

**Institution: University of Surrey**

**Unit of Assessment: UOA 4 Psychology, Psychiatry and Neuroscience**

**Title of case study:**

**The Development of a Guided Audio as an aid for Abstinent Smokers  
to manage their Smoking Withdrawal Symptoms**

**1. Summary of the impact** (indicative maximum 100 words)

Research and development at the University of Surrey of a guided audio to help abstinent smokers manage their stress, smoking cravings and tobacco withdrawal symptoms.

The audio — in MP3 format — is freely available on the NHS Stop Smoking website, and is part of the NHS smoking 'Quit Kit'. The audio has been downloaded 81,396 times (as of May, 2013). The main user groups of the audio are NHS patients wishing to stop smoking, and members of the general population.

**2. Underpinning research** (indicative maximum 500 words)

Tobacco smoking is one of the major causes of mortality and morbidity in industrialised nations, and stopping smoking increases life expectancy. In the UK, it has been estimated that approximately 80,000 of around 8 million smokers die prematurely each year. Approximately 70% of smokers wish to stop smoking (Department of Health 2000), and the majority of attempts are made without professional support. Only 2-4% of these individuals however are likely to be abstinent from smoking at 12 months. Even with the most effective smoking cessation treatments, combining nicotine replacement therapy (NRT) with behavioural support, these abstinence rates are only likely to increase by approximately 15%. More effective aids to smoking cessation are needed.

Severe cravings for cigarettes are a reliable predictor of smoking relapse (West et al., 1989). NRT is thought to work largely through moderating cigarette cravings and withdrawal symptoms. Laboratory studies have shown that non-pharmaceutical interventions; for example, cardiovascular exercise (Ussher et al., 2001) and glucose consumption (West et al., 1999), can also be effective for reducing cigarette cravings and withdrawal symptoms. However, exercise is impractical in many situations and glucose consumption may not be appropriate for some individuals (e.g., diabetics).

Cropley, Ussher and Charitou (2007) therefore developed and tested a guided behavioural relaxation intervention audio specifically designed for helping abstinent smokers reduce their cravings for cigarettes and to manage their stress. The audio was developed, recorded and piloted under laboratory conditions at the University of Surrey (Cropley et al., 2007), and later tested in the field as a downloadable audio (Ussher et al., 2009).

In 2009, the NHS developed a self-help intervention for smoking cessation called the "Quit Kit". The Quit Kit was devised through collaboration between the English Department of Health tobacco control team and academics. Interviews were conducted with staff at the NHS Centre for Smoking Cessation Training, and 12 groups (n = 6 to 8 smokers in each group) aged 18 to 55 years. The Quit Kit contains various products to aid a quitting attempt, however it was determined that stress management and distraction techniques were specifically needed, and the DoH approached us for permission to include our MP3 audio.

<http://smokefree.nhs.uk/quit-tools/quit-kit/> (under the 'MP3s' heading)

<http://smokefree.nhs.uk/quit-tools/stress-busting-mp3s/>

The Quit Kit is a box of practical tools and advice developed with experts, smokers and ex-smokers, which has helped thousands of smokers quit successfully. Within the kit smokers are also directed to the NHS website where they can download free of charge what the NHS call a “stressbuster for the mind”. Patients are instructed to use the audio whenever they crave a cigarette or experience stress, to help them stay focussed and calm.

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

1. Cropley, M., Ussher, M., & Charitou, E. (2007). Acute effects of a guided relaxation routine (bodyscan) on tobacco withdrawal symptoms and cravings in abstinent smokers, *Addiction*, 102, 989-93.
2. Ussher, M., Cropley, M., Playle, S., Mohidin, R., & West, R. (2009). Effect of isometric exercise and body scanning on cigarette cravings and withdrawal symptoms. *Addiction*, 104, 1251-1257.

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

To date the audio has been downloaded 81,396 times, and in the first two months of 2013, the audio was downloaded 4,349 times according to the Smokefree Campaign Manager, Health and Wellbeing Directorate, Public Health England.

The Quit Kit has now undergone three development iterations: Quit Kit-1, Quit Kit-2, and Quit Kit-3, and with each, all aspects of the kit are evaluated (data available for Quit Kit-1 and Quit Kit-2). During the first evaluation (see Ussher et al., 2011), 2,347 users of the kit were randomly selected for interview. It was found that people differed in respect to which element of the kit they found useful, and the audio was used by a quarter of the respondents.

Following feedback from Quit Kit-1 users, Quit Kit-2 launched in January 2011. During the second evaluation, 2,379 online surveys and 300 telephone interviews were completed by independent researchers (TNS BMRB) in March-April 2011. When considering the kit as a whole, the majority of respondents reported finding the kit helpful, with nearly three quarters saying they would recommend it. The audio was positively associated with quit attempts and used by 22% of the respondents (Murray, et al., 2013).

It is not possible to determine exactly how many people have gained health benefits due to the audio MP3 or the Quit Kit itself. However approximately two thirds of respondents (57%) receiving the Quit Kit-2 indicated that they had attempted to quit completely since receiving the kit, with over half reporting not smoking at the point of interview.

The MP3 audio has been requested by a number of researchers and is now being tested in Dr. Steven Wilson’s laboratory in Pennsylvania State University, USA, and by Professor Gillihan, Haverford College, Philadelphia, USA. Professor Gillihan found “the mindfulness audio to be effective in producing the desired manipulation: increasing state mindful awareness and decreasing negative affect”. This work is currently being written up for publication.

Cropley has been approached by the Public Health and Lifestyle Services, to engage in the evaluation of Quit Kit-3. This work began in October 2013.

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

- a) Link to Quit Kit: <http://smokefree.nhs.uk/quit-tools/quit-kit/>

- b)** Tobacco Control Marketing Team, Department of Health (contact details provided)
- c)** Ussher, M., Chambers, M., Adams, R., et al., (2011). Evaluation of a nationally disseminated self-help intervention for smoking cessation ('Quit Kit'). *Tobacco Control*, 20, 380-382.
- d)** Murray, R.L., Szatkowski, L., Ussher, M. (2013 ahead of print). Evaluation of a refined, nationally disseminated self-help intervention for smoking cessation ('Quit Kit-2'). *Nicotine & Tobacco Research: Official journal of the Society for Research on Nicotine and Tobacco*. <http://ntr.oxfordjournals.org/content/early/2013/01/04/ntr.nts286.long>