

Alternative approaches to prevention – use of the smartphone game

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Gamification behaviour change and M-Health

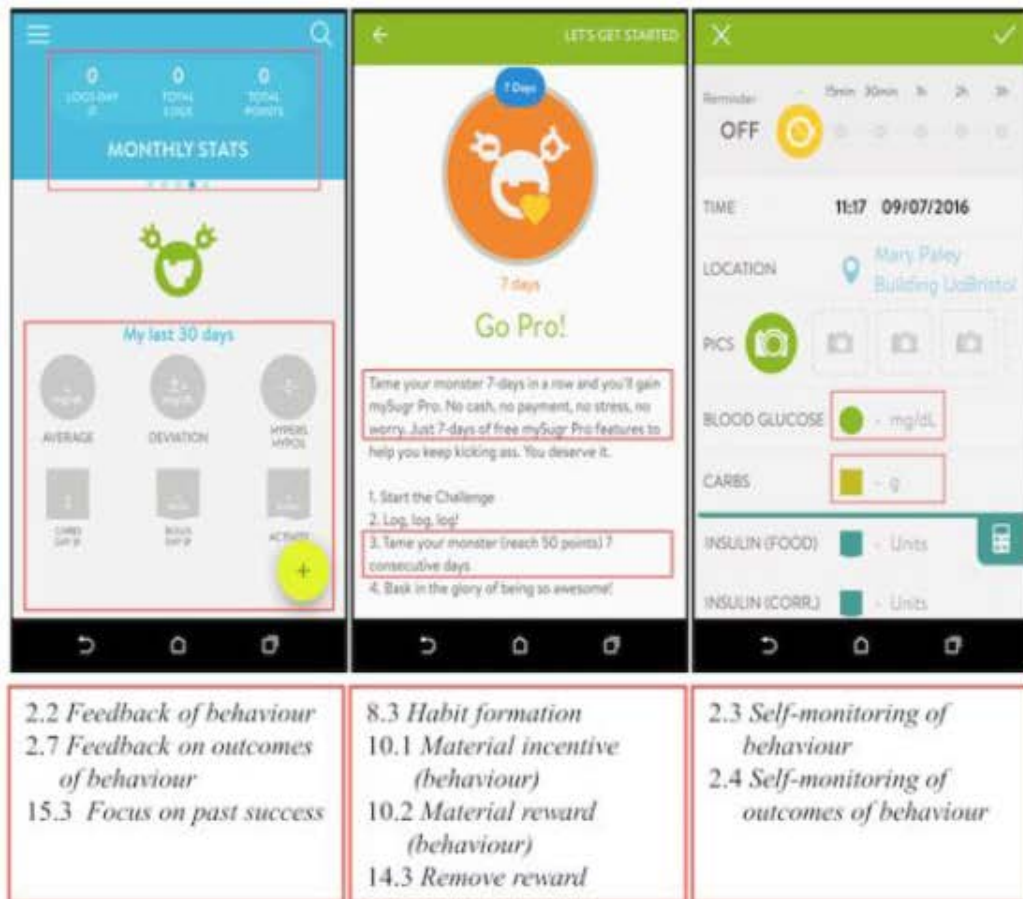
- Games largest market share of apps; 69% UK aged 8-74, playing 14h/week
- 52% of gamers in UK women, average age 31
(IAB 2014 & ukie 2015)
- Game playing more prevalent in smokers
(Raiff *et. al.* 2011)

Gamification: Using 'gaming' elements to engage/motivate people in non-game contexts

- Effective modifying human behaviour & promoting health (Hamari J. *et al.*, 2014, Johnson D. *et al.*, 2016)
- Linked to behaviour change science (Cugelman B. *et al.*, 2013, Cheek C. *et al.*, 2015, Edwards EA. *et al.*, 2016)
- Relatively new concept in Mobile-Health



Behaviour change techniques in Health Apps (Edwards BMJ Open 2016)



- Relatively few health & wellness apps using gamification: 64 of 1,680 (4%)
- Although apps designers using BCTs, Median 14 (range 5-22), wide variation in use
- Little evidence of public health practitioner/user participation in the design
- Limiting potential to improve health outcomes

Focus group development

- 10 focus groups / 73 participants
- Male (n=34) Female (n=39), Ages (15-67)
- Ethnicities: Bengali/Turkish/Russian/Polish/British/American/African American
- American smokers in Chapel Hill UNC, US
- Hardened smokers: routine & manual workers/adolescents
- Smoking cessation advisors/Doctors
- Found engaging & motivating & provided distraction, 84% would play again & recommend to a friend

