Report of empirical study

'A good method of quitting smoking' or 'just an alternative to smoking'? Comparative evaluations of e-cigarette and traditional cigarette usage by dual users

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Abstract

The development of e-cigarettes was initially hailed as a resource in facilitating a reduction in or cessation of cigarette smoking. Many users of e-cigarettes are 'dual users', smoking traditional cigarettes and e-cigarettes. The present qualitative study examines the factors that a group of 20 dual users considered to have been influential in their decisions to use e-cigarettes and their comparative evaluations of e-cigarettes and traditional cigarettes. Health concerns were not found to be sole motivators. Participants pointed to financial and contextual considerations, particularly peer influence on uptake and continued usage of e-cigarettes. E-cigarettes were evaluated as comparable to cigarettes in some ways but not in other important respects such as sensation and satisfaction. Different social evaluations of cigarette and e-cigarette usage were discerned which influenced how participants identified as smokers, 'vapers' or neither. Findings are discussed in relation to social representations, identity and implications for continued e-cigarette usage among dual users.

Keywords

dual users, e-cigarettes, identity, smoking cessation, vaping

Introduction

It has long been established that smoking is the principal avoidable cause of premature death in the United Kingdom and that quitting smoking can reduce risks of smoking-related disease and lengthen life (Action on Smoking and Health (ASH), 2015b). Nicotine replacement therapies (NRTs) have been created with the aim of facilitating smoking cessation. In recent years, electronic cigarettes – also known as 'e-cigarettes' – have been increasingly marketed and used as an NRT. An e-cigarette is a battery-powered cylindrical device that vaporises a liquid that usually consists of nicotine, propylene glycol, glycerine and flavourings (Dockrell et al., 2013; Geiss et al., 2015). The liquid refills vary in volume, nicotine concentration, flavour and overall quality (Grana et al., 2014). E-cigarettes have proven attractive to many users because of the possibility of modifying them to suit users' preferences (Grana et al.,

2014; Pokhrel et al., 2015; Zhu et al., 2014). The e-cigarette mimics the smoke exhaled in tobacco cigarette usage by creating a vapour that is exhaled. Hence, this type of smoking is sometimes termed as 'vaping' by users. There are some indications that users may also prefer the product because it does not resemble a traditional cigarette which may in some contexts be negatively evaluated by others (Pepper et al., 2014).

E-cigarette usage has increased in the United Kingdom with the number of users estimated to be circa 2.8 million (ASH, 2015b). This has coincided with a continued

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reduction in the prevalence of traditional cigarette smoking (Brown et al., 2014b). Thus, e-cigarettes have been perceived as a new technology that has already decreased the consumption of traditional cigarettes and increased attempts at smoking cessation (Brown et al., 2014a) and that could reduce the 6 million yearly deaths worldwide attributed to conventional cigarette smoking (ASH, 2015b; Eastwood et al., 2015). In other words, they have been perceived as a gateway to improving quality of life and life expectancy (Tombor et al., 2015).

Yet the uptake of e-cigarette usage may be motivated by considerations other than smoking cessation. In their focus group study with people who (with one exception) were using e-cigarettes exclusively, Barbeau et al. (2013) indicated that participants' use of e-cigarettes was influenced by (1) bio-behavioural feedback (i.e. e-cigarettes were deemed similar to traditional cigarettes and satisfied participants' oral fixation through the hand-to-mouth movement involved and the effects on the throat), (2) social aspects of belonging to a community of e-cigarette users or 'vapers', (3) hobby elements with users collecting different models of e-cigarettes/vaporisers and experimenting with different flavours and (4) self-identification as 'vapers' and not smokers. A distinction between smoking cessation and nicotine cessation was noted: e-cigarettes helped participants to quit smoking but not to withdraw from nicotine.

Many e-cigarette users do not use the product exclusively but continue to smoke traditional cigarettes alongside e-cigarettes, a pattern referred to as 'dual usage'. An estimated 1.4 million adults in Great Britain are dual users and the rates have risen rapidly in recent years from 2.7 per cent of traditional cigarette smokers in 2010 to 17.6 per cent in 2014 (ASH, 2015b). Studies have found that dual users have a pattern of usage that depends on the setting (particularly in light of legislation in some countries, including the United Kingdom, which has banned smoking in indoor public spaces), circumstances (e.g. traditional cigarettes being used when e-cigarettes are not available) and the cravings of the user (Dawkins et al., 2013; Dockrell et al., 2013; Etter, 2010; Pokhrel et al., 2015). Research evidence indicates that dual users tend to initiate and maintain their use of e-cigarettes due to perceived health benefits (McQueen et al., 2011; Tan et al., 2016). They have been found to perceive e-cigarettes as a less harmful and less toxic source of nicotine than traditional cigarettes (Callahan-Lyon, 2014; Etter and Eissenberg, 2015). Furthermore, dual users have stated that after using e-cigarettes, they felt less breathless and coughed less often compared to when they used traditional cigarettes and they also reported being more physically active (McQueen et al., 2011). However, the picture concerning motivations for e-cigarette usage is mixed. Recent evidence has suggested that decision-making about e-cigarette usage among dual users may be centred on image rather than health considerations, with dual users seeking to avoid being associated with negative social evaluations and images of cigarette smoking (Pokhrel and Herzog, 2015; Tombor et al., 2015). Related to this, other studies have found that younger smokers are more likely to be dual users (Harrell et al., 2015).

