Project Details	
Project Code	MRCPHS26Br Maynard
Title	Breaking the Habit: Designing and Evaluating Behavioural Interventions to Reduce Vaping Dependence and Support Cessation
Research Theme	PHS
Project Type	Dry lab
Summary	Vaping is often characterised by habitual, almost automatic use, with many users feeling the vape is constantly in their hand. This can lead to a sense of being controlled by the behaviour, which some find frustrating. For others, especially smokers considering switching, it reinforces the idea that vaping simply replaces one addiction with another, despite it being far less harmful than smoking. This PhD project will explore whether structured 'vape-free windows' delivered through a behavioural intervention can help users regain control, reduce dependence, and increase self-efficacy. The aim is to support those who want to cut down or quit vaping.
Description	**Background** Vaping has become a growing public health concern, with high rates of use among adults and young people, including school-aged children. Although significantly less harmful than smoking, vaping is not risk-free. Current public health guidance supports vaping as a smoking cessation aid, but recommends that individuals eventually stop vaping too. Despite this guidance, and data suggesting that over half of young people and ex-smokers who vape in Great Britain express a desire to quit, there is little evidence-based support available to help them do so. Existing cessation methods, such as nicotine replacement therapies, are designed for smoking and often do not address the distinct behavioural patterns associated with vaping. Vaping tends to be more automatic than smoking. Many users report near-constant use and describe feeling like they cannot put their vape down. This reinforces the belief among some smokers that switching to vaping may simply trade one addiction for another. These behavioural patterns are currently unaddressed in standard cessation approaches, highlighting the need for tailored interventions that support vaping reduction and eventual cessation. **Research Aim** This PhD project will investigate whether structured 'vape-free window' (periods during the day when individuals intentionally abstain from vaping), delivered through a novel digital app can help users regain control, reduce dependence, and increase self-efficacy to quit altogether. There will also be opportunities to explore other behavioural interventions for vaping reduction. **Co-production Approach** A central feature of this project is co-production. The student will collaborate closely with key stakeholders, including people who vape or smoke, public health specialists, and smoking cessation services, to ensure any intervention the student develops is relevant, feasible, and acceptable.

Objectives
The project will be structured into three phases:

1. Understanding the Landscape for Gradual Vaping Reduction
This phase will begin with a scoping review to explore current strategies for supporting vaping reduction. It will include academic literature, grey literature (e.g., clinical guidelines, government reports) and publicly available digital resources (e.g., websites, apps). The aim is to map existing support, assess whether it is evidence-based, and identify gaps.

In parallel, the student will conduct patient and public involvement (PPI) interviews with people who vape. These interviews will explore attitudes toward gradual reduction, desired features of support tools, and potential positive or negative impacts of vaping reduction strategies (which will guide choice of outcome measures for future phases).

2. Developing and Evaluating the 'Vape-Free Windows' Intervention
Building on early pilot work led by the supervisory team, this phase will optimise a prototype digital app that notifies users of scheduled vape-free windows (i.e., specific times when they are encouraged not to vape). Initial feedback suggests users find the concept acceptable and helpful in reducing use.

Using insights from Phase 1, the student will refine the app and evaluate key features, such as 1) duration and frequency of vape-free windows, 2) length of the overall reduction period and 3) level of user autonomy in setting the schedule.

A micro-randomised trial (MRT) may be employed to test different configurations. Participants will use the app for two weeks, during which they are randomly assigned to different versions of the intervention. Outcome measures such as changes in frequency of vaping, cravings, or sense of control will be assessed daily and at the end of the period.

This phase will identify which intervention components are most effective and acceptable for supporting vaping reduction. At this point, the student will instruct our app developer to provide an update of the app for Phase 3.

3. Conducting a Large-Scale Randomised Controlled Trial (RCT)
The final phase will involve a large-scale RCT to evaluate the fully developed Vape-Free Windows app. The trial will be designed in collaboration with stakeholders to ensure it addresses user needs and public health priorities.

Participants will be regular vapers interested in reducing or quitting. They will be randomly assigned to either an intervention group using the Vape-Free Windows app, or a control group, receiving either standard information or no support (depending on outcomes from co-production work). Primary outcomes will likely include reductions in vaping

	frequency, decreased nicotine dependence and increased quit attempts. Secondary outcomes may include self-efficacy, perceived control, and satisfaction with the intervention. Data will be collected at baseline, throughout the intervention, and at one- and three-month follow-ups. This phase will provide training in advanced trial design and evaluation while generating high-quality evidence on a scalable digital tool to support vaping cessation.
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