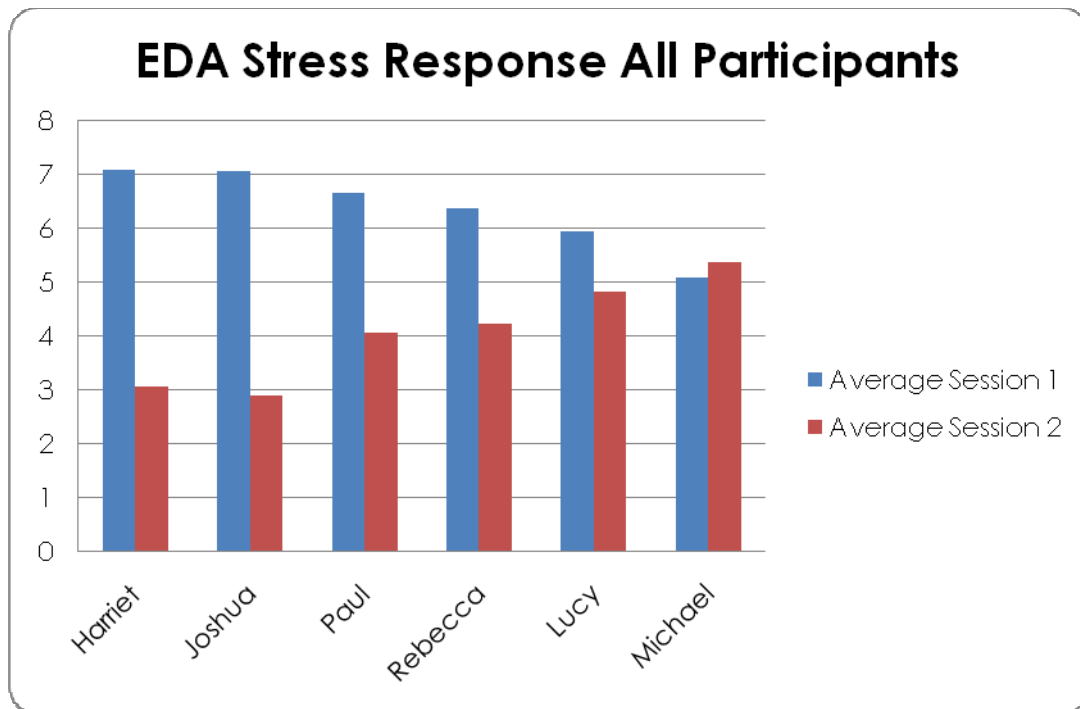


Figure 6. EDA Stress response for all participants

Figure 6 shows the average EDA response for each participant over the two sessions. It is clear that five of the six participants were noticeably less stressed during the second session when compared to the first session. Michael's stress levels before and after the test week were effectively unchanged. He reported that his behaviour hadn't altered much because he naturally goes out of his way to help others. It is worth noting that he had the lowest stress levels to start with.

