

The Potential Benefits of Even Very Brief, First Time Use of an E-Cigarette by Current Smokers

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Tobacco Harm Reduction

- What is to be done with the 523 million smokers who are not deterred by tobacco control measures and do not respond to professional assistance and peer encouragement to quit?
- An intuitive, pragmatic approach would be to encourage and assist those who are not interested, willing or able to quit smoking to use nicotine products that are substantially less toxic than inhaled tobacco smoke.

The Potential of E-Cigarettes

- Millions of individuals are now choosing to quit smoking, and hundreds of thousands are succeeding, with the assistance of electronic cigarettes and vapourisers.
- However, the potential public health benefit of e-cigarettes is being limited because many tobacco smokers who trial e-cigarettes do not persist with them long-term.
- Instead, too many smokers are using an e-cigarette only experimentally (i.e. for 2-3 days) before resuming cigarette smoking.

‘Pushing the Switch’

- Converting e-cigarette experimenters into regular users is critical to the success of e-cigarettes in reducing tobacco-related harm.
- Minds are largely made up about whether to persist with e-cigarettes within a few days of first use.
- Current smokers’ perceptions and experiences of using e-cigarettes for the first time are important determinants of the likelihood that they will persist with e-cigarettes in place of or in addition to cigarettes.

Research Question

- What perceptions and experiences of using e-cigarettes in the first week of use are important in rationalizing smokers' decisions to continue using e-cigarettes or to desist and resume smoking?

And In Turn...

What more can be done (by whom?) to:

- Persuade smokers to give e-cigarettes a try as an aid to smoking cessation, AND
- Keep these individuals using e-cigarettes beyond an experimental period, AND
- Continue to use their e-cigarette to gradually reduce daily smoking.

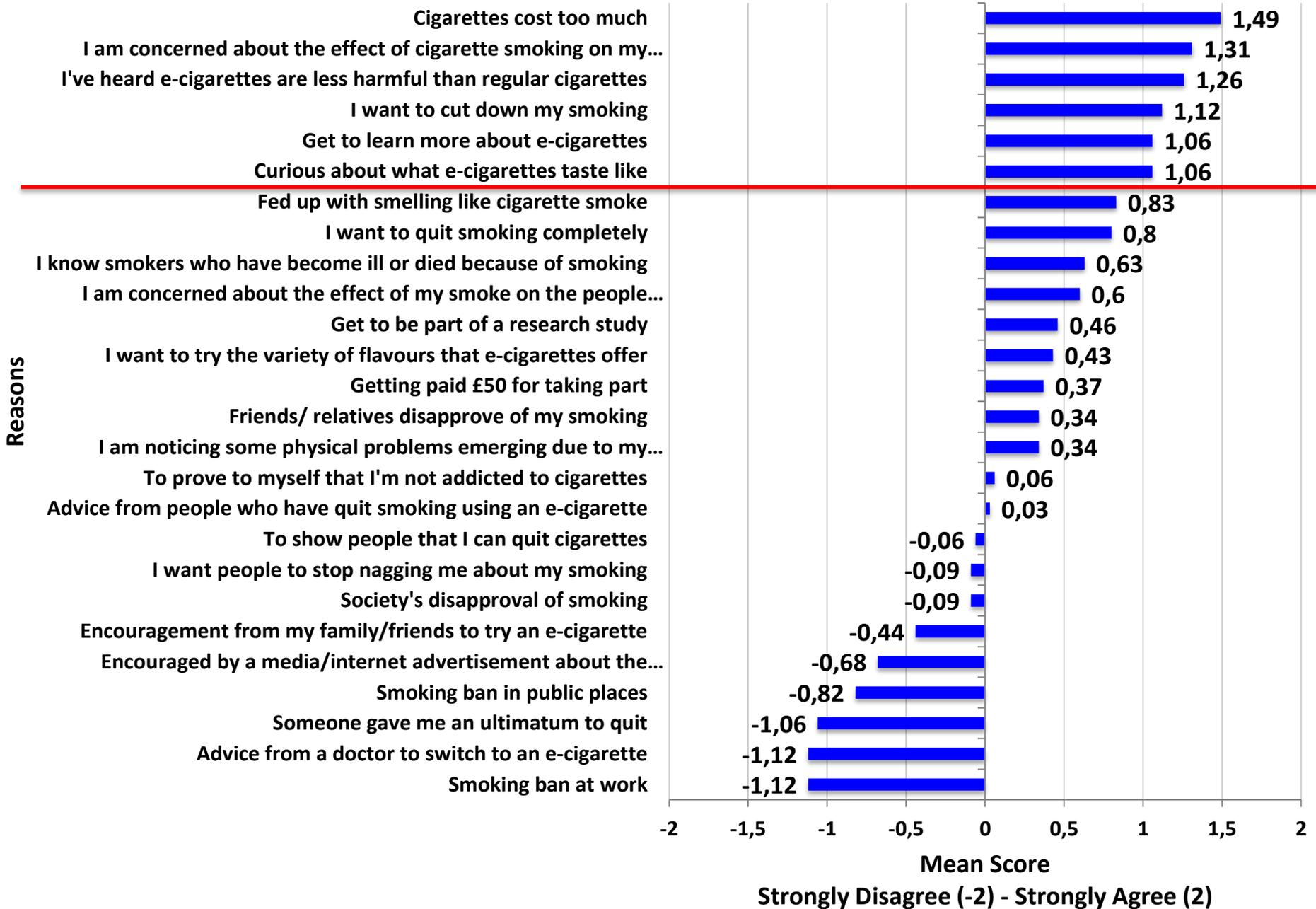
Study Design

- Recruited 37 current, daily cigarette smokers (20 male).
- Median age = 27 years
- Smoking at least 10 cigarettes per day for at least 1 year
- Never tried an e-cigarette, not even a puff, but curious about e-cigarettes.
- Schedule...
- Construct questionnaires to yield data that would support a hypothetical MRTTP application.