Studies are equivocal on whether dual usage helped current smokers reduce their consumption of traditional cigarettes or quit smoking (e.g. Biener and Hargreaves, 2015; Brose et al., 2015; Etter and Bullen, 2014; Harrell et al., 2015). Although e-cigarettes have been perceived as less harmful and as healthier than tobacco cigarettes, the variability in the amount of nicotine contained in refills can potentially lead to addictive behaviours (Callahan-Lyon, 2014) – although the European Union Tobacco Products Directive that came into force in 2016 has specified a maximum permissible amount of nicotine in e-cigarettes (ASH, 2015a). Studies have also shown that e-cigarettes can reduce the desire to smoke, as well as reduce nicotine withdrawal symptoms (Brown et al., 2014a; Choi and Forster, 2013; Dawkins et al., 2012; Vardavas et al., 2015). However, some studies have claimed that dual usage is more likely to lead to a continuation rather than a cessation of traditional cigarette smoking (Tombor et al., 2015). Harrell et al. (2015) found that dual users cited negative evaluations of e-cigarettes, representing them as more irritating and less satisfying than traditional cigarettes. It has also been suggested that an initial usage of e-cigarettes driven by curiosity can act as a gateway to tobacco cigarette smoking (Goniewicz et al., 2016). Indeed, there is a small body of evidence that suggests that using e-cigarettes brings people one step closer to smoking tobacco cigarettes and leads to smoking behaviours (Choi et al., 2012).

Given that e-cigarettes have entered the smoking 'landscape' relatively recently, the body of research evidence on users' motivations, decision-making, goals, experiences and evaluations is still taking shape. This means that there remains a need for research that examines questions that have been addressed by others in order to confirm, query and extend existing findings and to consider relevant dimensions that have been under-emphasised. One such dimension concerns the role of identity in the uptake and continued usage of e-cigarettes. There is a body of research on 'smoker identity' (i.e. how people conceptualise and evaluate themselves in relation to their smoking behaviour), mostly centred on traditional cigarette usage. This research has considered the implications of smoker identity for smoking behaviour. In their examination of relevant qualitative studies, Tombor et al. (2015) concluded that smoker identity is not a binary construct, with many different forms of smoker identity shaped by individual, social and behavioural factors. There are indications that a strong, positively-evaluated smoker identity can inhibit smoking cessation (see also Nelson et al., 2015).

The relationship between smoker identity and e-cigarette usage among dual users is potentially complex. They may

or may not see themselves as 'smokers', depending on how they conceptualise and evaluate e-cigarette usage and how they locate themselves in relation to traditional cigarette smokers and e-cigarette users. Moreover, as Barbeau et al. (2013) found, the emergent identity category of 'vapers' offers an alternative identity possibility. To understand this complexity, a model of identity is required that can accommodate social and individual aspects of identity change and development and the social evaluations attached to identity categories. This may mean drawing upon theoretical resources such as those offered by the social identity approach which focuses on the identity implications of affiliation to or membership of social groups (Tajfel and Turner, 1986; Turner et al., 1987); identity process theory which specifies how identity changes (or is maintained) through the operation of identity processes that are oriented towards the achievement of self-esteem, continuity, positive distinctiveness and self-efficacy (Breakwell, 1986, 1996; Jaspal and Breakwell, 2014); and social representations theory which focuses on understandings that are held (or are said to be held) by 'most people' in the groups in which a person moves or by 'most people' in a society – in other words, a cultural 'common sense' (Moscovici, 1981). These understandings or social representations can be seen as providing the evaluative dimension of identity. Social representations theory is particularly apposite as an explanatory resource in a study of e-cigarette usage as it examines how emergent, unfamiliar social phenomena (such as e-cigarettes and e-cigarette usage) are made sense of collectively through anchoring them in more familiar phenomena and ideas (most obviously traditional cigarettes and smoking) and through objectifying them in 'concrete' images (Farr and Moscovici, 1984).

In light of these considerations, this study examines the factors that a group of dual users of e-cigarettes and traditional tobacco cigarettes consider to have been influential in their decisions to use e-cigarettes and their experience-based comparative evaluations of e-cigarettes and traditional cigarettes. The study attends to the role played by smoking-related identity (if any) in this decision-making and evaluation.

Methods

Design

A qualitative research approach was employed to enable participants' evaluative sense-making to be studied in a contextualised way that could capture complexity. The research is located within what has been termed a 'Big Q' approach to qualitative work, that is, within a qualitative paradigm that does not seek to quantify data and that does not aspire to an 'objectivity' that is problematised (Kidder and Fine, 1987). This is a common approach to qualitative research within European psychology.

Recruitment and participants

Participants were recruited via an advertisement that was placed on social media, in a university and in local shops in an urban location in south east England. In line with previous research (Dockrell et al., 2013; Nelson et al., 2015; Pokhrel et al., 2015; Vardavas et al., 2015), people were eligible to take part if they were aged between 18 and 40 years (as people in this age range have been identified as more likely to use e-cigarettes), fluent in English, able to be interviewed face-to-face and if they were using both e-cigarettes and traditional tobacco cigarettes at the time of the interview. Those who were interested in taking part contacted the researchers who provided further information about the study and arranged an interview with individuals who wished to proceed. A total of 20 participants were interviewed. Details of their demographic and relevant background information are presented in Table 1.

