

<b>Institution:</b> University of Hertfordshire		
<b>Unit of Assessment:</b> 4 – Psychology, Psychiatry and Neuroscience		
<b>Title of case study:</b> Do Something Different: Achieving positive behaviour change in health and business settings and among individuals		
<b>Period when the underpinning research was undertaken:</b> 2003 – 2014		
<b>Details of staff conducting the underpinning research from the submitting unit:</b>		
<b>Name(s):</b>	<b>Role(s) (e.g. job title):</b>	<b>Period(s) employed by submitting HEI:</b>
Ben Fletcher	Professor of Psychology	1978 - 2020
Karen Pine	Professor of Psychology	1997 - 2017
<b>Period when the claimed impact occurred:</b> 2014 – 31 December 2020		
<b>Is this case study continued from a case study submitted in 2014?</b> N		
<b>1. Summary of the impact</b> (indicative maximum 100 words)		
<p>Research at the University of Hertfordshire (UH) that demonstrated the benefits of behavioural flexibility resulted in the creation of novel behavioural change technique Do Something Different (DSD) to improve health and wellbeing. Fully commercialised through a spinout social enterprise of the same name in 2014, DSD generated \$1m (£765,000) in private investment and £2m in revenues, directly created up to 10 UK jobs and was key to unlocking €4.5m (£4m) in EU funding for SMEs to develop new products and services. DSD programmes – delivered through a digital platform in the form of regular, short digital messages to break habits and routines – reached tens of thousands of people in community and organisational settings across 49 countries. This was achieved through partnerships between DSD Ltd and charities, health authorities and businesses. Evaluations demonstrated significant improvements in physical and mental health and productivity and clinical trials provided evidence of clinical feasibility, quality of life improvements and cost-effectiveness of DSD-based health interventions.</p>		
<b>2. Underpinning research</b> (indicative maximum 500 words)		
<p>Government attempts to change public health behaviour centre on providing information, offering incentives and introducing regulation. Yet these behaviour change interventions are heavily predicated on an information-deficit model that assumes the following: people lack knowledge about how to live a healthy life; people need educating about health; people will act in their own best interests once educated. The continuing rise in obesity rates demonstrates that educating people about healthy eating does not guarantee better dietary habits. A decade of research at the University of Hertfordshire, led by Professors Pine and Fletcher, sought to develop behavioural change techniques to address a fundamental challenge: the entrenched nature of people's pre-existing lifestyle habits that renders them resistant to change. Their approach was based on the idea that by changing small lifestyle behaviours that trigger unhealthy habit chains – addressing habits not knowledge – it is possible to instigate a new chain of events that deliver sustainable improvements in health and wellbeing.</p> <p>In 2004, Fletcher discovered a significant negative correlation between an individual's behavioural flexibility and their body mass index (BMI). The data indicated that BMI is correlated with individual personality and behavioural characteristics; the corollary of this finding was that behaviourally inflexible people are more likely to be overweight. To demonstrate causality, Fletcher and Pine carried out two three-month longitudinal studies [3.1, 3.2] that examined weight loss following a one-month intervention focusing on increasing participants' behavioural flexibility and breaking daily habits. The findings showed that increasing a person's behavioural flexibility led to reductions in BMI, anxiety and depression [3.1, 3.2]. This suggested that behavioural flexibility was also an important factor in improving other aspects of personal wellbeing. The mechanisms underlying this effect were further elucidated by Fletcher in research showing that individual variation within standard items on personality trait questionnaires predicted a range of positive and negative psychological outcomes. This demonstrated the benefits of applying item-level variability indices to behaviour statement questionnaires within situations requiring behaviour change [3.3]. An earlier study had observed behavioural traits in a different clinical setting: handwashing by health professionals. Fletcher highlighted discrepancies between desired and actual behaviour, finding that staff often failed to observe hand hygiene</p>		

guidelines despite being aware of what was required. This further supported the theory that people often behave habitually and without awareness [3.4].

