How should a vape shop-based smoking cessation intervention be delivered? A qualitative study

Tessa Langley* (PhD), tessa.langley@nottingham.ac.uk, https://orcid.org/ 0000-0001-9560-1148, tessa.langley@nottingham.ac.uk, Nottingham.ac.uk, Nottingham.ac.uk,

Emily Young (PhD), Emily.Young@shu.ac.uk Sheffield Hallam University, Collegiate Crescent Campus, Sheffield, S10 2BQ

Abby Hunter (PhD), <u>abby.hunter@dhsc.gov.uk</u> Office for Health Improvement and Disparities, Seaton House, Nottingham, NG2 4LA

Manpreet Bains (PhD), <u>manpreet.bains@nottingham.ac.uk</u> Nottingham Centre for Public Health and Epidemiology, School of Medicine, University of Nottingham, NG5 1PB

*Corresponding author

Word count: 4395

Keywords: vaping, smoking cessation, vape shops, qualitative

Abstract:

Background: Encouraging smokers to quit smoking tobacco using e-cigarettes could substantially reduce smoking-related diseases. Vape shops therefore have the potential to play an important role in supporting smoking cessation. The aim of this study was to explore how to deliver a vape shop-based smoking cessation intervention in the United Kingdom. Method: Semi-structured telephone interviews were undertaken with four stakeholder groups: 20 stop smoking service (SSS) providers, 7 tobacco control leads (TCL), 7 smokers/vapers and 5 vape shop staff). Interviews were analysed thematically. Results: Stakeholder groups were positive about the idea of delivering a vape shop-based intervention. Themes that were identified were the characteristics of the intervention (duration and timing; delivery; style and content; and product provisions); barriers to the intervention (challenges for new vapers; false information; tobacco company involvement; and conflicts of interest); facilitators to the intervention (positive views on vaping; costeffectiveness; popularity; and accessibility); and considerations for the intervention (data protection and privacy; aesthetics; and regulation and management). The results suggest that the intervention should be delivered by vape shop workers with mandatory training with the support of SSS. Most stakeholders agreed quitting vaping was not a priority, but that information on how to reduce nicotine use should be given. Concerns around privacy, GDPR, misinformation about vaping and tobacco company involvement would need to be addressed.

Conclusions: Stakeholders agree that vape shops should offer stop smoking interventions and hold similar opinions on how this should be delivered.

IMPLICATIONS

This study suggests that smokers, vapers and other key stakeholders in the UK are positive about the idea of a stop smoking vape-shop based intervention and that they hold similar opinions on how this should be delivered. Most participants felt that this should be primarily delivered by trained vape shop staff and run with support from SSS. Participants agreed that a stop smoking vape shop-based intervention should be flexible in terms of the type, duration and frequency of support provided, and that the intervention should comprise both technical guidance on using a vape and behavioural support to prevent a return to smoking.

Background

Combustible tobacco smoking was responsible for 74,600 deaths and 506,100 hospitalisations in the United Kingdom (UK) between 2019-2020.(1) Electronic cigarettes (ecigarettes) can provide a less hazardous alternative to smoked tobacco for smokers, and are currently used by an estimated 4.7 million adults in Great Britain.(2-4) Two-thirds of ecigarette users (or 'vapers') are ex-smokers, and the remaining third are dual users, smokers who also use an e-cigarette. Quitting smoking, reducing smoking or remaining abstinent are the most frequently cited reasons for e-cigarette use.(2) E-cigarettes are currently the most popular smoking cessation aid in England.(5,6)

Following several years of cuts to services, in 2023 the government announced additional funding for local smoking cessation services in England, as well as a new 'swap to stop' scheme whereby smokers accessing stop smoking services (SSS) will be offered a free vaping kit.(5-7) These measures will help to encourage the use of e-cigarettes for smoking cessation in combination with behavioural support. However, only a small proportion of smokers access SSS and many health care professionals are cautious about supporting patients who smoke to make a quit attempt using e-cigarettes.(8) Therefore there is a need to consider other ways of maximising the success of quit attempts using e-cigarettes.

In the UK, specialist 'vape shops' are a popular source of e-cigarettes; they are used by about a quarter of vapers. (9) The National Centre for Smoking Cessation and Training (NCSCT) has highlighted the role of vape shops in supporting quit attempts and has published guidance for cessation service providers and commissioners on how to work with vape shops. (10) Some stop smoking services (SSS) operate schemes where service users receive discounts from specific vape shops, or have purchased e-cigarette products for service users from vape shops, which is one approach to ensuring that smokers who are trying to quit have access to e-cigarettes, as well as behavioural support. (10) There is some evidence that vape shops provide access to a less harmful alternative to smoking and that the number of vape shops in the UK is estimated to be around 2,900, (12) they have a potentially important role in tobacco harm reduction.