Data generation

Data were generated through semi-structured interviews. This format was chosen to ensure that core questions were asked of all participants while providing scope for participants to explore relevant but unanticipated domains of experience and reflection that were important to them. The interview schedule was modified for purpose from interview schedules used by Pokhrel et al. (2015) and Tombor et al. (2015) in their research. The issues that the questions addressed included participants' experiences of traditional cigarette smoking; their uptake of e-cigarette usage, including how they first heard about e-cigarettes, their impressions of the product and their experiences of e-cigarette usage; participants' dual use of e-cigarettes and cigarettes, including the situations in which participants would favour one or the other, and their identification with one or the other. Questions were designed to avoid priming participants to respond in ways that would accord with constituent dimensions of any specific theoretical framework. So, for example, potential questions on identity and identification included 'How do you personally relate to the term "smoker"?'; 'Some smokers say that being a smoker is part of who they are. How far do you think that statement applies to you?'; and 'Do you think that your experiences of using e-cigarettes/vaping has changed how you see yourself as a smoker in any way?' These relatively general questions avoided theory-specific considerations such as identity motives, with the aim of allowing the analysis to reflect participants' concerns and sense-making.

When the study had obtained a favourable ethical opinion from a university ethics committee, interviews were conducted at locations that were convenient for participants. Four interviewers were involved, with each conducting five interviews. The research team met regularly during fieldwork to review progress and ensure a consistency of

Table 1. Participant characteristics.

Gender	
Female	11 (55%)
Male	9 (44%)
Age	
18–25 years	14 (70%)
26–40 years	6 (30%)
Ethnicity	
White	7 (35%)
Asian or British Asian	5 (25%)
Mixed race	4 (20%)
Other ethnic group	4 (20%)
Number of tobacco cigarettes smoked per day	
1–5	13 (65%)
6–10	2 (10%)
11–14	3 (15%)
15–20	2 (10%)
Number of years smoking tobacco cigarettes	
Less than 1 year	1 (5%)
1–5 years	13 (65%)
6–10 years	3 (15%)
11–14 years	1 (5%)
15–20 years	1 (5%)
More than 20 years	1 (5%)
Length of time using e-cigarettes	
3–5 months	8 (40%)
6–12 months	4 (20%)
1–2 years	7 (35%)
More than 2 years	1 (5%)

approach. Interviews lasted between 30 and 60 minutes. All interviews were audio-recorded and transcribed.

Analytic strategy

Transcripts were analysed using thematic analysis to generate a set of meaningful patterns or themes and subthemes associated with the research questions (Braun and Clarke, 2006). The analysis was undertaken by the interviewers in collaboration with the first and second authors (T.V. and A.C.). This meant that each interviewer-analyst was deeply familiar with the data that he or she was analysing, and the involvement of the two non-interviewer analysts ensured a consistency of approach and reduced the risk of idiosyncratic readings of the data being sustained.

The analysis followed Braun and Clarke's (2006) six stages of familiarisation with the data, generation of initial codes, searching for themes, reviewing themes and subthemes, defining and naming themes and subthemes, and writing up the analysis. This process yielded 10 clusters of meaning that dealt with a variety of issues. Theoretical concepts were introduced as analytic resources at this point and more explicitly in the write-up to inform and deepen the analysis but without over-writing participants' meaning-making. The clusters of meaning were ultimately organised

under two major themes. These themes and subthemes vary in how discrete they are. Some overlap with others due to the ways in which particular motifs surfaced across the data set in relation to several issues. The themes and subthemes that are reported in the next section, therefore, constitute one of the several ways in which the findings could have been organised. These themes and subthemes have been selected because of their capacity to do justice to the nature of the data set and to answer the research questions. In the data excerpts presented in the next section, participants' names have been replaced by pseudonyms to protect confidentiality.

The quality of the analysis was promoted through close alignment with recognised criteria for good qualitative research, such as grounding interpretations in examples from the data (which allows readers to confirm or query interpretations), conducting credibility checks and optimising coherence across the study (Elliott et al., 1999; Yardley, 2000).

Results

The presentation of the analysis is organised under the two major themes and constituent subthemes. These are presented in Table 2. The data-grounded 'story' that was produced through the analysis concerns the participants' decision-making and motivations concerning e-cigarette use and their largely experience-based comparative reflections on cigarette and e-cigarette usage. These reflections provide experience-based insights into the potential and limitations of e-cigarettes as a resource for smoking reduction/cessation.

Theme 1 Decision-making about e-cigarette use: personal and social motivations

Participants provided explicit accounts of their personal and social motivations for using e-cigarettes. These largely reflected standard motivations for engaging in efforts aimed at reducing or ceasing cigarette usage (concerns about adverse health implications and the financial cost of smoking) and also for the uptake of traditional cigarette smoking among young people ('peer influence and "cool"-ness'). Implied motivations can also be discerned from the second theme which relates to the comparisons that participants drew between traditional cigarettes and e-cigarettes.

Health concerns about cigarette smoking: e-cigarette usage as a route to smoking reduction/cessation. Participants acknowledged the health risks of cigarette consumption and reported having experienced negative health implications themselves (such as shortness of breath during and following exertion). They routinely invoked concerns about health risks as a rationale for reducing their cigarette consumption and/or moving towards ceasing cigarette consumption altogether

Table 2. Themes and subthemes.