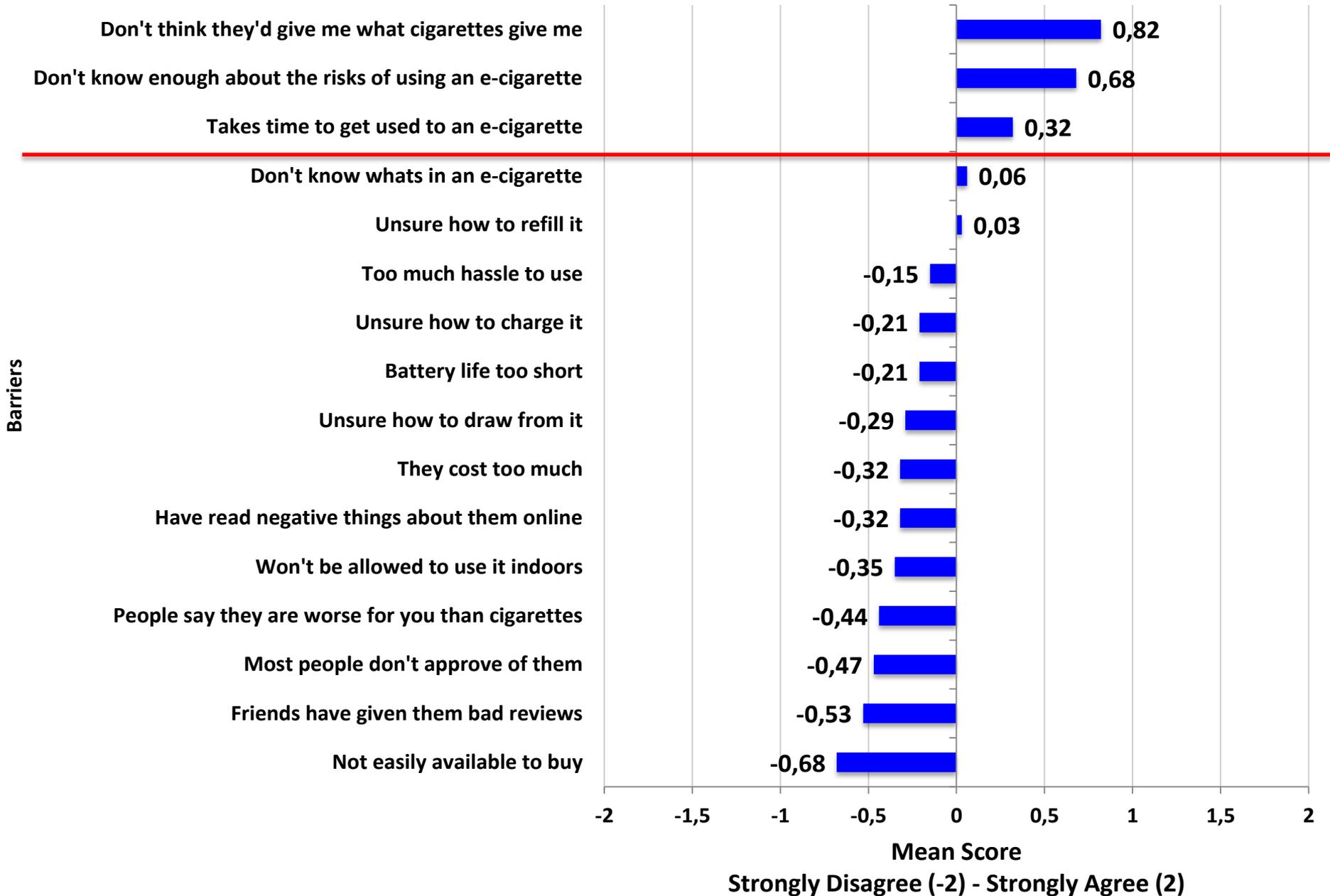
Satisfying TPD & MRTTP Data Needs

Data	Slides
Reasons for initiation	
Use and contexts of use	
Risk perception (pre-post use)	
Benefit perception (pre-post use)	
Subjective effects	
Adverse events	
Addictiveness/abuse liability	
Attractiveness (sensory, aesthetic)	
Likelihood of continued use	
Reasons for continue/discontinued use	

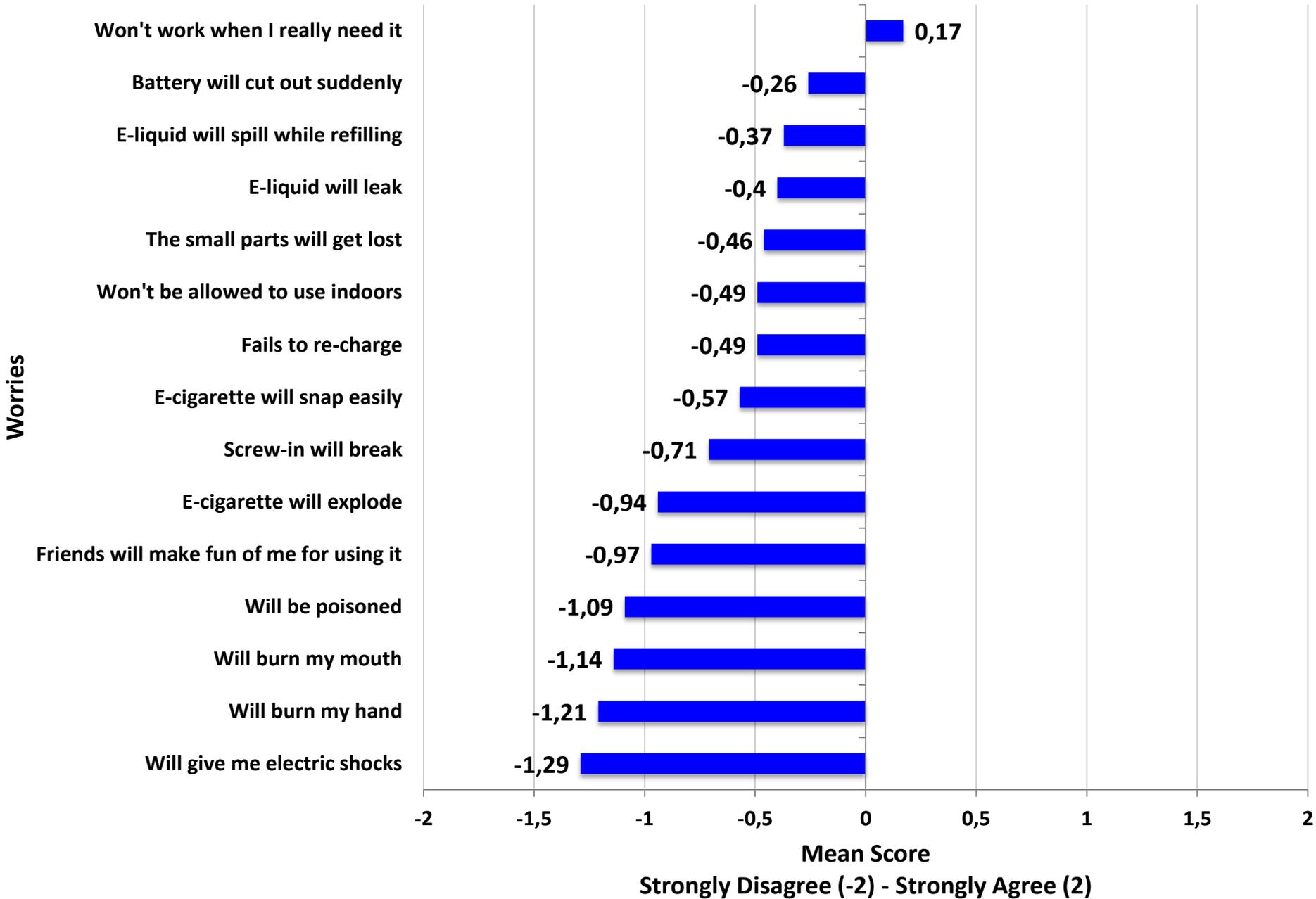
Reasons for Interest in Trying an E-Cigarette Now



Barriers to E-Cigarette Use



Worries About Using an E-Cigarette



(Mis)Perceptions of E-Cigarettes

Fear of Explosions:

I know it is better to use e-cigarettes rather than smoking cigarettes. However I have heard 1-2 cases of e-cigarettes explosion and I am not quite sure about their safety.

I've heard of some accidents (deadly often) occurred to explosion of an e-cigarette. Regular cigarettes may cause death and health issues too, but on the long run.

I have been told by a friend that she used one for a week and it made her feel 'funny'. I have also heard of ecigs exploding, though these were apparently cheap, low quality products.

(Mis)Perceptions of E-Cigarettes

Unknown health risks/ 'Russian Roulette':

I dont know too much about e-cigarettes, but I have to say I have felt quite wary of them, as it seems very chemical and unnatural. Why would electronic smoke be any healthier than smoke of a tobacco plant that has grown naturally (fair enough it has been sprayed with many chemicals!)

My understanding is that e-cigs still contain nicotine are therefore are not a completely safe alternative to cigarettes. However the tar and other toxins are removed when using an e-cig. I have heard from e-cig users that you are still able to get the pleasure of smoking but without the actual smoke. I am aware that e-cigs must carry a degree of risk but I am unable to identify theses due to lack of knowledge. The risks associated with smoking cigarettes are well publicised and I feel I know more about these dangers. I have also discussed this with my GP. I feel that e-cigs may possibly be a useful tool to aid with stopping smoking but I do not know enough of the side effects and risks to make an informed choice. I am willing to try this though.