We previously undertook a mixed-methods study of vape shops in the East Midlands region of England and their customers and found that vape shops are integral to vapers' positive experiences of vaping, but that in general they are not regarded as a place in which smokers can access smoking cessation advice. (13, 14) Similarly, a qualitative study investigating the role of the vape shop environment in supporting smoking abstinence in East Anglia and

London found that traditional smoking cessation is not perceived as the main role of vape shops by either vapers or vape shop staff.(15) In the East Midlands study, although many customers reported having quit smoking, many believed that there was a need for support, particularly in terms of managing or quitting their e-cigarette use.(14) Multiple studies have found that vape shop staff and customers believe that vape shops could be an appropriate setting for smoking cessation advice,(13, 14, 16) and such interventions have already been run in some parts of the UK.(17) The aim of this study was to understand attitudes towards vape-shop based smoking cessation interventions (VSBI) among current smokers who do not use e-cigarettes, vapers and other key stakeholders, as well as how such an intervention might best be delivered.

Methods

Design

Qualitative semi-structured interviews explored the views of key stakeholder groups on the provision of VSBI. The Standards for Reporting Qualitative Research (SRQR) guideline was adopted.(18) This study formed part of a larger mixed-methods study; the findings were used to inform a subsequent Delphi consensus study. The COVID-19 pandemic provided an additional opportunity to explore impacts on smoking, vaping, vape shops and SSS within the same interviews.(19) The study was approved by the University of Nottingham's School of Medicine Ethics committee (Reference 404-1910).

Recruitment and sampling

Recruitment comprised convenience, purposeful and snowball approaches. Smoking cessation training providers and individuals working in tobacco control at Public Health England shared an email about the study with stop smoking professionals (SSP) and Tobacco Control Leads (TCL). Smokers, vapers and dual users (SVD) were recruited via Facebook adverts. Those interested in participating completed a short online survey to check eligibility: over 18 years old, able to participate in an English language interview, and identifying as one of our stakeholder groups, and to provide contact details to arrange interviews. Vape shops (VS) were contacted directly by the researcher (EY), either by phone or social media. A database of vape shops in the UK was created by the researchers using online listings from ecigdirectory.co.uk, and the database was then stratified by area, index of multiple deprivation (IMD) and urban rural classification to maximise generalizability. For maximum variation, vape shops from different geographical areas, with differing IMD classifications were contacted about the study using a simple random sampling technique.

Data collection and procedure

Interviews were conducted via telephone, with separate semi-structured guides developed for each stakeholder group, based on the research aims and previous literature (Supplementary file). (13, 14) For all groups, interviews explored participants' attitudes about the need for smoking cessation interventions for e-cigarette users in general, and specifics around vape shop settings being used to deliver such initiatives. For those working in tobacco control and public health, we considered which existing models for smoking cessation in general could be applied, and whether these individuals had been involved in existing interventions with vape shops. Interviews also explored participants' views about the feasibility of delivering a VSBI, the key characteristics that an intervention should consider and barriers and facilitators to implementation. We also considered how SVD could be reached and engaged to access such a service. General views on e-cigarettes and experiences of using these products were also sought, along with previous quit attempts. Interviews were conducted by EY between May and September 2020 and were digitally audio-recorded.

Data Analysis

Interviews were transcribed verbatim by an external specialist transcription company. Transcripts were checked for accuracy and personal identifiers were removed. Transcripts were stored and managed using NVivo 12. Data were analysed using thematic analysis (20). Initially, each transcript was read several times and initial codes were noted by EY, which facilitated familiarisation. Data were analysed using thematic analysis (20). Initially, each transcript was read several times and initial codes were noted by EY, which facilitated familiarisation. Further readings and interpretation employed an open and inductive approach to coding. This involved axial coding where data and codes that were linked in terms of meaning were considered, thus moving from a semantic to latent level analysis. Further readings then led to the generation of substantive themes and corresponding subthemes. Data were double coded by TL and MB to ensure validity of interpretations (21). Themes and sub-themes and any disagreement were discussed between the research team, allowing clarification and agreement on a final set of themes, that was then applied across the entire dataset.