Cigbreak: The personal quit journey



Progress Missions Cravings Trophies Personalise

Personalise your Journal

Enter Your Name

Hope Caton

Enter Your Quit Date

1 9 16

How Many Cigarettes You Smoke Per Day

5

Cost Per Pack

10

Cigarettes Per Pack

5

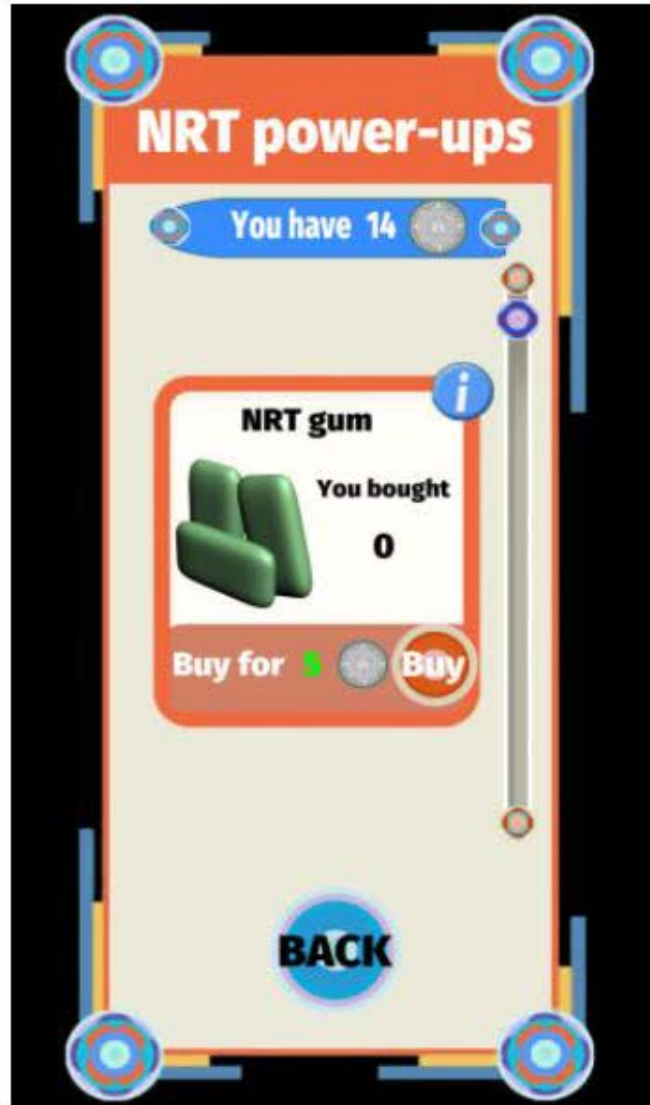
SAVE

Go to Map Go to Game

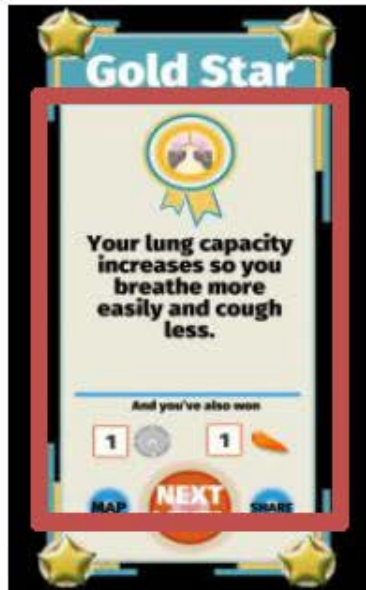
Cigbreak: A path to smoke free



Nicotine replacement power-ups



Cigbreak contains 37 behaviour change techniques



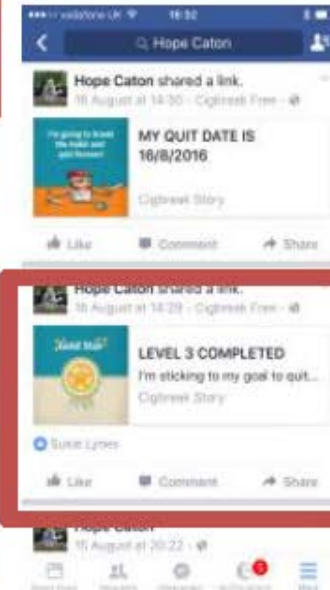
5.1 Information about health consequences



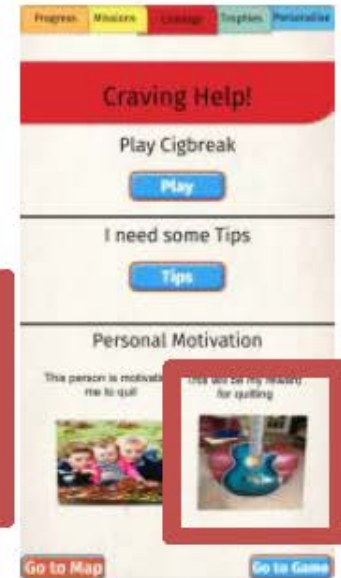
10.3 Non-specific reward
10.6 Non-specific incentive



5.2 Salience of consequences



3.1 Social support unspecified



10.7 Self-incentive

Conclusion

- Smoking cessation apps provide a potentially cost-effective platform for health behaviour change & health promotion
- Cigbreak innovative digital solution, fun/engaging & motivating - **Potential to Modify Health Behaviour**
- Large scale uptake could have substantial Public Health impact – link to GP records
- Need for data on effectiveness and cost effectiveness
- Marking a new & exciting chapter in Health care promotion and delivery

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