

Dual use of e-cigarettes and tobacco

Authors: Andy MacGregor, Hannah Biggs, Asiya Hamid, Stephen Hinchliffe and Sarah Minty



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Aims of the study

This research study explored the following questions:

- to explore the dual use of e-cigarettes and tobacco in those aged 45-64 in Scotland, in order to examine why levels of dual use are highest in this age group;
- to assess patterns of dual use in the 45-64 age group, including attempts to quit tobacco or reduce tobacco consumption using e-cigarettes;
- to examine factors which contribute to or mitigate against dual use;
- to explore perceptions of any impacts of dual use in the short and longer term;
- to explore patterns of tobacco and e-cigarette users who used to be dual users (ex-dual users), who are currently only smoking tobacco, only using e-cigarettes or have quit both;
- to investigate the reasons why ex-dual users gave up either e-cigarettes, tobacco or both; and
- to assess intentions to quit tobacco and/or e-cigarettes in the future.

Key findings

The factors related to stopping the use of tobacco were:

- Cost of tobacco, unpleasant associations such as smell, stained fingers
- Being around children/pregnancy of family members
- An attempt to lead a healthier lifestyle
- Bereavement (cancer-related) within family groups or friends

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- Own health (illnesses such as Chronic Obstructive Pulmonary Disease (COPD) were common)

Two individuals of the 21 interviewees had managed to quit both tobacco and e-cigarettes. Five participants claimed that they had used both tobacco and e-cigarettes, but never simultaneously, and did not necessarily consider themselves as dual users even if their use of these products overlapped.

Of those participants who were dual using, the most common reason for using e-cigarettes appeared to be circumventing tobacco restrictions, at work (e.g. on a building site) or in social settings. One individual did report that e-cigarettes were being used to reduce tobacco consumption.

The factors related to continue smoking tobacco only were:

- E-cigarettes 'not the same' as tobacco: in terms of taste, effect, feel
- E-cigarettes break, run out of charge, need refills: are a 'hassle'
- Lack of knowledge re which e-cigarette/vape is best for their needs/too much choice/not able to find ideal device?
- Longer term health concerns (e.g. popcorn lung) related to e-cigarette use
- Cannabis: those who used cannabis said that this was the main driving factor behind their tobacco use. They mixed cannabis with tobacco, and had no intention of quitting this practice, hence they had stopped using e-cigarettes

The factors related to continue smoking e-cigarettes only were:

- At least two users reported using the lowest nicotine content devices, and were not vaping frequently, and thus had cut out tobacco and their overall nicotine consumption
- Others reported similar or indeed higher levels of e-cigarette use; hence tobacco consumption had stopped though nicotine intake may have stayed relatively static, and may have increased in a few cases

The factors relating to the participants' future plans were:

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- Multiple attempts to quit tobacco previously, e.g. using patches, gum etc, prescription medication, hypnotherapy, acupuncture, will power, before using e-cigarettes
 - Majority of current smokers wish to reduce/stop entirely in the future; minority think they will always smoke and at the time of interview had no intention to stop or reduce tobacco consumption;
 - E-cigarette users are also split between those who intend to reduce nicotine levels to wean themselves off e-cigarettes/vapes and those who are less sure they will quit vaping (or reduce use) unless more negative effects associated with e-cigarette use are reported.

Conclusions

Why is dual use prevalence higher in those aged 45-64?:

- Chronic illness: many of the conditions reported, such as COPD, heart disease etc, are more prevalent in this age group, and indeed among smokers. As such, it is likely that e-cigarettes are used to reduce tobacco consumption and to improve respiratory and cardiac function
- Familial issues; grandchildren; pregnancy: There are a number of related issues related to the advent of grandchildren in particular. Firstly, the interviewees were involved in the care of grandchildren, and did not want to smoke in their proximity, and had indeed been told not to smoke and then hold the child. As such, e-cigarettes were used to mitigate against this. Pregnancy and the birth of grandchildren resulted in family members asking the interviewees to give up smoking tobacco. Also, the interviewees themselves reported wanting to improve their own health and lifestyle as they wanted to be a part of the grandchildren's lives and expressed a wish to see them grow up. As a result, dual use was instigated.
- Bereavement: Given the age of the interviewees, bereavement resulting from the loss of close family members such as parents, siblings, partners and other relations was commonly reported. Some of these cases were smoking-related deaths. This did have an impact, and e-cigarette use was initiated as a result.

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- E-cigarettes are being used to overcome tobacco restrictions, such as when working on a building site or when socialising. However, this is also likely to be a highly relevant issue for younger age groups.

The qualitative interviews would suggest that this age group is quite a dynamic group, with relatively frequent changes in the trajectories of tobacco/e-cigarette use status reported. In addition, five of the 21 interviewees said that they did not dual use – they switched between tobacco and e-cigarette use (even if there was overlap, they did not consider it dual use). Still, at the time of interview, ten participants were no longer smoking tobacco. Four were dual using and eight were using e-cigarettes only, with only two quitting both tobacco and e-cigarettes. The fact that 10 of 21 interviewees have quit tobacco may be a positive result, although further support may be needed in order that e-cigarette use also decreases – those who only use e-cigarettes did not seem to have great motivation to reduce or stop using them. Those who had reverted to tobacco only, or were still dual using, may be more dependent smokers, and may need the assistance of smoking cessation services. The crucial role of tobacco control is also evident in that smokers had used e-cigarettes to circumvent tobacco restrictions, the cost of tobacco had resulted in quit attempts, reduced tobacco consumption and dual use.