Results

Thirty-nine individuals completed interviews, comprising 20 SSP (East Midlands, South-East England, London, Scotland, Yorkshire & Humberside, Lincolnshire, North-East England and West Midlands), 7 TCL (London, Manchester, East Midlands, Liverpool and Yorkshire), 7 SVD (including dual users) and 5 VS (Table 1). Most participants were aged between 30-

50yrs (59%) and were female (59%). Of the 2309 VS identified, 36 were invited for interview; those who took part were in the East Midlands, West Midlands, London, Southampton and Yorkshire. Recruitment numbers were lower than intended in three of the stakeholder groups Recruitment numbers were lower than intended in three of the stakeholder groups due to scheduling difficulties because of the recurrent lockdowns, and because stakeholders had to prioritise COVID-19 projects. Vape shops were difficult to contact because they had to close which led to further challenges for recruitment that were further compounded by project time constraints. However, data analysis indicates thematic saturation.(22) Themes and subthemes are summarised in Table 2.

Table 1. Participant characteristics

		Smoking status by stakeholder group:			
		N(%)			
Stakeholder group	N (%)	Smoke	Vape	Dual	None
Smokers/vapers/dual	7 (17.9)	2 (28.6)	3 (42.8)	2 (28.6)	0 (0)
users					
Stop Smoking	20 (51.2)	0 (0)	2 (10)	0 (0)	18 (90)
Professionals					
Tobacco Control	7 (17.9)	0 (0)	0 (0)	0 (0)	7 (100)
Leads					
Vape shops	5 (12.8)	0 (0)	4 (80)	1 (20)	0 (0)
Total	39 (100)				
Gender					
Female	23 (59)				
Male	16 (41)				
Age					
20-30	5 (12.8)				
30-40	14 (35.9)				
40-50	9 (23.1)				
50-60	7 (17.9)				
60+	4 (10.3)				

Table 2: Themes

Theme	Subtheme		
Characteristics of the intervention	Duration and format		
	Delivery		
	Nature of support		
	Product provisions		
	Goal of the intervention – smoke		
	free or vape free?		
Barriers to delivering vape shop-based	Challenges for new vapers		
interventions			
	False information		
	Tobacco company involvement		
	Conflicts of interest		
Facilitators for intervention	Positive views on vaping		
	Cost effective		
	Popularity and accessibility		
Considerations for intervention	Data protection and privacy		
	Aesthetics		
	Regulation and management		
	Quitting vaping		

Quotes are labelled with stakeholder group and participant number: SSP – Stop Smoking Professionals, TCL -Tobacco Control Lead, SVD – Smokers/Vapers/Dual users, and, VS – Vape Shop.

Characteristics of the intervention

Duration and format

Across stakeholder groups, views were similar on the characteristics of a VSBI. Participants proposed support be provided for 12-weeks, in line with existing smoking cessation programs, but that ongoing support should be available (Supplementary Table, quote a).

Participants felt vape shops could facilitate an intervention; vape shop owners admitted offering informal support on smoking cessation for new vapers, via their social media platforms and instore. Social media was also used to offer free vape supplies in return for

smokers handing over their last pack of cigarettes (Supplementary Table, quote b). Others shared that staff being available online, to offer support to those trying to quit smoking via vaping (Supplementary Table, quote c) is helpful.

Regarding format, although some SSP favoured offering appointments, most stakeholders believed a VSBI should be flexible, including drop-in sessions and offering 'walk-in' appointments. Most stakeholders acknowledged people often decide to quit spontaneously, and having an instantly accessible service would support that. Some stakeholders felt a group format would be better over one-to-one; however, SVD preferred the latter. Group-based support was viewed as a beneficial supplement, highlighting the importance of client choice (Supplementary Table, quote d).

Intervention delivery - the relationship between VS and SSS

Most stakeholders felt a VSBI should be delivered by vape shop staff, but that training on delivering smoking cessation advice was required. SSP, TCL and some VS owners suggested the NCSCT Level 2 qualification in smoking cessation was ideal Many stakeholders advocated that a local SSS should oversee a VSBI and offer support and guidance to vape shops. However, some VS were hesitant about the degree to which SSS should be involved, as were SVD, because SSS may lack knowledge about e-cigarettes (e.g., about coils and different wattages). Overall, most stakeholders were in favour of SSS involvement, provided it was supportive and instructive. Moreover, stakeholders conveyed that the relationship should be collaborative as opposed to SSS having a 'management' role (Supplementary Table, quote e).