As the nicotine must be from tobacco then getting it from, there must be a chemical process and mostly not healthier then to smoke natural tobacco

(Mis)Perceptions of E-Cigarettes

Unknown health risks/ 'Russian Roulette':

*I've heard that the vapours produced by the e-cigarette don't carry any tars or the likes, and are simply a water-based nicotine delivery system, which sounded good. I've heard from my friends, and my mother, who had a 1 day stint in e cigs, that the feeling of inhalation is not the same, and that it is hard to replace the feeling and ritual of buying and smoking a cigarette, and that the battery life can be a real killer, cutting out when you need it the most. It may be hard to buy compatible liquids in different countries as well. Risk-wise I have not heard anything negative about e cigs, but I am a bit **skeptical about the liquid, which remains a mystery to myself.***

I have friends who use e-cigarettes and have stopped smoking cigarettes as a result. They cost much less. Don't know much about risks of e-cigarettes but they must be a lesser risk than cigarettes...or are they???

*I've got a friend who switched to e-cig about one year and a half ago, and he enjoys it although he still smokes normal cigarettes sometimes. **I've read that the liquid product in them might be quite dangerous...***

As far as I know, using an e-cigarette is still damaging to your lungs, but compared to the damage of smoking a tobacco cigarette the damage is minimal.

(Mis)Perceptions of E-Cigarettes

Rumour and word of mouth as main info sources; lack of clarity from trusted bodies/ an 'official' declaration of safety/riskiness:

i know very little about them, i have seen colleagues use them at work but never asked about them. very curious to know the truth regarding them and what they are like to use, as i've heard polarised views in the media regarding them.

I do not know anything about health benefits or worry about e cigarettes that goes beyond rumour. I know there are a lot of different kinds and they have flavours, but that's about all.

They can be more addictive as they contain only nicotine whereas cigarettes have many other chemicals which mask the overwhelming nicotine.

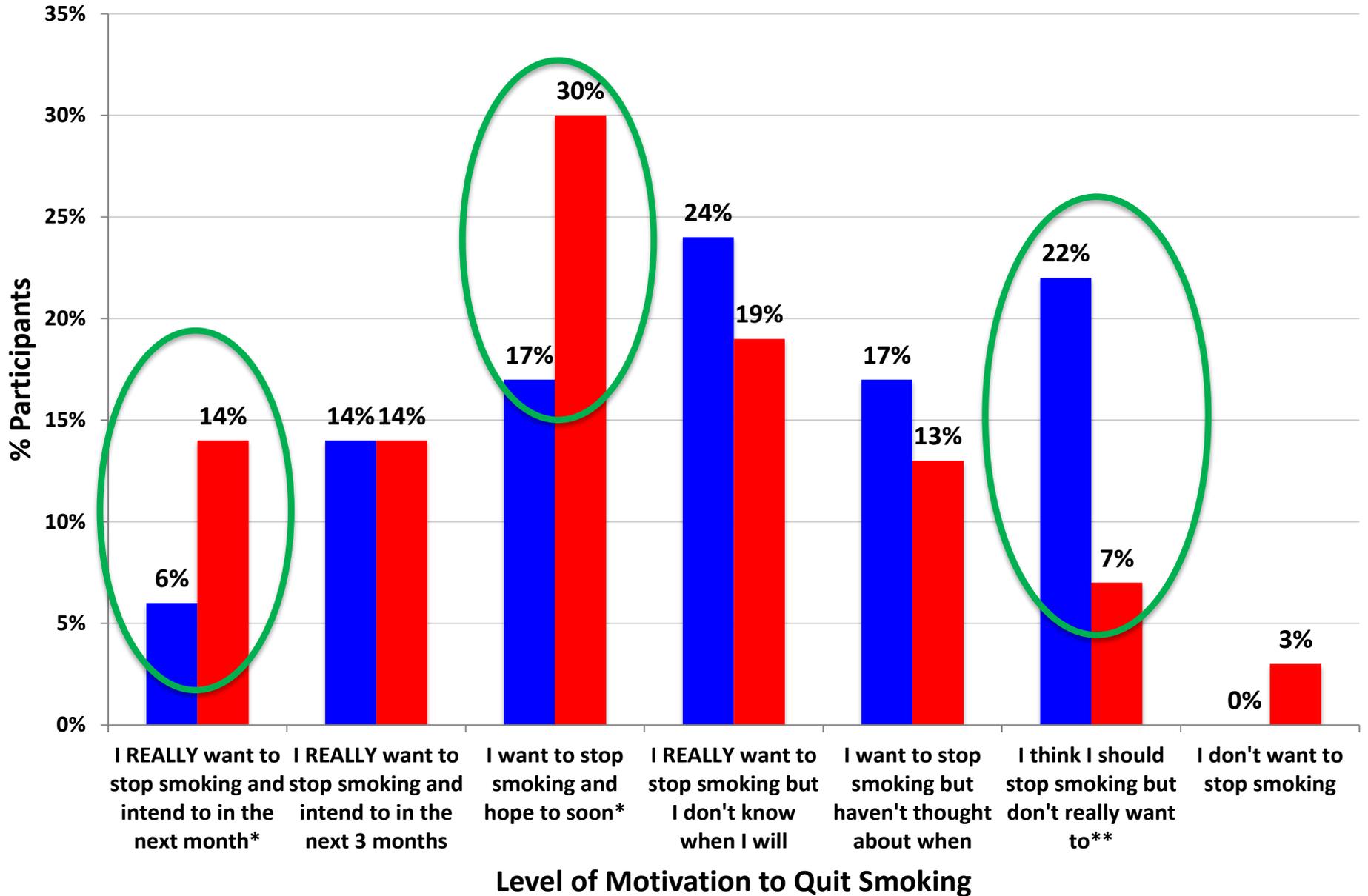
One Week Later...