Themes	Subthemes
Decision-making about e-cigarette use: personal and social motivations	Health concerns about cigarette smoking: e-cigarette usage as a route to smoking reduction/cessation
	Financial concerns about cigarette smoking
	Wider context of permitted usage for e-cigarettes
	Peer influence on uptake and continued usage of e-cigarettes
Comparative representations and evaluations of cigarette and e-cigarette usage	Different social evaluations of cigarette and e-cigarette usage
	'Smoker', 'vaper' or neither: identity implications of dual usage
	E-cigarettes offering greater customisation possibilities than cigarettes
	E-cigarettes as more complicated to use and less readily available than cigarettes
	Shared smoking actions and experience rendering e-cigarettes and cigarettes comparable
	E-cigarettes not offering comparable sensory experience, satisfaction or rewards
	E-cigarette and cigarette usage as equivalent addictions

through the use of e-cigarettes. For example (dots indicate pauses in speech):

> The reason I started to use e-cigarettes is because I want to give up – give up on real smoking … to change, to make myself better, you know … more … to avoid future like problems of like lung cancer and all of that … I don't want tar in my lungs. (Abida)

However, some participants also expressed uncertainty about possible negative health outcomes arising from e-cigarette usage. For example:

> Nothing's ever come out to say it's one hundred per cent safe. Nothing's come out to say it's ever good. (Liam)

This imported some ambivalence into their accounts of using e-cigarettes to avoid the negative health implications of cigarettes. For example, Jacob invoked 'news' reports, worked up a sense of self-evident toxicity and drew an analogy with cigarette smoking to substantiate his representation of e-cigarettes as risky:

> [Re e-cigarettes] At the start said it was much better for you which obviously hearing things now that it's not better for you … you hear, you know, in the news now and stuff that it's not good for you. Obviously you see the labels of the liquids that they're quite toxic … I think it took us a long time as a human race to figure out that smoking was bad for you and it's taken us a lot, erm, quicker to find out that e-cigarettes are, um, we found out a lot sooner that there's negative side-effects.

Given that all participants were current users of e-cigarettes, it was unsurprising that these concerns were not consistently foregrounded in the data.

Financial concerns about cigarette smoking. Although health concerns were cited frequently as considerations in deciding to use e-cigarettes, these were usually invoked alongside other considerations. Participants represented cigarettes as more financially costly than e-cigarettes in the longer term, despite the initial outlay required for a starter kit. This commonly formed part of their rationales for e-cigarette usage. For example (material in square brackets is for clarification):

> Financially yes, that's one of the reasons why I tried to move on to e-cigarettes. It's [smoking cigarettes] so expensive particularly if you smoke straights [pre-rolled cigarettes] that rinses you with money [requires a rapid financial outlay]. (Natalie)

Wider context of permitted usage for e-cigarettes. One reported consideration in decision-making concerned the possibility of using e-cigarettes in contexts where the use of cigarettes is forbidden by law, organisational policy or perceived social norms. For example:

> In most places anyway, you can use it inside, I'll constantly smoke [e-cigarettes] instead of just going out for a cigarette once every hour. (Natalie)

> [I use e-cigarettes] every other weekend when I've got my son to look after. (Howard)

Some participants reported using e-cigarettes to avoid leaving the smell of cigarettes in their own and others' clothing, homes and other contexts. In doing so, the range of contexts in which they could and would use e-cigarettes was extended far beyond the narrow range of settings in which they could smoke cigarettes. For example (empty square brackets indicate where material has been excised):

> I started using these ones now, the vape ones, because you know they don't smell. I can smoke when I drive. You know, it don't smell my car. Main reasons really. [ ] Just because you know it's not going to smell, it's not gonna smell my hands and stuff like that. (Liam)

Peer influence on uptake and continued usage of e-cigarettes.
Participants also attributed their uptake of e-cigarettes to the influence of peers and the perceived fashionable nature of e-cigarette smoking. For example:

> It was cool, it was a new trend coming out at the time and it was cool – you see everyone smoking the e-cigarette. I was on holidays and then most of my friends – they was already smoking e-cigarettes, they was vaping. Then I decided I would try it out and give it a go and then since then I'm a regular vaper. (Ben)

This reprises a standard feature of literature on the reasons why young people begin smoking cigarettes but, in this data set, e-cigarette usage was represented as much more socially accepted and valued by peers and by broader society than cigarette smoking. Exceptions to this were reported by some participants when, as dual users, they talked about what influenced their current decisions about when to use e-cigarettes or traditional cigarettes (a matter that related to the previous subtheme also). For example, Jacob said:

> It depends on what sort of company I'm in cos I've got several friends which use e-cigarettes so if I'm with them then I'll just smoke them all the time but if, you know, I'm with other friends or at work then I'll just smoke normal cigarettes. I think, um, at work I tend to smoke normal cigarettes because e-cigarettes – people sort of laugh at you [laughs] with them a bit, um, they're not, um, well sort of supported really.

Jacob reported that his e-cigarette usage and non-usage were determined by peer norms and evaluations. He represented his work colleagues as not taking e-cigarettes seriously. The inference here was that cigarettes and e-cigarettes were not evaluated as equivalent in terms of status by peers at work. This socially-agreed non-equivalence of status may have carried social identity implications if using cigarettes rather than e-cigarettes at work confirmed Jacob's membership of a 'work friends' group. In the same way, using e-cigarettes with other e-cigarette users may have confirmed his membership of that peer group. The identity implications of dual usage are elaborated more explicitly under the next theme.