Fletcher and Pine combined the techniques they were trialling into a formal intervention: Do Something Different. It worked by starting with new behaviours, introduced in small steps and in everyday situations in which the behaviours were needed. The underlying premise was that when people are more flexible in their behaviours they become more cognitively flexible. Fletcher's team carried out studies to establish empirically the benefits of increasing behavioural flexibility. Collaborations with mental health and psychiatric teams showed that flexible, dynamic assessment of behaviour in brain injury patients was a reliable predictor of learning ability [3.5], and that the DSD methodology rendered people with mild cognitive impairment more receptive to a complex intervention designed to delay the onset of dementia [3.6]. The latter was achieved through a feasibility study for a randomised controlled trial (RCT) in collaboration with UCL and North Essex Partnership University NHS Trust.

Through spinout company Rilke's Room Ltd, Fletcher and Pine trained health workers at West Norfolk Partnership to engage 10,000 people in DSD from 2009 to 2013. Data showed people exercising more, eating more healthily and drinking less, and experiencing less anxiety and depression – and these changes were sustained. A KTP [G1] further developed DSD for a workplace environment. In 2010-12, Fletcher and Pine worked with global professional services consultancy PwC to apply DSD to a digital workplace behaviour change intervention designed to help 16,000+ staff address bias and diversity issues. It won PwC's Chairman's Prize in 2011. Building on these successes, Pine and Fletcher have continued to argue for new approaches to health behaviour change, publishing opinion pieces in practitioner-facing journals and online, and pursuing wider commercial application.

### 3. References to the research (indicative maximum of six references)

**3.1** Fletcher B, Pine K, Page NA. A new behavioural intervention for tackling obesity: Do Something Different. *Agro Food Industry Hi Tech*. 2007;18(5):8-10. (PDF copy available)

**3.2** Fletcher B, Hanson J, Page NC, Pine KJ. FIT – Do Something Different: A New Behavioral Program for Sustained Weight Loss. *Swiss Journal of Psychology*. 2011;70(1):25-34.

<https://doi.org/10.1024/1421-0185/a000035>

**3.3** Churchyard J, Pine K, Sharma S, Fletcher B. Same traits, different variance: Item-Level Variation Within Personality Measures. *SAGE Open*. 2014 Feb 11;2014:1-11.

<https://doi.org/10.1177/2158244014522634>

**3.4** Jenner EA, Fletcher BC, Watson P, Jones FA, Miller L, Scott GM. Discrepancy between self-reported and observed hand hygiene behaviour in healthcare professionals. *J Hosp Infect*. 2006 Aug;63(4):418-22. <https://doi.org/10.1016/j.jhin.2006.03.012>

**3.5** Uprichard S, Kupshik G, Pine K, Fletcher B. Dynamic assessment of learning ability improves outcome prediction following acquired brain injury. *Brain Inj*. 2009 Apr;23(4):278-90.

<http://doi.org/10.1080/02699050902788444>

**3.6** Dannhauser TM, Cleverley M, Whitfield TJ, Fletcher BC, Stevens T, Walker Z. A complex multimodal activity intervention to reduce the risk of dementia in mild cognitive impairment--ThinkingFit: pilot and feasibility study for a randomized controlled trial. *BMC Psychiatry*. 2014 May 5;14:129. <https://doi.org/10.1186/1471-244X-14-129>

#### **Key underpinning grant**

**G1** ESRC funded Knowledge Transfer Programme (KTP), £99,000 (with Professor Karen Pine), 2008–10, Heales Medical Ltd. *This looked at behavioural flexibility and workplace stress and won KTP National Award, 2008 for Best Knowledge Transfer Partnership, SE England.*

### 4. Details of the impact (indicative maximum 750 words)

The research-based Do Something Different behavioural intervention, developed at the University of Hertfordshire and commercialised through a spinout company, has resulted in a broad range of impacts. It has delivered economic impact and commercial benefits in the UK

and within the EU; evidence of its efficacy as a clinical health intervention has been found through randomised controlled trials overseas; and it has improved people's health, wellbeing and productivity internationally within health, workplace and domestic settings.