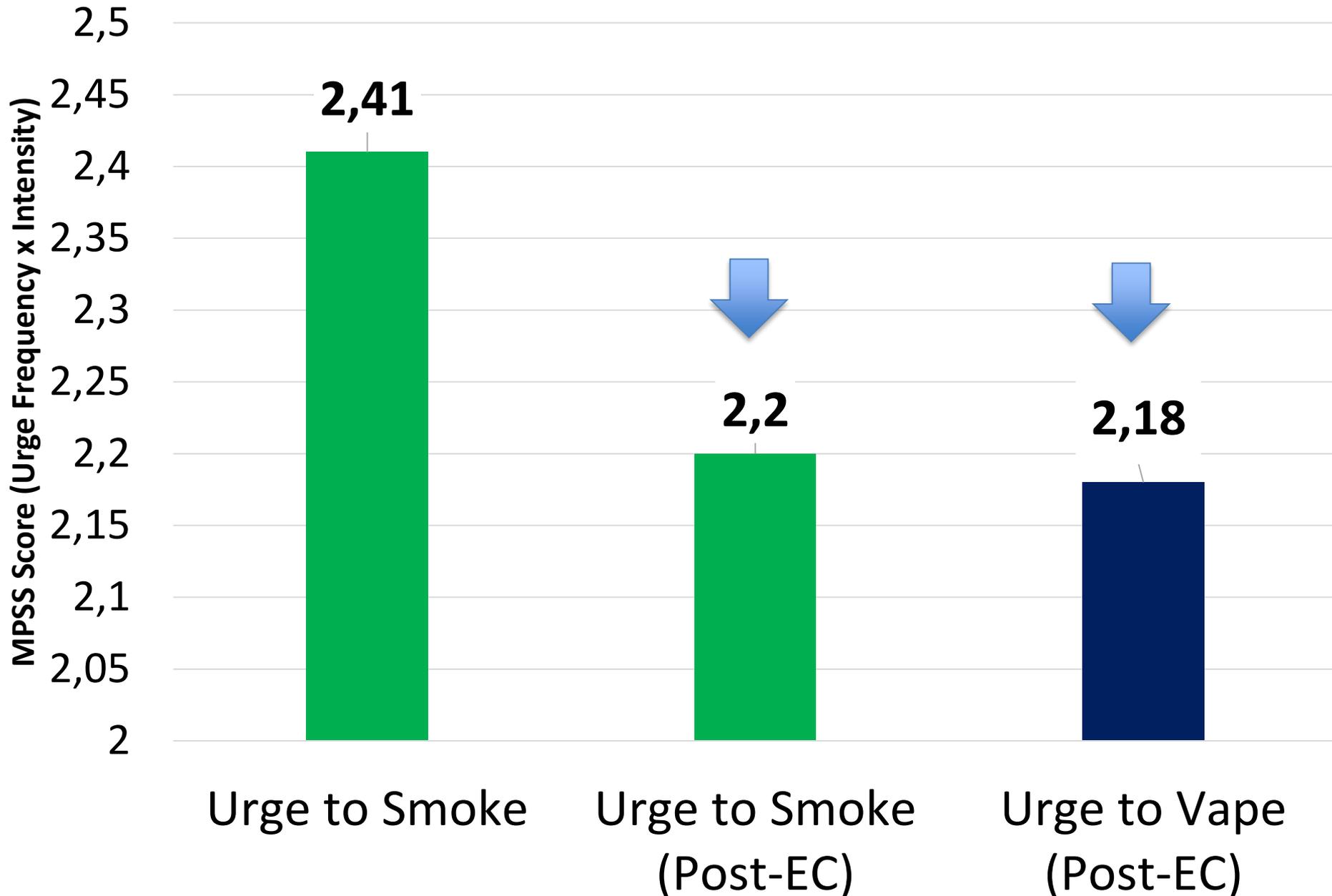
Change in Daily Smoking

- Cigarettes smoked per day significantly reduced from 15.67 to 9.25 (6.42 CPD; a 41% reduction).
- 34/36 (94%) participants reduced their smoking by at least one CPD.
- 75% of participants reduced their smoking by up to 10 CPD.

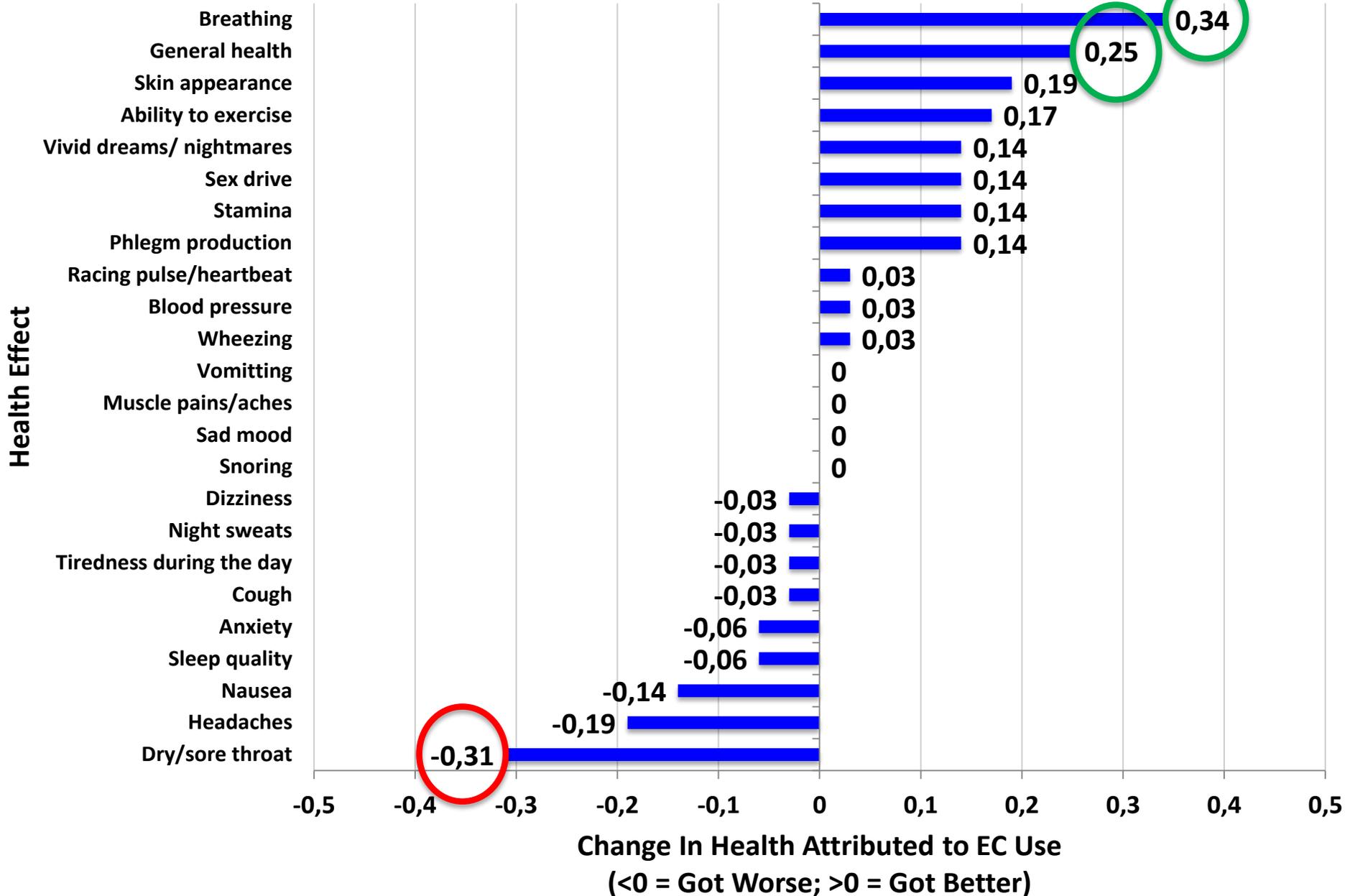
Change in Motivation for Quitting Smoking