Furthermore, participants reported that their use of both traditional cigarettes and e-cigarettes was sometimes questioned by peers who could not discern a rationale for dual usage. For example, Howard said:

> People have said in the past 'What's the point in doing both? You might as well do one or the other' – particularly people who don't smoke traditional cigarettes now. They can't understand why I've not just given up traditional cigarettes. [ ] Non-smokers think it's a good thing if you can stop smoking, other [traditional cigarette] smokers I suppose less so. I've got friends who smoke a lot and every time I say I'm thinking

about giving up, they're um, they're kind of, you know, 'Why'd you wanna give up? What's the point? Why'd you want to give up smoking? You should carry on', erm, and the people I know who've gone onto e-cigarettes permanently, their view is you should do what they've done, really.

Here, Howard represented himself as experiencing pressure to conform to the membership requirements of groups of exclusive users of traditional cigarettes and e-cigarettes, with members of the former group viewing e-cigarette use as enacting an expressed desire to move towards smoking cessation. His dual usage appeared to have located him in a socially 'in-between' or liminal position. This was also reported or indicated by other participants (but not the majority).

Theme 2 Comparative representations and evaluations of cigarette and e-cigarette usage

As expected, given their status as users of both traditional cigarettes and e-cigarettes, participants drew many comparisons between the two at various levels, representing and evaluating them in different and in overlapping ways. These comparisons expanded participants' rationales for using e-cigarettes and for not using them exclusively.

Different social evaluations of cigarette and e-cigarette usage.
Participants worked up evaluative distinctions between cigarette and e-cigarette usage that they attributed to society (exemplified by legislative and organisational restrictions on cigarette smoking in public places) and their local social context but in which many participants also claimed a personal investment. These can be seen as social representations. A negative representation of cigarette smoking was objectified in the form of 'the typical smoker' on which there was a high degree of consensus across participants. This category was associated with dirt, disease, fecklessness, a lack of self-control and a lack of consideration for others:

> Smelly, tar, dirty nails, yellow teeth, inconsiderate. (Holly)

> A smoker has – tends to have like a negative connotation to it. It's like someone who has lung cancer or doesn't make good life choices. [ ] Negative because at the end of the day everyone knows that smoking isn't good for your body, it's not good for your health. (Veena)

E-cigarette usage was represented in much more positive terms as 'cool' (as noted earlier) and analogous to the fashionable shisha (a way of smoking flavoured tobacco through a bowl and hose or tube):

> Vaping is the new cool thing, even for adults. [ ] When I stared vaping, I was more confident [than with cigarettes] to do it front of everybody. (Sonia)

Everyone's more interested in it. They want to know more about it. They're like 'Wow', you know, 'What does it feel the same?' [ ] I liked the whole idea of it. (Abida)

It [e-cigarette usage] was like doing a shisha – that was it, yeah it was like shisha. So it's not really – it's not as, I suppose, as dirty as a cigarette – fresher, so that was nice. (Josh)

'Smoker', 'vaper' or neither: identity implications of dual usage. The invocation of a negative representation of cigarette smoking and smokers could have placed participants in a problematic position as dual users of cigarettes and e-cigarettes. However, the extremity of their construction of 'the (cigarette) smoker' enabled most participants to disavow membership of this group or at least create some distance between themselves and the category. For example, reflecting on how she described a typical smoker, Holly said:

I don't feel like e-cigarettes completely qualify, I guess, because of the words I used to describe it [a typical smoker]. I don't think an e-cigarette conforms to that [ ] so I don't really associate it [the category of smoker] with this [e-cigarette].

Howard expressed a highly qualified relationship with the negatively-evaluated identity category of '(cigarette) smoker'. He then spoke of smoking in terms of behaviour rather than identity. This may have enabled him to avoid an unequivocal membership of that category, at least at this point in the interview:

You know, I don't really think-think of myself … I'm not saying I'm not a smoker obviously but I don't really kind of classify myself as a smoker … I don't know. Occasionally at work it occurs to me because there's ten of us and there's two of us that smoke out of the ten, so occasionally I think about it in that kind of way, thinking that well, there's a lot of people that don't smoke and I'm in the minority, but I don't think – [ ] I don't associate myself with it.

The behavioural orientation towards reducing or eliminating their cigarette usage that was evident in their accounts of motivations for using e-cigarettes located participants in a liminal position of positive, aspired transition. This also allowed them to distance themselves somewhat from the negatively-evaluated '(cigarette) smoker' category. For example:

If someone called me a smoker I would be offended. Even though I'm a smoker I wouldn't want to be called that … I'm one but, you know what I mean, I feel like I'm on the good end of it. (Abida)

Similarly, some participants claimed to be in control of their smoking behaviour and thereby positioned themselves outside a '(cigarette) smoker' category that connoted a lack of self-control. Jessica went further than this and emphasised the plurality of her identity, thereby deflecting any assumption that 'smoker' must necessarily be a salient identity category for her:

I'd say that like I'm in full control because it's a choice to smoke, not a need … There's so many other things that are part of me and who I am and if I wanted to I would be able to stop smoking altogether.

Some participants located themselves within an identity category that was specific to e-cigarette usage and that allowed them to avoid the smoker category and its negative connotations. For example:

I'd rather see myself as like a vape – a vaper, you know. [ ] I just see myself like more as a vaper. Like if someone said to me 'Do you smoke?', I would say 'No, I vape' [ ] Yeah, I don't see myself as a smoker any more. Now I vape so I see myself as a vaper, if anything. (Liam)

Don't consider myself a smoker … Well I don't smoke, well not as much. So I see myself as a vaper rather than a smoker. [ ] Yeah, there's definitely a positive image. (Jake)

The disavowal of or the partial, qualified alignment with the '(cigarette) smoker' category that was evident in the preceding data excerpts was seen in the accounts of most but not all participants. For example, despite offering an account of having greatly reduced her cigarette consumption, Lorna was definitive in how she saw herself and how she believed others saw her in relation to the smoker category:

I still class myself as a smoker, I think I always will do. [ ] Pretty much everyone knows me to have a fag hanging out my mouth. That's all they know me as. People think it's weird [to see me vaping] because they're just not used to seeing me without a fag.

