E-cigarettes for smoking cessation within healthcare settings: patients’ perceptions and research feasibility

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Conflict of interest

• None

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Background - tobacco and oral health

• Oral cancer

• Periodontitis/ Peri-implantitis

‘Severe periodontitis: Sixth most prevalent health condition in the world’

(Kassebaum et al, 2014)
Methods - ongoing study

• Title: A mixed methods feasibility study of electronic cigarette use by patients with periodontitis.

• 80 participants: tobacco smokers + severe chronic periodontitis.

• Randomised to usual care or usual care + e-cig

• ISRCTN: 17731903
Methods

AIM:
• To explore the perceptions of individuals attending a (dental) healthcare setting towards e-cigarettes, and the acceptability and feasibility of providing e-cigarettes within this setting.

DESIGN:
• Theory-based, one-to-one, semi-structured interviews (Theoretical Domain Framework, TDF [Michie et al., 2005]).

• Purposive sample of 28 participants.

• 14 received e-cigarette starter kit: 2nd generation device, spare tank, spare battery, 2x10ml bottles of e-liquids, written info and tutorial.
## Results - demographics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean or N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender, male (n [%])</td>
<td>12 [43]</td>
</tr>
<tr>
<td><strong>Age (Mean [SD, range])</strong></td>
<td><strong>44 [11, 25-60]</strong></td>
</tr>
<tr>
<td>Ethnicity (n [%])</td>
<td></td>
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<tr>
<td>White (British, Irish, other White)</td>
<td>28 [100]</td>
</tr>
<tr>
<td>Age started smoking (Mean [SD, range])</td>
<td>16 [3, 12-29]</td>
</tr>
<tr>
<td><strong>No. cigarettes per day (Mean [SD, range])</strong></td>
<td><strong>19 [8, 10-40]</strong></td>
</tr>
<tr>
<td>FTND (Mean [SD, range])</td>
<td>5 [2, 1-9]</td>
</tr>
<tr>
<td><strong>eCO (ppm) (Mean [SD, range])</strong></td>
<td><strong>21 [11, 1-49]</strong></td>
</tr>
<tr>
<td>Employment status (n [%])</td>
<td></td>
</tr>
<tr>
<td>Working in a routine or manual occupation</td>
<td>6 [21]</td>
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<tr>
<td>Working in an intermediate occupation</td>
<td>9 [32]</td>
</tr>
<tr>
<td>Working in a managerial or professional occupation</td>
<td>9 [32]</td>
</tr>
<tr>
<td>Unemployed/ not working for a year or more</td>
<td>2 [4]</td>
</tr>
<tr>
<td>Sick/ Disabled/ Unable to return to work</td>
<td>1 [4]</td>
</tr>
<tr>
<td>Home carer (unpaid)</td>
<td>1 [4]</td>
</tr>
</tbody>
</table>
Results - theme overview

- Influence of other e-cigarette users
- Concerns about addiction to e-cigarettes/nicotine
- Health considerations
- Social acceptability of e-cigarettes
- Previous e-cigarette experience

General experiences and perception regarding e-cigarettes
Results- ‘Influence of other e-cigarette users’

• Positive influence

…a lot of people I know, they seem, quite positive about it [vaping], and I haven’t had any sort of negative, feedback or anything from it. (Male, 45 years, 15 cigs/day)

A lot of the girls at work, have been really successful on the e-cigarettes… about six or seven of the girls … have stopped smoking with the e-cigarettes. (Female, 52 years, 15 cigs/day)
Results- ‘Influence of other e-cigarette users’

- Others aware of positive views but sceptical themselves

…a lot of people say, “Well it’s a lot better than smoking”…the amount of people using them now it’s ridiculous… so a lot of people must have a positive views of them as well you know. (Male, 27 years, 15 cigs/day)
Results- ‘Previous e-cigarette experience’

• Previous experience was predominantly negative

‘leak all over the place in me [my] pocket’
‘tasted really funny… could actually taste like electricity in your mouth’
Results- ‘Concerns about addiction to e-cigarette/ nicotine’

• Worries about becoming over-reliant on e-cigarette

‘just replacing one addiction for another’

• Lack of control

... when I’m smoking [tobacco] cigarettes I know exactly what I’m getting. If I move to a vaper [e-cigarette], I don’t really know how much, how much of a hit I’m getting… [If I used tobacco cigarettes] I think it would be easier for me to do it [cut down], to measure what I’m having you know. (Male, 44 years, 30 cigs/day)
Results- ‘Health considerations’

• Some believed e-cigarettes to be less harmful than tobacco cigarettes

I feel better for it [switching to e-cigarettes]. I really do. I don’t feel like I smell… me [my] mouth’s a lot healthier, I’m not wheezing, I’m not coughing, on a morning, it’s, I just feel in myself, a lot healthier for packing in real cigarettes and going on to the e-cigarette. It’s a massive difference. (Female, 52 years, 15 cigs/day)
Results- ‘Health considerations’

• Others had negative views of the health harms from e-cigarettes

I did go on the e-cigarettes for a while…But then me Mam [mum], [fell] seriously ill, and I’ve actually been looking up this week about it and I think...from what they described, apart from the tumour she had Popcorn lung…Which is part of the e-cigarette…or so they think. (Female, 47 years, 15 cigs/day)
Results- ‘Social acceptability’

• Mixed views

…I don’t feel out of place when I’m using it, I don’t feel uncomfortable using it, walking through town or wherever. (Male, 27 years, 15 cigs/day)

I think if you see someone with a, e-cig, you just know that they used to be a smoker, it just doesn’t look attractive… I think they’re awful. (Female, 35 years, 10 cigs/day)
Results- theme overview

- Benefit of behavioural similarities
- Influence of e-cigarette flavours
- Additional themes in those offered e-cigarette kit
- Technical issues
Results- ‘Benefit of behavioural similarities’

• E-cigarettes more than nicotine provision

_It has helped, because, I don’t know whether you can appreciate this. It’s like having a pen in your hand. You need something to do with your hands._ (Male, 58 years, 15 cigs/day)

_And you can see the smoke blowing out, you get the throat hit, and it’s, it’s exactly, a replacement and it’s, aye, I’ve really, found it [quitting tobacco cigarettes] quite, easy, in a way._ (Female, 52 years, 15 cigs/day)
Results- ‘Influence of flavour’

- Less than half chose tobacco
- 18mg/ml was the modal nicotine concentration
Results- ‘Influence of flavour’

• Dichotomous views on flavour:

1. Strong preferences against tobacco flavours- too similar to smoking

2. Strong preferences towards of tobacco flavours- it should be similar to their smoking experience
Results- ‘Technical issues’

- Small number of incidents
- Sometimes assistance from family or friends
Strengths and Limitations

STRENGTHS:

• Theory-based interviews, representative sample

• First qualitative research (on e-cigs) in dental healthcare setting

LIMITATIONS:

• Interviews conducted in clinical setting by research dentist

• Interpretation bias of qualitative research
Conclusions

• Smokers positively perceived the provision of an e-cigarette for smoking cessation within the dental healthcare setting.

• There were a wide range of positive and negative perceived influences. Future approaches and interventions should consider these.
Acknowledgments

- Research participants!

- Research team!

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Questions

• Title: A mixed methods feasibility study of electronic cigarette use by patients with periodontitis.

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