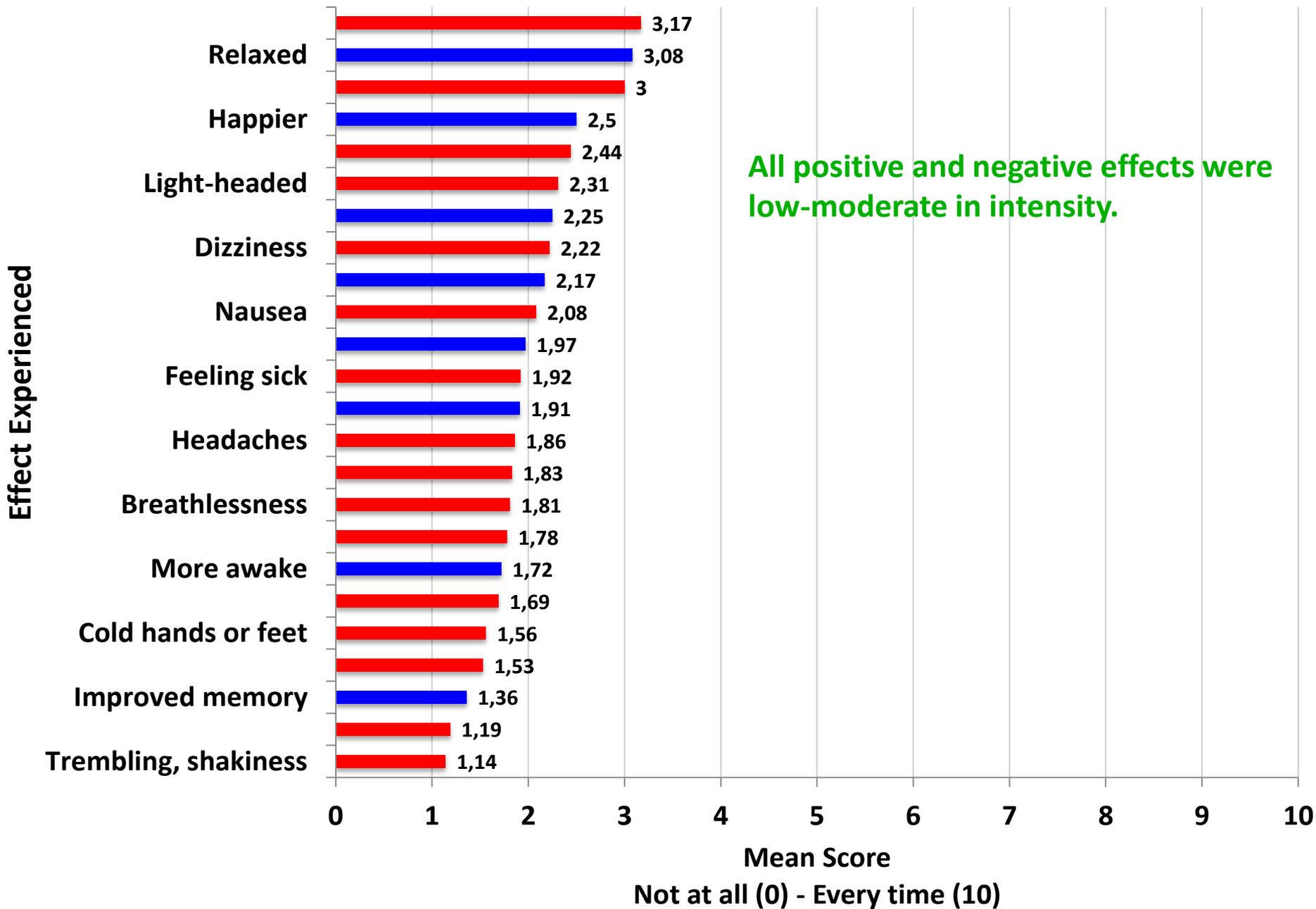
Change in Urge to Smoke & Vape



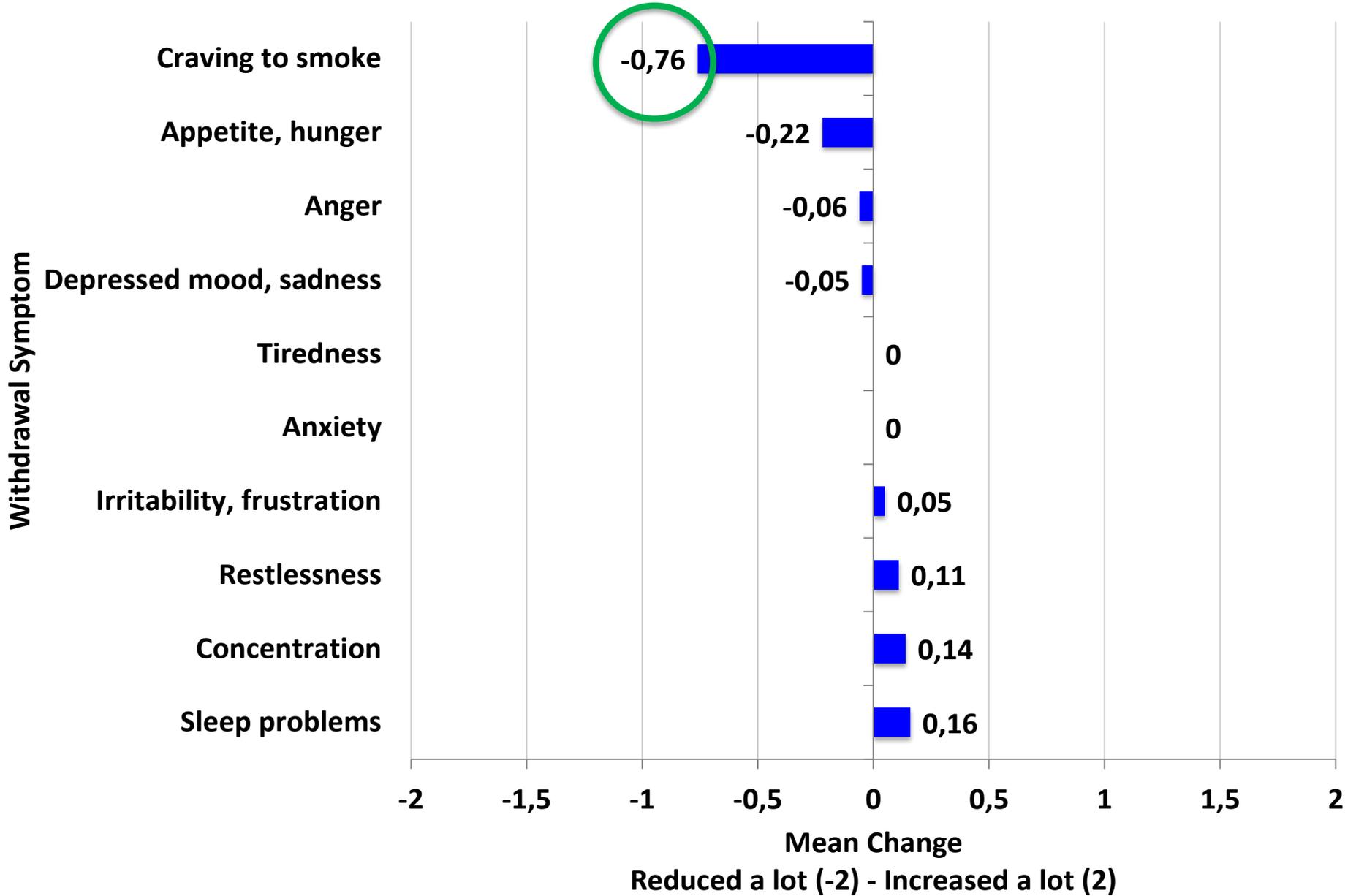
Perceived Changes in Health Attributed to 1-Week Use of an EC



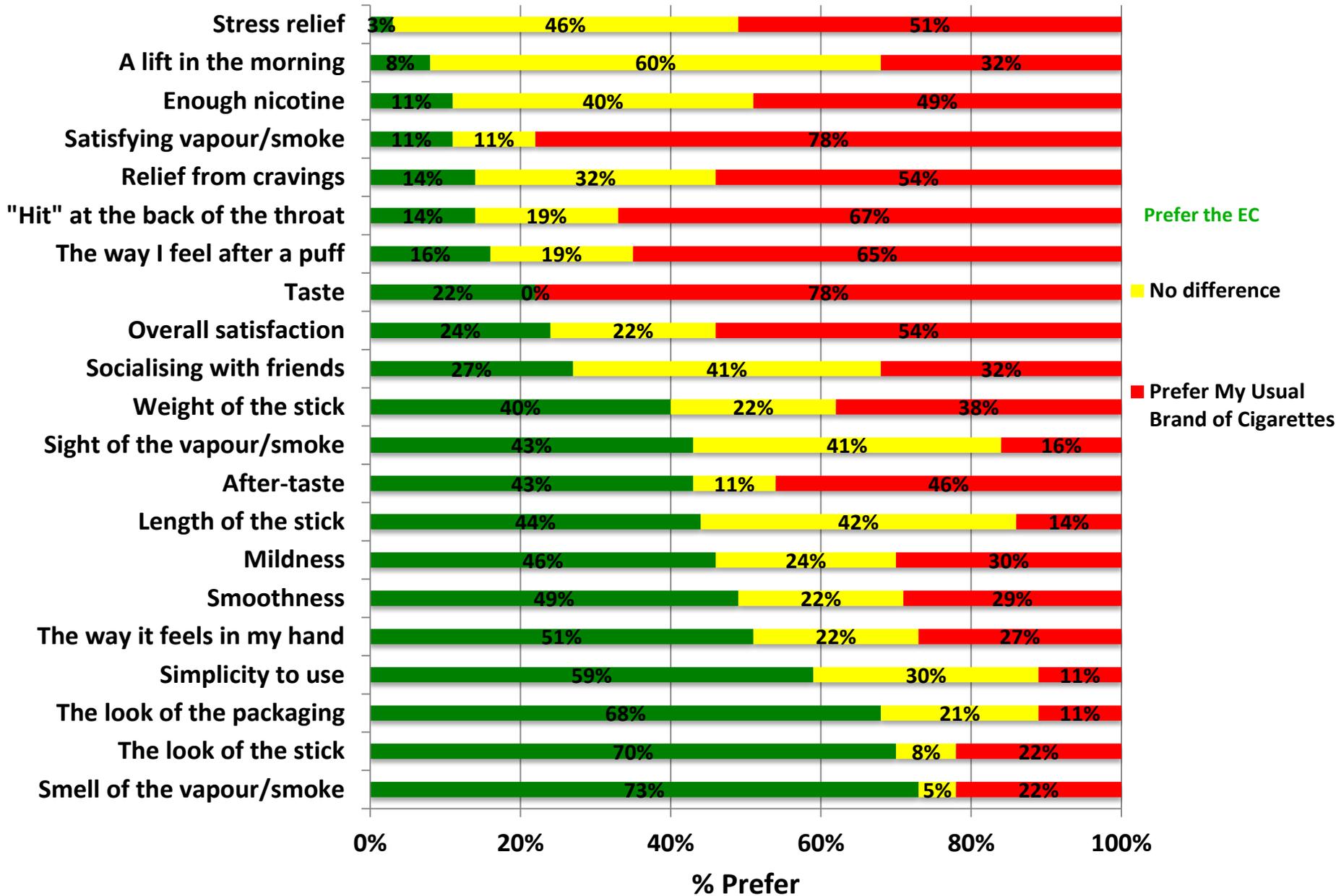
Intensity of Subjective Positive & Negative Effects Experienced After EC Use