This identification with the smoker category could be seen as conforming with others' perceived dominant image of her and affording a continuity of identity amid the process of transition involved in reducing her use of traditional cigarettes.

E-cigarettes as offering greater customisation possibilities than cigarettes. The preceding subthemes considered the identity work that participants engaged in as they positioned themselves in relation to relevant social categories that had different valences for most participants. This identity motif reappeared when participants talked about the possibilities for customising e-cigarettes to suit personal preferences. They spoke in positive terms of the options for choosing types of e-cigarette, flavours and levels of nicotine, with flavours being particularly linked to enjoyment. For example:

You can set a temperature on an e-cigarette so if you want it to like – if you want it to burn at a higher temperature or low temperature … You get different kinds of flavours so mine is a crunchy nut flavour. (Matt)

They got so much flavours … you can have, like, nicotine flavours and stuff. It feels better than smoking cigarettes in my opinion, um, and also the thing is some people smoke shisha as well. I think this is better than shisha, like you can taste the flavour more, you can enjoy it more. (Adam)

Although cigarette smokers can also choose brands with different strengths and tastes, there was considered to be less scope for choice. The possibility of varying the nicotine levels delivered by e-cigarettes was considered a mode of customisation that was not readily afforded by cigarettes and one that could facilitate a person weaning themselves off nicotine and e-cigarettes altogether. One participant spoke of having reduced her traditional cigarette usage from 40 per day to 3–5 per day. She attributed this to having been able to choose high nicotine levels for her e-cigarettes which she believed had made them more effective than other smoking replacement options that she had tried in the past:

Well, my ex had one [e-cigarette] and he lent me it … I rung him three hours later and made him bring me some fags … this one's stronger … it's so strong I can feel it … [it's] sort of like a fag but it just tastes nicer, you can still blow smoke out it has different strengths and I've got like the strongest nicotine one … it's definitely cut me down [in relation to cigarettes]. (Lorna)

This emphasis on the value of the customisation options offered by e-cigarettes can be seen as attributing to them possibilities for gaining an increased sense of personal distinctiveness and, in relation to moving towards smoking cessation, a sense of self-efficacy (a quality seen also in the earlier quotation from Jessica). As was noted in the introduction, these are outcomes that are frequently oriented towards in processes of identity change or maintenance. This points again to the uptake of e-cigarettes as carrying identity implications.

E-cigarettes as more complicated to use and less readily available than cigarettes. Comparisons were made in terms of the practicalities of cigarette and e-cigarette usage, with the latter frequently represented as more complicated and e-cigarette refills as less readily available than cigarettes. Many participants reported having initially been unsure how to use e-cigarettes and having found them difficult or problematic to use. Stacey illustrated some perceived complications and concluded that persistence and determination were required to develop competence:

When I first got it, it kept breaking so I ended up going back to cigarettes to like compensate so it wasn't a really smooth

transition from cigarettes to e-cigarettes. [ ] Yeah it's a bit annoying because you can't hold it properly like it's quite heavy so you like go to like smoke how you would a cigarette and it falls out of your hand so you have to sort of hold it like with a whole grip. So it's like quite foreign or like you hold it sort of like, that your thumb supports it. And where my one is, it has a button so I sort of hold it like that [demonstrates to the interviewer]. But yeah I mean it takes some getting used to and you have to be tough on yourself sort of thing. (Stacey)

Ongoing problems that were reported concerned batteries running out and liquids leaking. This was not a universal experience or outlook, though. Some participants evaluated e-cigarettes as more convenient to use than cigarettes, with convenience relating also to the possibility of using them in a greater range of settings than cigarettes. For example:

In terms of convenience I just feel – wow, you know, really convenient. I didn't have to look for matches or lighters or anything like that. [ ] Convenient using it at work indoors, staying away from the cold as well. [ ] It's less invasive and it's so much more easier. (Bina)

Some participants linked practical problems directly to their dual usage of traditional cigarettes and e-cigarettes, with motivations for using e-cigarettes being overridden at times by a need for convenience and for nicotine. For example:

If I find that I don't have this [e-cigarette] at hand – like cigarettes are still a lot more available than e-cigarettes I think so going into a shop and buying cigarettes is easier to get your hands on basically. So that fact if I didn't have this [e-cigarette] and I really wanted one then I know I could get a cigarette. (Holly)

The thing is about cigarettes – if you run out of cigarettes there's always going to be somewhere open to buy cigarettes whereas if your electronic cigarette runs out of battery or it breaks you're, you know – what are you going to do? You're really screwed. (Natalie)

As has been observed in data extracts under other subthemes, other contextual considerations were invoked when participants described the occasions on which they used traditional cigarettes rather than e-cigarettes. The most common context that was identified for e-cigarette usage was when participants were socialising and drinking. For example:

If I'm out drinking, just now and again I'll fancy just a proper fag. [ ] If I was out and all my friends were smoking and we all went out for a fag, I'd go out and have a real one with them. (Lorna)

Going out socially and drinking. The two seem to go hand in hand – I mean a traditional cigarette and, um, a drink of alcohol. (Howard)

Shared smoking actions and experience rendering e-cigarettes and cigarettes comparable. Two subthemes that offer particular insights concerning the utility of e-cigarettes as a smoking reduction/cessation resource compared e-cigarettes and traditional cigarettes in terms of bodily actions, sensory experience, satisfaction and rewards. One subtheme deals with comparability or equivalence and the other with difference.