Nature of support

Participants felt that clients would need good instructions on how to use a vape, the strength of nicotine they required (based on individual needs) and be advised on the different types of devices available and styles of vaping – mouth to lung or direct lung. Upkeep of devices was also considered important, with vapers and VS discussing the importance of understanding coils and how to change/manage them. Importantly, all stakeholders mentioned that this information should be delivered over several contact sessions to encourage repeat attendance and not overwhelm new vapers (Supplementary Table, quote f).

Stakeholders also felt that understanding of behaviour change theory would be necessary for those delivering the intervention, as well as training in cessation counselling. Validating smoking status using Carbon Monoxide (CO) monitors was recommended, especially because this may motivate behaviour change (Supplementary Table, quote g).

Some VS, SVD and SSP felt that vape shops should have knowledge around issues such as nicotine interaction with certain medications (e.g., for mental health disorders such as lithium), and be able to offer other pharmacotherapies. However, many SSP were concerned that this could lead to inaccurate recording, distribution and use of nicotine replacement therapy (NRT) and felt such products should remain with SSS, pharmacies and general practitioners.

Product provision

Product provision was discussed, where views were divisive within rather than between stakeholder group. Those in favour of providing vaping products either agreed a basic starter kit of a vape, spare coil and some e-liquids (with nicotine) should be provided, or that clients have a choice between three basic starter kits. A starter kit was considered an alternative to NRT, which clients can routinely get free, or for the price of a prescription (Supplementary Table, quote h).

However, some stakeholders felt offering vapes for free would risk an intervention being abused and that those who wanted to quit smoking using vapes should purchase their own devices. Apart from a couple of stakeholders, most felt offering free vape products as incentives was unnecessary (such as e-liquids).

Goal of the intervention – smoke free or vape free?

Some stakeholders, particularly SSP, felt the end goal of the intervention should be to have clients both smoke and vape free; this was often discussed in comparison to traditional stop smoking aids such as NRT which clients were expected to eventually come off. There was some disagreement between all stakeholders as to whether this should be at the end of the 12-week intervention period, or within a time frame of 12-months. Many stakeholders across all groups felt that quitting vaping was not that important and that the focus should be to ensure clients were smoke free but did suggest that they should be given advice on how to quit vaping, accordingly.

Some stakeholders were concerned that vape shops would not encourage users to quit vaping, as that would directly impact their business; however, VS owners reported they were supportive of people who were ready to quit vaping and already had strategies they would suggest. Overall, most stakeholders felt becoming 'nicotine-free' was a more achievable and desirable outcome than 'vape-free' (Supplementary Table, quote i).

Barriers to delivering VSBI

Some felt that vapes could be quite complicated, and that clients (particularly older clients) would find the technology off-putting. The two smokers who had previously vaped found vapes 'harsh' and struggled managing their coils. This was corroborated by VS owners, who described new vapers having issues with vapes (which to use, coil issues, wattage to use, different types of vape juice) as being common. SSP discussed the difficulty of managing nicotine; some SSP recalled how some clients who had tried using vapes were keen to use very low levels of nicotine which did not satisfy their cravings. Some vapers also shared experiences that they carried a second vape in case one broke or if the battery ran out, because it would be difficult to get a replacement at short notice and that they were expensive, compared to the vast availability and cost of buying cigarettes (Supplementary Table, quote j).

Other barriers reported included false beliefs that vaping caused popcorn lung, and instances where healthcare professionals had told others that smoking was the healthier option. Participants felt these myths about vaping needed to be publicly addressed so that clients felt safer about quitting smoking with a vape (Supplementary Table, quote k).

All stakeholders were concerned about tobacco industry involvement in any intervention. SSP who had already trialled working with vape shops expressed dismay when shops were bought by the tobacco industry. These individuals also cited products they would not recommend because of their links to the tobacco industry. All stakeholders expressed mistrust of the tobacco industry; these individuals felt the industry was ultimately interested in returning clients to tobacco products, rather than vapes. SSP and TCLs also highlighted there would be logistical barriers in terms of their involvement in supporting intervention delivery, as they are unable to work with tobacco industries, as per their policies (Supplementary Table, quote I).

Although all stakeholders held positive beliefs about vape shops, SSP, TCLs and SV highlighted vape shops are a business whose priority is to make money. This created concerns that vape shops would forgo the needs of intervention clients to complete sales and work with paying customers or would be limited on the time they could spend with those quitting smoking to manage the commerce side (Supplementary Table, quote m).