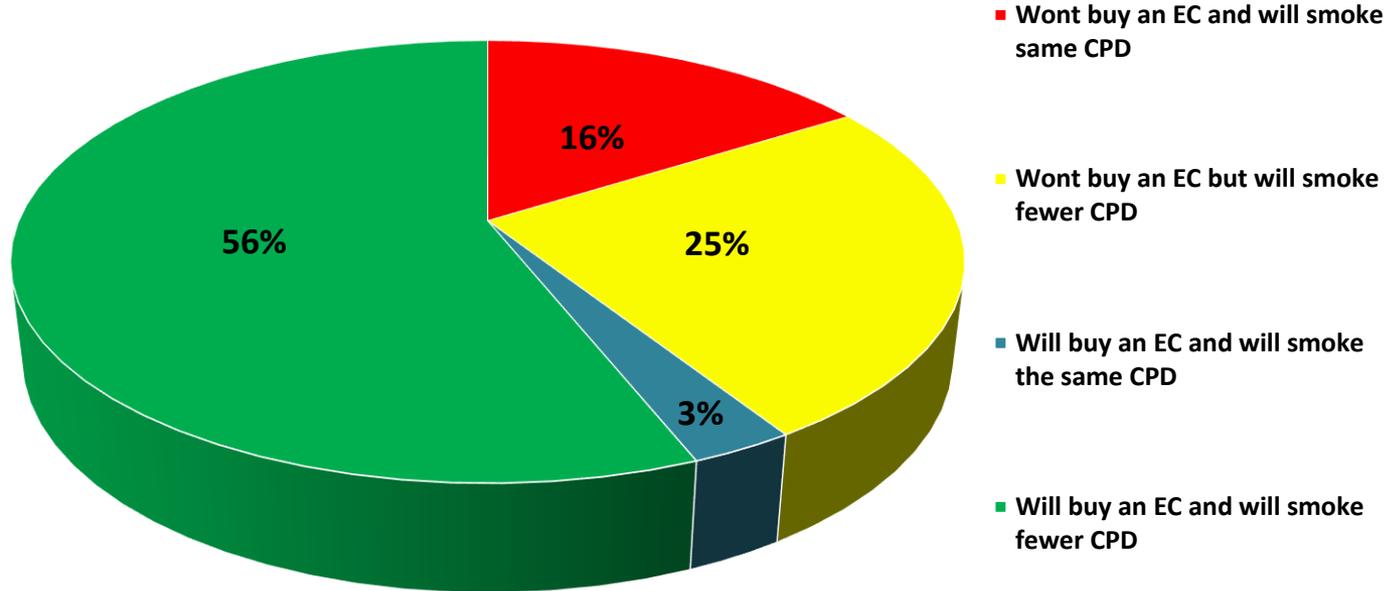
Change in Tobacco Withdrawal Symptom Severity Attributed to EC Use



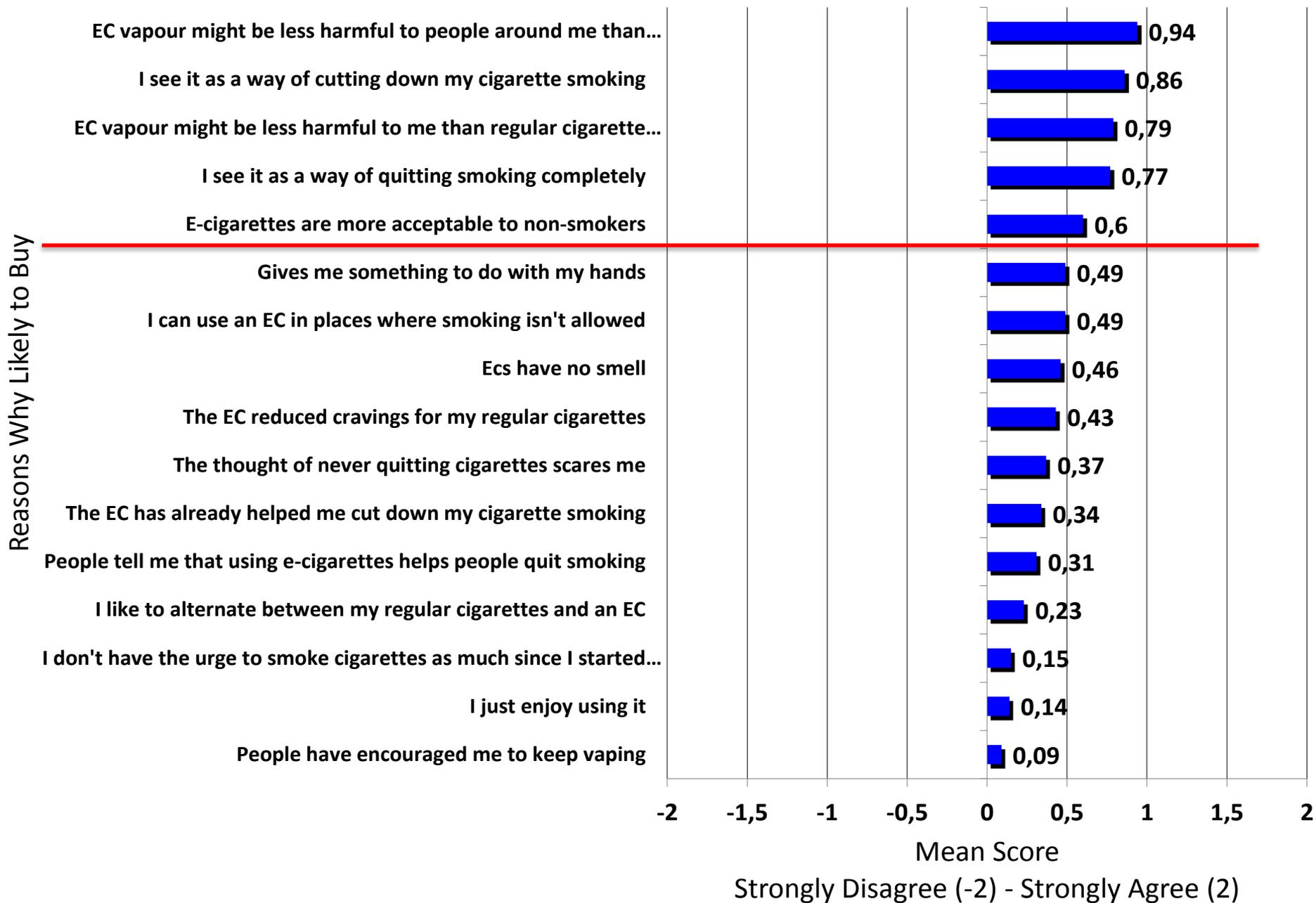
Factors Determining Preferences for the EC vs. Usual Brand of Cigarettes