The fact that e-cigarette usage involves a similar hand-to-mouth movement and visible exhalation as cigarette smoking was deemed important by some participants in terms of creating a recognisable, familiar smoking experience. For this reason, it was evaluated as a more acceptable and potentially more effective mode of nicotine replacement than alternatives that lacked the enactment of core smoking actions. For example:

> I've tried other things like patches and gum and stuff and that [e-cigarette usage] did seem like a better way, that you're still doing the smoking action but without the bad stuff supposedly going into you. (Jacob)

> It has confirmed to me that it was just all habit with me because I don't actually need a fag – it's just the motion of going to my mouth and blowing smoke out. (Lorna)

The habitual nature of their smoking was frequently stressed by participants. This was sometimes invoked as a rationale for using e-cigarettes because they were seen as allowing important behavioural aspects of the habit to be sustained.

E-cigarettes not offering comparable sensory experience, satisfaction or rewards. Although some participants reported an equivalence in terms of smoking actions, more participants evaluated e-cigarettes as offering a less satisfying sensory experience than cigarettes in terms of the feelings generated in the mouth and throat and the nature of the vapour. E-cigarettes were experienced by these participants as not providing the same satisfaction or rewards as cigarettes in relation to the pleasure and stress relief aims of smoking. For example:

> It [e-cigarette usage] doesn't satisfy you as much as a normal cigarette. It's a different texture, almost, of smoke … I thought it would be more like a cigarette as in the way it felt in the mouth and the – the way the smoke sort of, well the vapour, smelt … It just doesn't give you the same satisfaction outcomes as a normal cigarette. (Jacob)

> After I used it for the first time, I realised that it doesn't have the same effect do you know what I mean [ ] as normal cigarettes. It just wasn't the same. [ ] I mean in terms of its purpose, I mean yeah, but in terms of rewards it just wasn't. (Abida)

> If I have to be put into a stressful situation which I have no choice about, e-cigs just don't do the thing. Like it's not – you

don't – it just doesn't feel the same as a normal cigarette and there's times when you need that – that harshness at the back of your throat. You need the – the lingering flavour in your mouth just to get through the next twenty minutes or so. (Jessica)

These and other participants spoke of what appeared for them to be fundamental considerations in cigarette and e-cigarette usage. The perceived capacity of traditional cigarettes to relieve stress much more effectively than e-cigarettes was cited by some participants as influencing their decision-making concerning when to use traditional cigarettes. For example, Lorna reported always having a pack of 10 cigarettes with her 'just in case I have a really bad day'. Participants' evaluation of e-cigarettes as failing to provide similar 'pay-offs' to traditional cigarettes raises questions about how effective e-cigarette usage will be for them in achieving a sustainable reduction in or cessation of cigarette smoking.

E-cigarette and cigarette usage as equivalent addictions. From this analysis of their reflections on experience, it is clear that the participants did not have a consensual settled view about the comparability of e-cigarettes and traditional cigarettes and the (likely) effectiveness of e-cigarettes in reducing or replacing cigarette smoking. The experience of two participants seems pertinent here as both of them said they came to realise that using e-cigarettes was not a simple, straightforward way of ceasing cigarette smoking. Earlier we saw how other participants separated 'vaper' and 'smoker' categories. However, any separation was explicitly challenged by one of these two participants, both of whom evaluated cigarette smoking and e-cigarette usage as equivalent addictions:

> Smoker and a vaper to me are sort of the same category, so it – they're no different between that kind of thing … I thought I could just vape and then if I could come off that [and] then you would eventually be a non-smoker but I think that because you've still got the nicotine in the vape there's – that's the addictive part, so you're either on one or the other, so it sort of falls into the same category for me … Whether you do it outdoors or it's electric or normal, it's still the same at the end of the day … I just don't think they're a good method of quitting smoking. I think it's just an alternative to smoking. (Jacob)

> I thought it [e-cigarette usage] was going to be the answer … I kind of felt disappointed because I naively think that these things are just gonna solve all my problems and I'm just going to throw all my cigarettes away and never smoke again … [It's] a very short term thing between cigarettes to kind of suppress your need for a cigarette until the next cigarette rather than being a forever solution. [ ] I don't think that replacing cigarettes is actually the answer. I think that if you start with anything, whether it's e-cigarettes … or putting patches on, you're not – it's just nicotine replacement rather than actually getting over it because it's an addiction … I do know that my best friend who gave up with – by starting an e-cigarette, she's

on it all the time … [ ] so you really possibly can end up more addicted to that than you could to traditional cigarettes. (Howard)

Discussion

The aim of this study was to examine the factors that a group of dual users of e-cigarettes and traditional tobacco cigarettes considered to have been influential in their decision-making about e-cigarette usage and their comparative evaluations of e-cigarettes and traditional cigarettes arising from their experiences. As noted in the introduction, given that e-cigarettes have appeared as a salient feature in the 'smoking' arena relatively recently, there is a need for research that confirms, queries and/or extends aspects of the emergent evidence base on e-cigarette usage. This study has provided further evidence for findings reported by other researchers that were outlined in the introduction.