Recommendations

1. *Tobacco control: existing services should continue to focus on supporting smokers to quit smoking using and if required using approved prescription options but also be open to those who want to try to quit using e-cigarettes.*

In the qualitative interviews, dual use tended to start due to tobacco control measures such as increased costs of tobacco, dealing with smoking restrictions in public places and the workplace, as well as chronic illness and the advent of grandchildren in the family. In a few cases this led to individuals giving up tobacco and e-cigarettes, and in total 10 out of 21 individuals were no longer smoking tobacco. However, 11 interviewees still smoked tobacco after being or continuing to be dual users, and it is likely that further tobacco control measures may be necessary to support moving away from dual use with tobacco.

2. *Dual users need to be strongly advised to quit smoking completely*

This research has identified that individuals can move between different categories, smoking tobacco, dual using tobacco and e-cigarettes and using e-cigarettes alone. It is crucial that services emphasise to e-cigarette users the risks of smoking tobacco, and emphasising quitting smoking tobacco completely. However, we need to be mindful that those who use e-cigarettes could also continue to smoke tobacco and therefore remain at risk of tobacco related harm.

3. *The role of e-cigarettes can be complex and needs to be considered carefully*

This research has identified that both the use and role of e-cigarettes can be complex. It was used in different ways by study participants, for example used alone, used together with tobacco (dual use) or used sequentially with tobacco (smoking, then vaping, then smoking etc). It also played a different role in different participant's lives, some used it to quit smoking tobacco and then went on to also stop vaping. Some used it together with tobacco (dual use) while others used it as a substitute, quitting smoking, but continuing to vape with no intention of quitting. These individuals may need additional support in terms of quitting e-cigarettes and vapes in the future.

4. *It is not clear whether those using e-cigarettes are at risk of returning to smoking tobacco*

This study identified that participants moved between using tobacco and using e-cigarettes and back. Therefore, it is not clear whether those who are using e-cigarettes are at risk of becoming smokers again, or if the moving between smoking and e-cigarettes is specific to the study participants because they were selected as dual users at the outset. It would be useful to understand the dynamic relationship between smoking and e-cigarette use further.

5. *Tailored approaches are needed to encourage smoking cessation in the 45-64 age group, and smoking cessation services have a crucial role to play*

This age group would seem to be a dynamic group, with individuals moving between dual use and sole tobacco consumption and e-cigarette use. Multiple attempts at smoking cessation were cited, through the use of e-cigarettes, NRT, prescription medication, hypnotherapy, acupuncture and

will power. However, at the time of interview, it was commonly stated that interviewees were quite content with their current smoking status, and only two were non-smokers and non e-cigarette users. Smoking cessation services would seem best placed to tailor approaches to suit an individual's needs, which is in line with Scotland's Quit your Way approach.

Secondary data analysis

Tables 1 and 2 below show that dual use was 3% in the whole adult population of Scotland in 2016-2019, but 16% among current smokers.

Table 1: All Adults

	16-44	45-64	65+
Yes %	3	4	1
No %	97	96	99

Scottish Health Survey, 2016-2019

Dual use was still significantly higher in those aged 45-64 compared with other age groups combined (see Table 2).

Table 2: Current smokers only

	16-44	45-64	65+
Yes %	15	18	12
No %	85	82	88

Scottish Health Survey, 2016-2019

Multiple logistic regression was conducted which demonstrated that the factors associated with dual use were:

- in all respondents aged 45-64: 'can smoke anywhere or in certain rooms of the house' (P<0.01), 'exposure to passive smoking outside of buildings' (P<0.01) and 'having a limiting, long-standing illness' (P<0.01)

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- in smokers aged 45-64: 'trying to give up smoking 3 or more times' (P<0.01), 'wanting to give up smoking' (P<0.05) and 'having a limiting, long-standing illness' (borderline significance, P<0.1).
 - (other age groups: smokers aged 16-44: 'wanting to' and 'trying to' give up smoking; smokers aged 65 and above: 'wanting to give up smoking', both 'limiting and non-limiting long-standing illness' and 'having asthma').

Methodology

Secondary analysis of the Scottish Health Survey sweeps 2016-2019 was conducted. Multiple logistic regression was conducted on the entire adult population, those aged 45-64, and those aged 16-44 and 65 and above. Factors associated with dual use in the different age groups were then identified.

Scottish Health Survey (SHeS) participants from the 2016-2019 sweeps who had given their consent to be recontacted were invited to take part in a qualitative interview. The purposive sampling was based on including dual users with:

- a range of ages within the 45-64 year age group
- a mix of genders
- factors identified in the secondary analysis (e.g. long-standing limiting illness).

We interviewed 21 SHeS dual users between 19th October 2021 and 23rd February 2022 by telephone or online, due to the pandemic. Interviews took an average of 75 minutes to complete. The topic guide incorporated a grid for completion as a joint endeavour between the interviewer and interviewee, focusing on the period when dual use had started. The topic guide also covered smoking and vaping profiles, views of tobacco and e-cigarette use, participant quit attempts (both tobacco and/or e-cigarettes), changes in dual use status over time, factors which made use of tobacco and/or e-cigarettes more and less likely, and future plans for tobacco and/or e-cig use.

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National Centre
for Social Research
35 Northampton Square
London EC1V 0AX
020 7250 1866
www.natcen.ac.uk