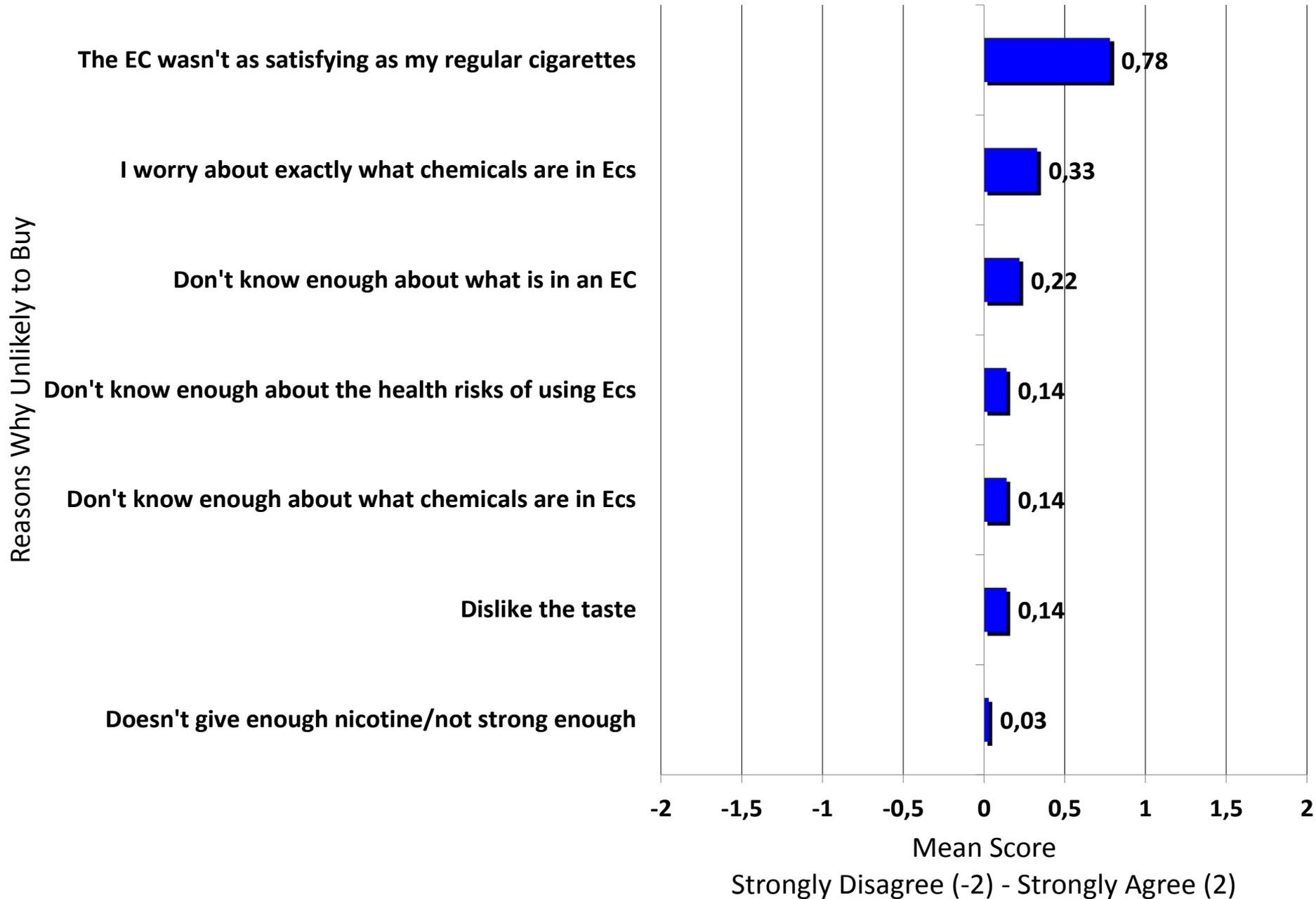
“After you leave here today, which of the outcomes below do you think is most likely for you?”



Why are you likely to buy an EC in the near future?

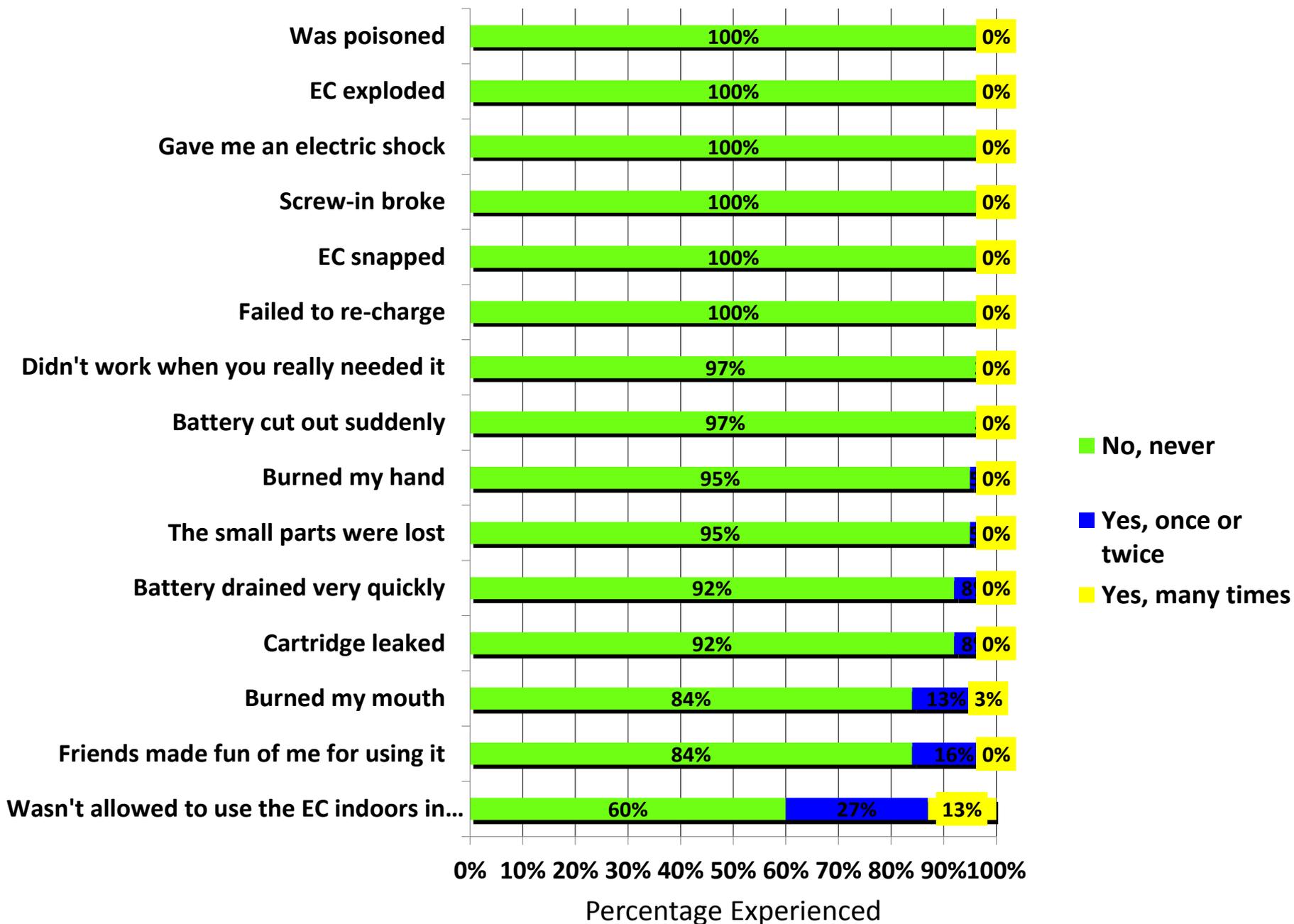


Why are you unlikely to buy an EC in the near future?



Manufacturing-Related Adverse Events Experienced

Adverse Event



ECs Better in What Ways?