### **Delivering economic impact through commercialisation of DSD**

In February 2014 Rilke's Room Ltd became the social enterprise Do Something Different Ltd following an investment of \$1m (£765,000) from PAX Holdings Ltd. This investment allowed the company, co-founded by Fletcher, Pine and social entrepreneur Ray Richards, to develop the DSD platform into a low-cost, scalable and accessible behaviour change intervention. It was aimed at three target beneficiaries to improve wellbeing, mental and physical health, and productivity: individuals, through collaborations with charities; healthcare organisations and public health commissioners; and businesses. DSD Ltd generated £2m in revenue from August 2013 to December 2020, creating and supporting six jobs for core staff and, at one point, sustaining up to 10 roles [5.1, 5.2].

The DSD platform underpinned the award of two major EU Horizon 2020 grants (combined value: €13.5m): Do CHANGE (2015-2018), which used the DSD model to change lifestyle and behavioural risk factors for people with heart disease or hypertension, and Preventomics (2018-2021), which applied the DSD model to the development of a digital platform that guides consumers to healthy food choices [5.3]. These grants included a total of €4.5m (£4m) in direct EU funding specifically for SMEs to develop new products and services [5.3]. One example is Dutch design firm Onmi (for whom Fletcher is an advisor), which received €900,000 [5.3]. Onmi offers two behaviour change programmes based on DSD: Alius and Flex [5.4]. It created two products via the Do CHANGE programme: COOKiT, a smart spatula that helps the user adopt healthy cooking habits (it won the 'public vote' award at the EC Innovation Radar Prize, 2017) and MySleeve, a smart device that can be wrapped around cups or bottles to encourage healthy drinking habits [5.4].

### **Demonstrating feasibility, efficacy and cost effectiveness of DSD through clinical trials**

The efficacy of DSD was demonstrated by an RCT (ACTRN12615000114549; registered Feb 2015) of habit-based interventions carried out by researchers from the Faculty of Health Sciences and Medicine at Bond University, Australia. DSD was found to be clinically beneficial in achieving long-term weight loss and improved diet and exercise habits [5.5]. Approximately 65% of participants lost >5% of their body weight (the benchmark of successful and healthful weight loss) and kept it off 12 months after the intervention ended. The researchers concluded: "*Habit-based interventions have the potential to change how we think about weight management and importantly how we behave.*" The Do CHANGE programme resulted in an RCT (NCT02946281; registered Oct 2016) involving 300 heart disease and hypertension patients in three hospitals in Spain, Netherlands and Taiwan. The DSD-based intervention was shown to be feasible and quality of life improved more in the intervention group; a positive cost-effectiveness ratio was demonstrated in the Spanish hospital [5.6].

### **Improving health and wellbeing among individuals internationally**

DSD Ltd created behaviour change programmes to address various health-related issues. An impact evaluation carried out in 2016 found that, out of 18,000 users from 49 countries, 66.7% reported lower levels of anxiety and depression [5.1]. The number of people with a clinical level of anxiety fell by 55.9% and a clinical level of depression by 53.9%. Participant comments [5.7] included: "*I got motivated to take up more exercise, to do things differently in my life, where before I was in a rut. My grandchildren loved doing some of it with me.*" "*One of my favourite 'do's' was going out and giving something to somebody that was very unexpected ... I took a neighbour whom I'd never met some flowers and some biscuits ... in the end we got the whole street involved and all the ladies now meet ... once a month.*" "*I was basically completely sedentary, I did no exercise at all. Now that I do exercise as a result of doing this course, I've probably added years and years to my life.*" In 2014 DSD collaborated with UK charity Action for

Happiness to design an intensive six-week programme to help people develop habits proven to bring more happiness to themselves and the people around them. The *Do Happiness* programme sent people regular small positive actions (Do's) to break their existing habit cycles. According to an evaluation published with Action for Happiness [5.8], 80% of 1,993 participants from 49 countries said they would recommend DSD to others. The overall average uplift in wellbeing was 21.6%. More than 8,500 comments were shared in the 'Do Zone' by programme participants.