Facilitators for the intervention

Stakeholders identified factors that would facilitate the success of the intervention. The intervention proposed was seen to be perceived as more 'attractive' and thus accessible than traditional SSS, due to flexibility and lack of medicalisation. Therefore, stakeholders felt the reach of such services would be greater, and would engage groups such as transient workers, pregnant women, shift workers and those on lower incomes (Supplementary Table, quote n).

Despite the negative myths associated with vaping, stakeholders felt that overall, there were many positive views on vaping, which would increase the acceptability of the intervention to the target population. They discussed Public Health England's (PHE's) report on vaping (Supplementary Table, quote o).

All groups felt a VSBI was cost-effective, although some TCLs and SSS were concerned about who would be responsible for funding and overseeing an intervention. It was felt that vape shops should be compensated for their efforts with the intervention and stakeholders suggested paying per quit, pay per support session or regular set payments. A few stakeholders felt that vape shops would benefit without monetary compensation, as it was believed that the intervention would bring new business. TCLs and SSP also felt that gaining a certificate in smoking cessation would be 'payment' for VS workers. Participants felt that being associated with such an intervention would be 'good for business' and would add to the legitimacy of what vape shops offered. SSP and TCLs also acknowledged that those who attempt to quit through vaping were more likely to quit and remain smoke free than those on traditional stop smoking medications and aids, resulting in smoking-attributable healthcare cost savings.

Considerations for the intervention

There were concerns that data protection and privacy would need to be assured. Stakeholders felt that vape shops may lack a suitable private area for people to discuss their needs, although many smokers and vapers did not see this as being necessary.

All stakeholders identified the need for suitable General Data Protection Regulation (GDPR) practices to be in place for a VSBI. SSP and TCLs went on to recommend vape shops should use the same data collection records as they did to track quits and ensure no-one 'slipped through the net'. Some VS owners who had previously worked on small scale interventions with SSS felt the amount of paperwork involved was somewhat overwhelming and felt that data collection and record keeping would need to be substantial enough to collect relevant data, but not overwhelming and repetitive (Supplementary Table, quote p).

Aesthetics was also raised by most stakeholders, but views were mixed. Some felt that a more clinical, 'pharmacy-looking' shop would be beneficial to the intervention, and highlighted that less clinical shops (described as having lots of gadgets and artwork) would be off-putting and intimidating to certain demographics, such as older adults. However, others felt a more clinical aesthetic would medicalise vaping and make it a less attractive intervention, arguing the traditional 'clinical' aesthetic of SSS was already available to those clients who would be attracted to it. These stakeholders (across all groups) felt a less clinical, more informal setting would be more beneficial for targeting those most in need of the intervention. However, it was acknowledged that both would appeal to some more than others (Supplementary Table, quote q).

The regulation and management of VSBI was also discussed. There was the belief that there should be a list created of vape shops that were willing to, or had already undergone, training in smoking cessation, and that those on this list would sign an agreement to not work with the tobacco industry. SSP, vape shops and TCLs also felt it was important that the intervention was standardised so that all shops offering the intervention were working uniformly. SSP and TCLs also felt there should be regular reviews with shops offering the intervention to assure quality.

There was also a worry, although this was minimally represented, that vape shops may falsify data or sign-up people who already vape to the intervention to inflate their number of quits. Despite this, most stakeholders felt that vape shops would be involved in supporting all quit attempts and were honest businesses with a vested interest in helping others to remain smoke free. Vape shops themselves did not consider this an issue, although some acknowledged there were 'bad businesses' in all industries. Vape shops felt they were already providing stop smoking services and giving up a lot of their time (and sometimes products) for free, to support those who asked for help in quitting smoking.

Discussion

Summary of findings

Our study found that all stakeholder groups were positive about the idea of a VSBI, and there was consistency across groups in terms of what a VSBI should look like. Most study participants felt that a VSBI should be delivered primarily by vape shop workers and that it

should be highly flexible in terms of access and the nature and duration of the support provided.

Discussion of findings

The recent announcement of a range of new tobacco control measures and funding for smoking cessation in England has reinforced the government's commitment to supporting the use of e-cigarettes for smoking cessation, while emphasising the benefits of e-cigarettes being used together with behavioural support.(5) However, most smokers who are trying to quit do not use stop smoking services, and an increasing proportion of vapers are purchasing e-cigarettes in non-specialist stores, meaning that they are less likely to get product advice as well as being unlikely to receive behavioural support.(9) Given the high street locations of many vape shops, providing VSBI has the potential to increase access to behavioural smoking cessation support, particularly among disadvantaged groups who may face barriers in attending local stop smoking services.