(1) No Smell; (2) Aesthetically appealing; (3) Convenience; (4) Harm reduction:

I really enjoyed using the EC. First of all I like the way how it looks, it gives feeling of elegance. Secondly, I love that it has no smell like regular cigarettes. Taste of it was pretty good but I think that flavoured tips will taste better. Dose of nicotine was perfect. I never had problems using it, battery is really strong and I had no worries about using it all day. Tips are very efficient. The last advantage of it is that it is more acceptable by non-smokers. Finally my friends wasn't telling me that I smell like smoke.

I liked the fact that it does not smell and I do not smell after the use. Also my breath was better.

The e-cigarette seems to have improved my health and reduced the smell on clothes etc.

It did not have the annoying smell of a regular cigarette.

ECs Better in What Ways?

(1) No Smell; (2) Aesthetically appealing; (3) Convenience; (4) Harm reduction:

I could smoke it in my room, which I keep as a smoke-free zone so as not to stink up my clothes and sheets. The package looked pretty RoboCop.

The best thing about it is the conveniency. You don't need a lighter, you don't need an ashtray and you don't need to worry about the discussing smell afterwards. Can just sit in my bed an puff away.

I liked that i didn't have a lingering smell of cigarette smoke afterwards, thats the one thing about smoking i hate the most. it was very easy to use, and the packaging is sturdy so it does not get crushed in my pocket or bag. i also like i that i can use them where regular cigarettes are banned.

ECs Better in What Ways?

(1) No Smell; (2) Aesthetically appealing; (3) Convenience; (4) Harm reduction:

I liked the taste of the e-cigarette. I liked the fact that i can smoke it basically wherever i wanted to. I was really amazed by the battery life. I think it actually is pretty good. I believe I have charged it only twice for the last week. My roommates (non-smokers) were perfectly fine with me smoking in their rooms (something that they don't agree with if I am smoking a normal cigarette. I also liked the fact that it was really easy to change the tips. It literally took a couple of seconds to do so. The packaging in general looks really well and it also is really convenient.

I liked the thought of not smoking tobacco but still getting my "fix" of nicotine. Also liked the fact i could have a puff or three and put it away instead of having to smoke a full cigarette.

I Used the stick as I would use a normal cigarette. I tried to use the ecig as a replacement for a cigarette and more often than not it satisfied my craving and it stopped me from having a real cigarette. I found that I used less of the ecig than I would a normal cigarette. I find that sometimes I will smoke a whole cigarette when in fact my craving is satisfied after around half of it. This I feel is habit.

I liked the fact that I wasn't ingesting tar and other various toxins that are present in regular cigarettes. It made me feel less guilty at what I was exposing my body to. I also liked how easy it was to use and that I didn't have to charge it at all in the past week.

Cigarettes Better in What Ways?

(1) Bad/weak taste; (2) Low satisfaction/ low craving relief; (3) Sore throat/burn; (4) Unknown harms

The taste was awful. I didn't like the taste at all compared to cigarette smoke. Also it didn't relieve the need to smoke for as long as cigarettes.

The taste was revolting, I kept going back and forward to see if it would improve but it tasted like burning plastic or metal but not natural flavour or tobacco flavour.

Only think that I dislike is that after few puffs (one after another) the taste in mouth is not comfortable.

It really didn't give me the satisfaction of a normal cigarette. If I was to compare e-cigs and normal cigarettes, the best example would be that the e-cig is a snack to keep you going till the meal and a normal cigarette is a full meal. Smoking e-cig did not take away the need to smoke, but it postponed it a little. It was enjoyable to puff, but it really was not comparable to the normal ones.

The thing I disliked the most was the nicotine level. After a couple of puffs, it just was not enough for me. A couple of times I found myself in a situation, where I puff continuously for around 15 minutes, without stopping, and after that I was still feeling the urge to have a normal cigarette.

It didn't quite give the hit of nicotine that a normal cigarette offers and I felt that the '200-puff-per-tip' estimate was a little optimistic.

Cigarettes Better in What Ways?

It would make me feel like I hadn't really had a cigarette sometimes for silly reasons such as I didn't need to tap ash off of it. Just because it's not on fire, it's weird...

I am not aware of how harmful it is and that scares me.

the aftertaste, i really disliked it which i the main reason i could not get into them. also, i felt quite nauseous after using them sometimes and would get a light head quite easily, all in all i just couldn't get used to the taste in my mouth after smoking it for a few minutes. i can't imagine getting used to that and it being a regular thing. I'm glad i tried it though because I've been so curious and they aren't that cheap to buy.

I really did not like the flavour I was given (tobacco). It also hurt my throat sometimes. I also had to inhale a lot harder to produce vapour.

There was a strange feeling on my tongue after inhaling which got worse as I continued, a tingly irritating sensation. After smoking the e-cigarette for a while I began to get headaches and feel slightly nauseous, I worry this may have been because I was inhaling too much to try and replicate the sensation from smoking normal cigarettes.

Cigarettes Better in What Ways?

At the beginning I tried to use the e-cigarette as much as possible but felt that they never quite took away the urge for a cigarette. Towards the end of the week I felt the e-cigarette wasn't having much effect on my urge to smoke and that I often had a sore throat

i tried to get used to smoking it as i would a normal cigarette, and initially it was fine and i enjoyed it, but i felt each time i started smoking it, eventually i would get to get a taste in my mouth i didn't like. i ended up not smoking that much of them over the week as i really disliked the after taste in my throat from smoking it. it wasn't a taste that i was used to and i smoked pretty much my normal amount of regular cigarettes eventually.

Anything Else? Taste/Flavour!

better taste liquid would make it cover more ground really!

I found it really useful, I will go and buy a mint/menthol type of e-cigarette now and try that to see if it is better suited to me.

I will def keep on using this to stop smoking but would rather a different flavour.

Have already ordered one and with different flavoured tips.

Liked the look of the ecig but not the taste, if the taste was improved I would have continued to try to use it.

Perhaps give a choice of different flavours.

**IF YOU HAD OFFERED DIFFERENT FLAVOURS THEN IT MIGHT HAVE BEEN ENJOYABLE.
WILL PROBABLY TRY A DIFFERENT BRAND.**

Anything Else? Cessation!

I enjoyed using the product and hope it can help me further reduce or totally stop my twenty-eight year smoking addiction.

With persistence the e-cigarette helped me deal with my cravings and I believe I could successfully cut back and eventually quit smoking cigarettes for good with everyday use.

It was fun to use, and I found it really good in combination with regular cigarettes. I've reduced the number of cigarettes per day and used e-cigarette when it was more convenient for me. Although combining those two might be very costly.

JUST THAT OVERALL I DID ENJOY THIS PRODUCT, BUT MAYBE THE STRENGTH COULD BE CRANKED UP A LITTLE TO STOP THE URGES FOR CIGARETTES AS MUCH AS I DID.

I found it to be more effective than I first expected and intend to purchase one. Most probably the brand that I was testing over the past week.

Summary of Main Findings

1. Cigarette smoking reduced significantly ($M = 6.42$ CPD; 41% reduction of baseline CPD).
2. Perceived as much less risky than cigarettes and likely to be very helpful for smoking cessation.
3. Very few adverse health effects reported; typically low-moderate in severity.
4. Positive subjective effects common, but low-moderate in strength.
5. More participants motivated to quit smoking after using the EC.
6. Very low liability for abuse estimated for the EC compared with conventional cigarettes.
7. Manufacturing-related adverse events were extremely rare.
8. Interest in e-cigarettes fostered by one week of use.
9. Education! Education! Education! Smokers curious about e-cigarettes are crying out for clarity about the risks. Ambiguity from trusted bodies is a major barrier to uptake and persistence!
10. Mass of data to predict continued and discontinued EC use beyond this study.

Summary of Main Findings

11. Availability of a range of flavours and nicotine strengths is vitally important! Regulating these options away will drive people away from a product they otherwise perceive to be attractive, convenient to use, effective for smoking cessation, and less harmful to others.

Thanks For Listening

Questions?

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Happy to share slides
and discuss findings afterwards