### **Enabling health authorities and companies to improve physical and mental wellbeing**

DSD collaborated with Hertfordshire Public Health to run three programmes between 2014 and 2016: Do Healthy in Herts, which focused on exercise and diet; Do Less Stress in Herts, which explored ways to combat stress; Do Happiness in Herts, which further developed the programme run with Action for Happiness. These three interventions engaged 1,000 residents. Evaluations [5.9] showed subjective wellbeing up by 21%; more than 50% of people with clinical levels of anxiety and depression moved to healthier levels. Physical activity was up 37%, weight was down by an average of 5.8lbs in six weeks and alcohol consumption fell 20%.

Representative comments from participants, captured in video testimony [5.9], included: *"It definitely helped to refocus mental energy and thinking patterns."* *"I was feeling extremely low ... not wanting to do anything ... but then I changed to a more positive attitude in spite of what's going on."* *"I can't even send out a text, but do you know, I was looking forward to this text coming in, isn't that amazing?"*

The interventions won a Royal Society for Public Health (RSPH) Health and Wellbeing Award in 2015 for *'its innovative and creative approach to behaviour change for individuals in Hertfordshire'* [5.9]. RSPH highlighted DSD's accessibility and scalability and that it was *'underpinned by research and good practice in technology'*. Hertfordshire's Director of Public Health said that DSD *'shows that people with long-term conditions move out of clinical levels of depression at a fraction of the cost of face-to-face care'* [5.9]. Hertfordshire Public Health commissioned further DSD programmes under a Do Healthy in Herts banner. They included programmes to help people with Type 2 diabetes manage their condition, improve mental health in young people and empower victims of domestic abuse [5.9]. DSD developed Do Healthy Cov for the Coventry City Council Public Health team; it was designed to engage 1,500 residents in making small changes in everyday exercise and diet, while making use of the city's leisure facilities [5.10]. DSD ran a smoking cessation programme in partnership with Brighton and Hove Clinical Commissioning Group. It achieved a 'quit rate' of 52% and resulted in DSD being a finalist in the 'Partnership with the NHS' category in the 2016 South East Health Technologies Alliance awards [5.10].

In 2014 Medicinfo, a Dutch healthcare innovation company, invested £85,000 in a three-year agreement to distribute DSD. Beneficiaries in the Netherlands included a public health centre, educational institution, local authority, a care home and people with diabetes and COPD [5.11]. Medicinfo's director said: *"We ran eight programmes, all successful based on qualitative feedback from participants. The best results were in a care home where a complete culture change occurred among healthcare professionals, from dictating an organisational structure to implementing a structure based on what clients want and need. DSD also worked well with blue collar workers in a building company ... (who) ... liked the conciseness of the 'Do' format"* [5.11].

### **Improving wellbeing and increasing productivity among company employees**

Large corporate organisations used DSD to deliver wellbeing and training programmes to their employees, focusing on issues such as resilience, stress, inclusivity and leadership. Clients during the impact period included: General Electric (USA), Aviva, American Express, Mondelez, Remploi, TUI and Cisco [5.1]. DSD worked with Cisco's HR team to deliver a programme aimed at building a more inclusive workplace culture. It was offered to all employees across Cisco's Europe, Middle East, Africa and Russia region. A total of 1,264 employees across 44 countries participated. A published evaluation [5.12] found a 13.3% uplift in people engaging with others

from different cultures. One employee commented: “*Do Something Different has changed a lot of my habits and introduced real change to the person I am at work and at home.*” In a collaboration with TUI, DSD designed a bespoke leadership training programme that combined TUI’s management development goals with a drive to improve digital skills. It was made available to managers on TUI’s Perspectives Leadership programme. One international tax manager said: “*If I had to sum up the Do programme in a few words it would be ‘Life Changing’.*” A regional finance director commented: “*It taught me to let go of the day-to-day and become a more strategic leader*” [5.12] Working with Mondelez, DSD created an ‘Agility at Work’ programme to encourage employees to adopt new ways of working. The programme was made available to all employees in seven sites across the UK and Ireland. As a result, 28.4% said they were more likely to look for new ways of doing things [5.12]. A similar programme in 2016 engaged Aviva’s employees to encourage them to ‘embrace different measures’. The evaluation showed that 74% were likely to recommend DSD and 68% said they were doing things differently as a result [5.12].