Delivering support for quitting using e-cigarettes in vape shops has some advantages over traditional models of stop smoking support. Choice in vaping products is an important determinant of smoking cessation, (23, 24) and the large variety of products available in vape shops avoids the limited choice smokers may face when provided with starter kits or vouchers.(16) Participants in our study also highlighted the need for guidance on how to vape in a way that suited them, including using the right nicotine strengths, as well as product advice and guidance on how to maintain their vapes; this type of technical advice may be lacking in more medicalised settings. Furthermore, vape shops are accessed by both dual users as well as exclusive vapers, and therefore VSBI may reach individuals who were not previously intending to quit smoking.

Our findings provide insights into how a VSBI should be delivered. Most participants felt such an intervention should be delivered by trained vape shop staff with the support of local SSS, with VS being compensated to deliver it. An evaluation of a pilot scheme has demonstrated the potential of partnership working between vape shops and SSS. Some VS in our study had already trained their staff to support people who wanted to quit smoking.(11) NCSCT offers training which is free to access,(25) and has guidance for SSS who wish to work with vape shops.(10) Participants generally agreed that similar approaches to those used in traditional SSS should be used, but that VSBI should be more flexible than current SSS, with informal support extending beyond 12 weeks. Offering 'walk-in' sessions was deemed especially important. This was based on the idea of capturing smokers in the

moment they decide to quit, rather than having them book an appointment for a point in the future when they may be less motivated. (26)

There were mixed opinions as to whether the goal of a VSBI should be for clients to be smoke free, or both smoke and vape free. Due to the relative novelty of e-cigarettes, literature on whether long term vaping is associated with continued abstinence from cigarettes is limited;(27) however, research has found that those who continue to vape long term are more likely to report a high self-efficacy for remaining abstinent from smoking.(28) While there is overlap between vaping and smoking, differences in barriers to quitting and reasons for quitting vaping (versus smoking) have been reported, and thus whether/how VSBI should consider vaping cessation, requires further research. (29)

In our study, participants felt that overall, most people were positive about e-cigarettes; however, misperceptions about vaping are increasing. In 2023, only a third of adults who smoke perceived vaping to be less harmful than smoking, down from 60% in 2014(2), and myths around vaping were identified as a barrier to the intervention in our study. It is possible that providing SSS-supported interventions in vape shops could help to alleviate concerns about vaping among smokers who do not currently vape. Given the recent rise in youth vaping in the UK, and that many young vapers report purchasing their e-cigarettes in shops, there would also need to be measures to ensure that the shops delivering smoking cessation services are rigorously implementing age of sale regulations.

Our study raised several issues around potential conflicts of interest, related to both the vape shops themselves and the tobacco industry. Some participants highlighted concerns that the goal of vape shops is to make sales and profit rather than the improvement of public health. However, research suggests that vape shop employees already serve as smoking cessation 'advisors', albeit often without training, as part of their roles, and see themselves as public health advocates.(30, 31) This was echoed by discussions with VS who talked about their own perceived responsibility to support smoking cessation and their own individual shopbased support they had put in place.

Our study identified concerns about tobacco company involvement in vape shops among SSS and TCL. Tobacco companies have become increasingly involved in the development and selling of vape-based products in recent years (32); however, there is a clear conflict of interest in relation to smoking cessation interventions. Research suggests the tobacco industry is likely to invest in the least effective products (33) and therefore these products lean towards creating dual users.(34) A recent survey from the UK found just over half of

vapers were using tobacco industry products.(35) There are also suggestions that effectiveness of different devices, such as closed versus open systems warrants attention. Hence further research is required to explore how industry products differ to those made by independents and appropriate regulations need to be developed to ensure products are not setting up users to fail.

Limitations

We planned to recruit approximately 20 participants per stakeholder group; however, this proved to be problematic due to the COVID-19 pandemic. Bricks-and-mortar vape shops were forced to close during lockdowns, making it more difficult to get hold of VS and their workers. As a result, there was an imbalance in the numbers of the stakeholder groups, with stop smoking professionals being overrepresented. However, thematic saturation was reached. The majority of participants were aged 30-50, and therefore the views of older age groups may not be well reflected in our findings.

All participants held favourable opinions on e-cigarettes, which may bias our findings; however, those involved in delivering/accessing a VSBI would be expected to hold favourable views and as such, this sample is representative of those who would use or deliver VSBI.