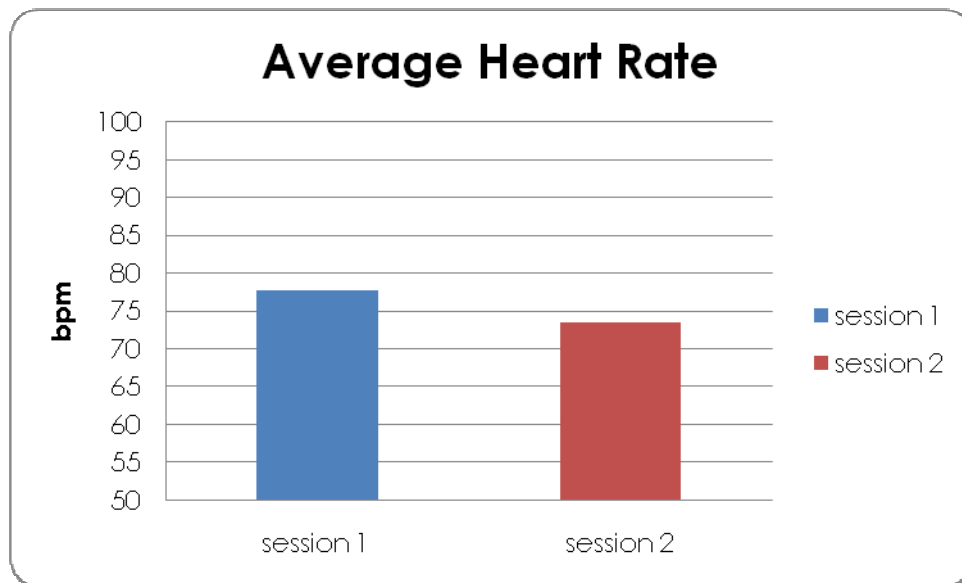


Figure 7. Average Heart Rate

In this study, heart rate was not affected in any statistically significant way by the cognitive stress that the participants were put under in the laboratory. Heart rate increases due to stress when the body releases hormones to activate the 'fight or flight' response. This hormone release occurs due to physical stressors. The cognitive stressor techniques used in this study activate this type of physical response.

Conclusion

Participants were given total flexibility to do whatever they felt appropriate during their week of generosity, and this resulted in a range of activities, from small expressions of kindness to larger proactive acts (some examples of these can be found in appendix 2). This provided unexpected turns of reciprocating generosity. This may indicate that helping others actually causes them to behave in an altruistic manner themselves.

We found a clear correlation between positive self-perception and lower stress levels. These improvements came about in all participants after they took part in a week of altruistic behaviour. This suggests that it was the altruistic behaviour that helped cause a change in people, reducing stress and increasing feelings of self-worth and positivity.

If the research was conducted over a longer period of time with an increased sample size, it would be possible to investigate whether the increased emotional wellbeing in the short term leads to long term emotional and wellbeing.

It is well documented that excess stress can manifest itself in physical form with symptoms including ulcers, over or under eating and paranoia. The positive results of this study offer a good baseline for a more comprehensive study addressing whether the reduced stress levels lead to positive, long term physical health benefits.

Appendices

Appendix 1: Stroop test

The Stroop test is a psychological test used for attention and reaction measurements. During the test, various names of colours are displayed; with the text in a colour other than that name (e.g. the word 'red' is displayed in blue text). The participant must identify the text colour and not the name spelled out.

In this case, to add an element of urgency and raise stress levels, this particular version gave each choice cycle a time limit of three seconds or so. If the time ran out or the participant got the colour wrong, their score would be recorded and they would have to start again.

Appendix 2: Participant quotes:

"The woman was really, really happy that I helped her, and a bit shocked, I think. It did affect my mood and made me glad that I had made her happy" – Michael (Helping older woman pack bags and take to car).

"The guy was so shocked that I had given him money, he seemed quite overcome, which it was really nice to see"- Harriet (Giving homeless man £10)

"I was surprised at how grateful people were when I did such small things; it made me think about how little we actually do for others in our day-to-day lives"- Joshua (Letting people in front in a supermarket queue)

"I found it difficult to do nice things when I was having a bad day, but it actually made me feel a little better"- Joshua

"I felt really good as I was able to treat people I care about, when I usually can't. It was lovely to be able to do that"- Harriet (Bought round of drinks)

"Although I do see my Nan every week, it was lovely to be able to do something really nice for her"- Lucy (Paid for Nan who is ill to have a manicure).

Appendix 3: Participants details

Participant Name	Age	Area of work	Location
Paul	39	Account Director	Hove
Rebecca	36	Media	Hove
Harriet	30	Housewife	Brighton
Lucy	18	Student	Brighton
Joshua	44	Radio Presenter	Hove
Michael	54	Actor	Brighton

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The study was commissioned by Simplyhealth as part of Bothered Britain Week (6 – 12 September 2010). Simplyhealth, believes that a difference can be made to people's lives by taking the time to care about customers, employees and each other. They therefore commissioned this study to establish whether being bothered does genuinely make us happier and healthier. To find out more about Bothered Britain Week, a national health campaign which aims to discover what we are bothered about as a nation, and whether we really are bothered about our health and each other follow twitter @simplyhealthuk or log onto Facebook and search for 'we can be bothered'.