#### 5. Sources to corroborate the impact (indicative maximum of 10 references)

5.1 Corroborating statement from the Director (not UH affiliated), Do Something Different Ltd.

5.2 Filing history for Do Something Different Ltd on Companies House:

<https://beta.companieshouse.gov.uk/company/07334205/filing-history>.

5.3 European Commission webpages for the two Horizon 2020 grants: Do CHANGE and PREVENTOMICS, demonstrating product/service development income streams for EU SMEs:

<https://cordis.europa.eu/project/id/643735>; <https://cordis.europa.eu/project/id/818318>. Article re link between Preventomics/DSD: <https://preventomics.eu/2020-resolutions-behaviour-change/>

5.4 Onmi webpages – demonstrating services and products based on DSD:

<https://www.onmi.design/flex>; <https://www.onmi.design/do-change>; <https://tinyurl.com/y645x939>

5.5 Cleo G, Glasziou P, Beller E, Isenring E, Thomas R. Habit-based interventions for weight loss maintenance in adults with overweight and obesity: a randomized controlled trial. *Int J Obes (Lond)*. 2019 Feb;43(2):374-383. <https://doi.org/10.1038/s41366-018-0067-4>

5.6a Broers ER, Kop WJ, Denollet J, Widdershoven J, Wetzels M, Ayoola I, Piera-Jimenez J, Habibovic M. A Personalized eHealth Intervention for Lifestyle Changes in Patients With Cardiovascular Disease: Randomized Controlled Trial. *J Med Internet Res*. 2020 May 22;22(5):e14570. <https://doi.org/10.2196/14570>.

5.6b Piera-Jiménez J, Winters M, Broers E, Valero-Bover D, Habibovic M, et al. Changing the Health Behavior of Patients With Cardiovascular Disease Through an Electronic Health Intervention in Three Different Countries: Cost-Effectiveness Study in the Do Cardiac Health: Advanced New Generation Ecosystem (Do CHANGE) 2 Randomized Controlled Trial. *J Med Internet Res*. 2020 Jul 28;22(7):e17351. <http://doi.org/10.2196/17351>

5.7 Video testimony from DSD users on DSD Ltd’s Vimeo page:

<https://vimeo.com/user14675240>

5.8 Impact evaluation report of DSD’s Do Happiness programme:

<http://dsd.me/wp-content/uploads/2016/06/Do-Happiness-Report-2015-1.pdf>

5.9 Corroboration of the RSPH award in 2015, the efficacy of the Hertfordshire programme and funded follow-on programmes under the Do Healthy Herts banner.

<http://www.prweb.com/releases/2015/10/prweb13030225.htm>; <https://dsd.me/dohealthyherts/>

5.10 Corroboration of DSD programmes in Coventry and Brighton:

<https://dsd.me/healthcare/2015/05/27/coventrys-getting-fitter/>; <https://dsd.me/healthcare/> (see 52% stat near the bottom of the page); <https://www.medilinkuk.com/news/2016-sehta-healthcare-business-award-winners-announced>

5.11 Transcript of an interview with former Director of Innovation and Business Development at health insurer UVIT (now VGZ), and Director at Medicinfo, Netherlands.

5.12 Published evaluation reports for DSD projects with corporate partners:

<https://dsd.me/wp-content/uploads/2014/12/do-inclusive-culture.pdf>;

<https://dsd.me/wp-content/uploads/2014/12/do-agility-at-work.pdf>;

<https://dsd.me/wp-content/uploads/2014/12/do-digital-leadership.pdf>;

[https://dsd.me/wp-content/uploads/2016/06/Aviva\\_report-3.pdf](https://dsd.me/wp-content/uploads/2016/06/Aviva_report-3.pdf)