Conclusions

There is an ongoing need to identify ways to encourage uptake of e-cigarettes for smoking cessation and to maximise the likelihood of successfully quitting smoking. The use of e-cigarettes for smoking cessation is more likely to be effective when combined with behavioural support. This study demonstrates the potential for this type of support to be delivered by vape shop staff with support from SSS. Such interventions should be flexible in terms of the type, duration and frequency of support provided, and should comprise both technical guidance on using a vape and behavioural support to prevent a return to smoking. The findings of this study have been used to inform a Delphi study to identify the most important elements of vape shop-based smoking intervention to stakeholders who would be involved in delivering or accessing such an intervention. [under review alongside this study]; together these studies should be used to inform the development, testing and implementation of VSBI.

Funding

This work was funded by Cancer Research UK (C40274/A28918).

Declaration of interests

None to declare.

Data availability

Ethical approval did not cover making the data available beyond this project.

References

- 1. NHS Digital. Statistics on Public Health, England 2021. 2021. Available from https://digital.nhs.uk/data-and-information/publications/statistical/statistics-on-public-health/2021 [Accessed 02/11/23].
- 2. ASH. Use of e-cigarettes among adults in Great Britain. 2023. Available from https://ash.org.uk/uploads/Use-of-e-cigarettes-among-adults-in-Great-Britain-2023.pdf?v=1691058248 [Accessed 02/11/23].
- 3. RCP. Nicotine without smoke: Tobacco Harm Reduction. Royal College of Physicians. 2016. Available from https://www.rcplondon.ac.uk/projects/outputs/nicotine-without-smoke-tobacco-harm-reduction-0 [Accessed 02/11/23].
- 4. PHE. E-cigarettes and heated tobacco products: evidence review. Public Health England. 2018. Available from https://www.gov.uk/government/publications/e-cigarettes-and-heated-tobacco-products-evidence-review [Accessed 02/11/23].
- 5. Department of Health and Social Care. Stopping the Start: Our plan to create a smoke free generation. Available from https://assets.publishing.service.gov.uk/media/651d43df6a6955001278b2b0/cp-949-I-

stopping-the-start-our-new-plan-to-create-a-smokefree-generation.pdf [Accessed 02/11/23].

- 6. CRUK & ASH. Feeling the heat: the decline of stop smoking services in England. Cancer Research UK & Action on Smoking and Health. 2018. Available from https://www.cancerresearchuk.org/sites/default/files/la_survey_report_2017.pdf [Accessed 01/11/23].
- 7. Iacobucci, G. Stop smoking services: BMJ analysis shows how councils are stubbing them out. BMJ, 2018;362:k3649.
- 8. Albury C, Barnes R, Ferrey A, Coleman T, Gilbert H, Naughton F, et al. The old and familiar meets the new and unknown: patient and clinician perceptions on e-cigarettes for smoking reduction in UK general practice, a qualitative interview study. Addiction. 2022;117(5):1427-37.
- 9. Smoking Toolkit Study Trends in electronic cigarette use in England. October 2023. Available from https://smokinginengland.info/graphs/e-cigarettes-latest-trends [Accessed 02/11/23].
- 10. NCSCT. Working with vape shops: A guide for commissioners and stop smoking services. National Centre for Smoking Cessation and Training. Available from http://www.ncsct.co.uk/usr/pub/Working%20with%20vape%20shops%2002.10.18%20update.pdf [Accessed 02/11/23].
- 11. Notley C, Belderson P, Ward E, Wade J, Clarke H. A Pilot E-Cigarette Voucher Scheme in a Rural County of the United Kingdom. Nicotine & Tobacco Research. 2023;25(3):586–9.
- 12. The Grocer. A vape a day: vaping & e-cigarettes category report 2022. 2022. Available from https://www.thegrocer.co.uk/category-reports/a-vape-a-day-vaping-and-e-cigarettes-category-report-2022/664706.article. [Accessed 02/11/23]
- 13. Pattinson J, Lewis S, Bains M, Britton J, Langley T. Vape shops: who uses them and what do they do? BMC Public Health. 2018;18(541).