The motivations for e-cigarette usage reported by dual users in other studies were reprised here (most notably in the subtheme 'Health concerns about cigarette smoking: e-cigarette usage as a route to smoking reduction/cessation'), as were influences on patterns of usage (seen, for example, in the subthemes 'Wider context of permitted usage for e-cigarettes' and 'E-cigarettes as more complicated to use and less readily available than cigarettes'). The subthemes 'Shared smoking actions and experience rendering e-cigarettes and cigarettes comparable' and 'E-cigarettes not offering comparable sensory experience, satisfaction or rewards' extend the focus on the importance of bio-behavioural feedback in shaping exclusive e-cigarette usage in Barbeau et al.'s (2013) study. However, while the exclusive users in that study felt that using an e-cigarette mimicked traditional cigarette smoking in important sensory respects, participants in this study were much more equivocal about this, echoing the negative evaluations of the satisfaction afforded by e-cigarettes reported by dual users in Harrell et al.'s (2015) work. Their dual usage may have offered an ongoing present-time comparative context for their evaluations rather than having to rely on past memories of traditional cigarettes as the participants in Barbeau et al.'s study may have done. The positive evaluations of those exclusive users may have been partly inspired by the need to avoid imperilling the maintenance of their behavioural change by associating it with loss.

Much of the analysis can be seen as relating to participants' invocations and mobilisation of social representations of the nature, usage and implications of e-cigarettes and traditional cigarettes. Two recurrent features in participants' accounts can be readily interpreted in terms of social representational processes. The anchoring of representations of e-cigarettes in traditional cigarettes was not surprising, given the evaluative focus of the study and that participants were dual users. The anchoring in 'shisha' by some participants was more noteworthy, given the positive image that was attributed to shisha and which e-cigarettes shared though association. In light of questions about the health implications of shisha usage (see Akl et al., 2010), there may be reservations about promoting this association.

The invocation of the negatively-evaluated object or category of 'the (cigarette) smoker', which objectified the social representation of 'smoking', saw some participants placed in a dilemmatic position as they discussed their relationship with that category as dual users. Participants were faced with a potential threat to their identity if they aligned with that negatively-evaluated category. Most qualified their relationship with the 'smoker' category or positioned themselves in an identity category that denoted e-cigarette usage rather than traditional cigarette usage (i.e. as a 'vaper'). It may be difficult for dual users to sustain this identity credibly as their consumption of traditional cigarettes may undermine it in the eyes of peers. In various places in the analysis, it became evident that dual users were located in a liminal identity position – a smoker in some contexts and a vaper in others – and there was some evidence that this could be deemed problematic by peers whose social identity involved membership of exclusive smoker or vaper groups. The concept of liminality, popularised by Turner (1969) in his analysis of symbolic ritual, has become an increasingly-used analytic resource in the social sciences. With its notions of in-between-ness, transition and an opening up of alternative possibilities, as well as its potential as a situation of identity threat or a response to identity threat, it may be worth using the concept of liminality in a more explicit and detailed way to explore the identity implications and sustainability of dual usage.

There was no representational consensus among dual users on some issues that could conceivably influence participants' continuation or discontinuation of e-cigarette usage, most notably the (non-)equivalence of the experiences offered by traditional cigarettes and e-cigarettes. This may reflect the status of e-cigarettes as a relatively new phenomenon about which a hegemonic social representation and evaluation has yet to develop. Alternatively, this study may have identified how an earlier relatively undifferentiated positive representation (which the last two data excerpts in the previous section alluded to) has become fragmented in a context of growing representational plurality. This evaluative ambivalence is perhaps linked with the increased sensationalised coverage in the media surrounding the dangers of e-cigarettes and the possibility of an indoor e-smoking ban, prompting dual users to be sceptical about the health benefits of using e-cigarettes. Bans on smoking in communal public areas have been in place in the United Kingdom since 2007. These have deterred cigarette smoking and have been instrumental in creating health-conscious ideologies. It remains to be seen whether e-cigarettes, which have been perceived as an NRT to date, will also come to be viewed as detrimental to health with

new legislation (ASH, 2015a). The popularity of e-cigarette usage has been attributed to its flexibility, convenience and accessibility as temporary alternative to cigarette smoking in particular social settings (Zhu et al., 2014) and the capacity it offers for working around current indoor smoking bans. The legislative changes arising from the European Union Tobacco Products Directive that came into force in 2016 regulate e-cigarette production and sales by reducing the maximum amount of nicotine in the e-cigarettes, imposing limits on the size of refillable tanks, banning promotional packaging and imposing a health warning on packaging mean that it is timely to examine whether any of these considerations might affect consumption (ASH, 2015a).

Overall, the picture presented by this study indicates that e-cigarette usage remains an emerging, diverse context of health behaviour. The question posed in the title of this article – whether e-cigarette usage is 'a good method of quitting smoking' or 'just an alternative to smoking' – is borrowed from the data excerpt from Jacob that appeared towards the end of the 'Results' section. On the basis of the experiential reflections and evaluations offered by the group of dual users studied in this article, the best answer that can be given to that question is that it may be either, depending upon factors such as how people evaluate e-cigarettes relative to traditional cigarettes and how important those dimensions of comparison are for them.

Video abstract

Please click on the below link to view the video abstract for this article: https://youtu.be/0D2zAJNiP5M

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