- 14. Langley T, Bell-Williams R, Pattinson J, Britton J, Bains M. Vape shop customers' experiences of e-cigarette use, vape shops and the vaping community. Int J Environ Res Public Health. 2019;16(13):2341.
- 15. Ward E, Cox S, Dawkins L, Jakes S, Holland R, Notley C. A Qualitative Exploration of the Role of Vape Shop Environments in Supporting Smoking Abstinence. International Journal of Environmental Research and Public Health. 2018;15(2).
- 16. Ward E, Dawkins L, Holland R, Pope I, Notley C. Medicalisation of vaping in the UK? E-cigarette users' perspectives on the merging of commercial and medical routes to vaping. Perspectives in Public Health. 2023.
- 17. PHE. Essex County Council delivers stop smoking support via vape shops. Public Health England. 2018. Available from https://www.gov.uk/government/case-studies/essex-county-council-delivers-stop-smoking-support-via-vape-shops [Accessed 01/11/23] [
- 18. O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. Standards for reporting qualitative research: a synthesis of recommendations. Academic Medicine. 2014;89(9):1245-51.
- 19. Johnston E, Bains M, Hunter A, Langley T. The Impact of the COVID-19 Pandemic on Smoking, Vaping, and Smoking Cessation Services in the United Kingdom: A Qualitative Study. Nicotine & Tobacco Research. 2023;25(2).
- 20. Clarke V, Braun V. Thematic analysis. Encyclopedia of critical psychology: Springer; 2014. p. 1947-52.
- 21. Patton MQ. Enhancing the quality and credibility of qualitative analysis. Health services research. 1999;34(5 Pt 2):1189.
- 22. Saunders B, Sim J, Kingstone T, Baker S, Waterfield J, Bartlam B, et al. Saturation in qualitative research: exploring its conceptualization and operationalization. Qual Quant. 2018;52(4):1893-907.
- 23. Notley C, Ward E, Dawkins L. The unique contribution of e-cigarettes for tobacco harm reduction in supporting smoking relapse prevention. Harm Reduction Journal. 2018:15(31).
- 24. Gentry S, Ward E, Dawkins L. Reported patterns of vaping to support long-term abstinence from smoking: a cross-sectional survey of a convenience sample of vapers. Harm Reduction Journal. 2020;17(70).
- 25. NCSCT. NCSCT training standard: Learning outcomes for training stop smoking practitioners. Available
- from https://www.ncsct.co.uk/usr/pub/NCSCT_training_standard.pdf [Accessed 02/11/23].
- 26. Gariti P, Levin S, Whittingham T, Barou D, Kampman KM, Lynch K, et al. Why do those who request smoking treatment fail to attend the first appointment? Journal of Substance Abuse Treatment. 2008;35(1):62-7.
- 27. Hartmann-Boyce J, Lindson N, Butler AR, McRobbie H, Bullen C, Begh R, et al. Electronic cigarettes for smoking cessation. Cochrane Database of Systematic Reviews. 2022(11).
- 28. McNeill A, Driezen P, Hitchman SC, Cummings KM, Fong GT, Borland R. Indicators of cigarette smoking dependence and relapse in former smokers who vape compared with those who do not: findings from the 2016 International Tobacco Control Four Country Smoking and Vaping Survey. Addiction. 2019;114:49-60.
- 29. Sanchez S, Kaufman P, Pelletier H, Baskerville B, Feng P, O'Connor S, et al. Is vaping cessation like smoking cessation? A qualitative study exploring the responses of youth and young adults who vape e-cigarettes. Addictive Behaviours. 2021;113.
- 30. Galimov A, Meza L, Unger JB, Baezconde-Garbanati L, Cruz TB, Sussman S. Vape shop employees: do they act as smoking cessation counselors? Nicotine and Tobacco Research. 2021;23(4):756-9.

- 31. Hart JL, Walker KL, Sears CG, Lee AS, Smith C, Siu A, et al. Vape shop employees: public health advocates? Tobacco prevention & cessation. 2016;2(Suppl).
- 32. Kamerow D. The battle between big tobacco and vape shops. Bmj. 2014;349.
- 33. Torjesen I. Tobacco industry is investing in e-cigarette types least likely to help smokers quit. BMJ. 2015;350(h2133).
- 34. Chapman S. Why is Big Tobacco investing in e-cigarettes? BMJ. Available from https://blogs.bmj.com/bmj/2014/03/20/simon-chapman-why-is-big-tobacco-investing-in-e-cigarettes/ [Accessed 02/11/23].
- 35. Chapman S, Freeman, B. Removing the emperor's clothes: Australia and tobacco plain packaging. 2014. Sydney University Press. Available from https://ses.library.usyd.edu.au/bitstream/2123/12257/7/9781743324295_Chapman_RemovingtheEmperorsClothes_FT.pdf [Accessed 27 February 2018].