

Smoking and Vaping

Health Needs Assessment

Appendix 5: Behavioural Systems Mapping

Suffolk Knowledge Intelligence And Evidence Team

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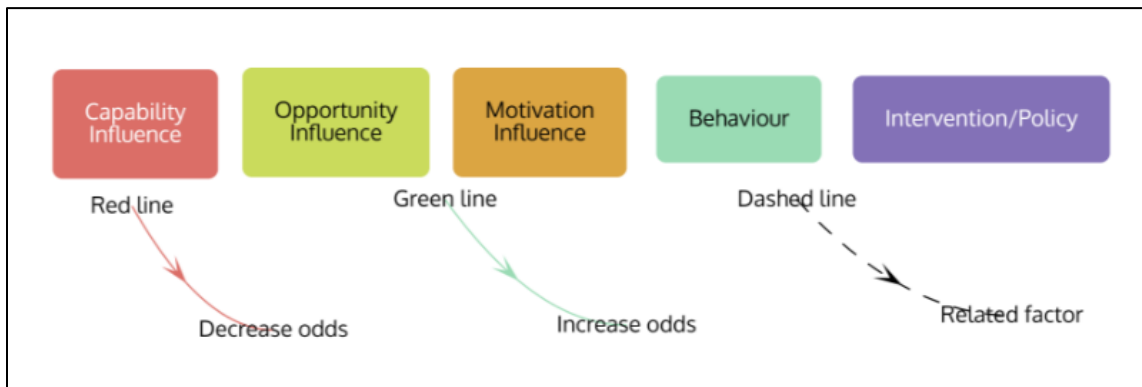
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Introduction

Suffolk’s County Council’s Behavioural Science Team used Healthwatch Suffolk’s research data from interviews and survey responses, to develop a behavioural systems map. This created a visual representation of the behavioural influences associated with smoking and vaping- key shown in figure 1. Below are sections from the map with accompanying narrative to explain the key behaviours and behavioural influences using COM-B as a framework to categorise influences. Building on this a set of recommendations were made. These recommendations have been included in the smoking and vaping health needs assessment.

Figure 1: Key to Maps



How smoking starts

The Healthwatch Suffolk stakeholder engagement found that many people started smoking when they were teenagers. Figure 2 presents a summarised behavioural systems map, outlining key behaviours that may influence teenagers to start smoking. Results show that the reasons why teenagers started smoking were mainly related to social influences and biases, including:

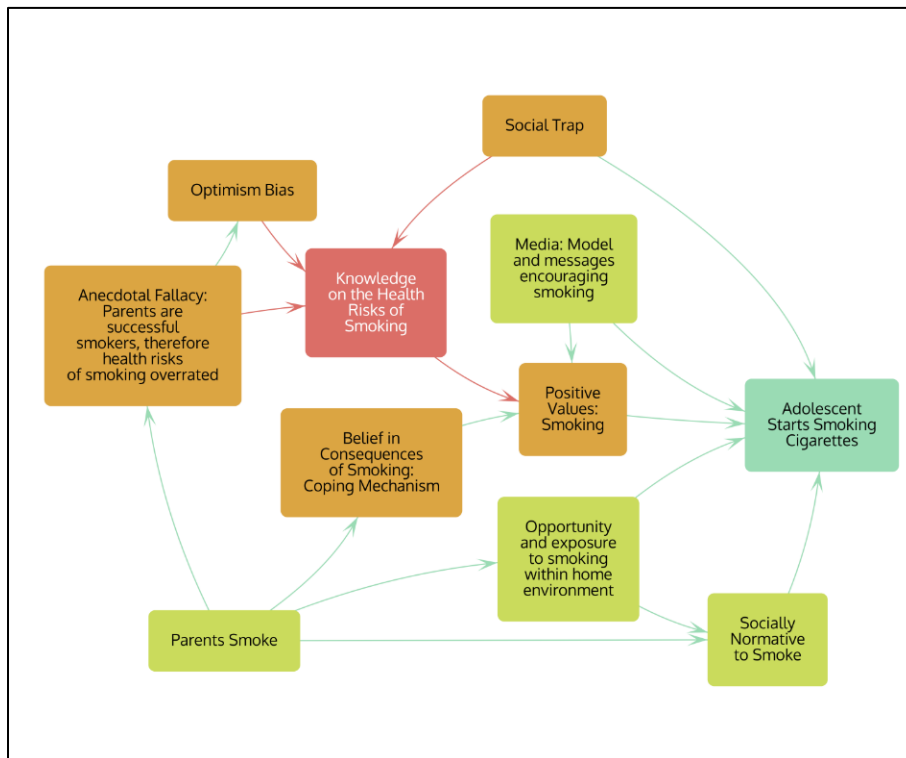
- **The "Social Trap":** The immediate social benefits of smoking, like feeling accepted by friends or appearing "cool," outweighed the potential future health risks in their minds.
- **Optimism Bias:** Individuals tended to underestimate or downplay the actual health risks of smoking, thinking "it won't happen to me."

These social pressures and mental biases undermined individuals ability to fully understand and weigh the health risks of smoking.

Additionally, positive views of smoking developed through:

- **Anecdotal Fallacy:** If individuals parents smoked without obvious health issues, the teen might rationalise that smoking can't be that harmful (faulty logic from anecdotal evidence).
- **Multiple opportunity influences:**
 - Media, including modern social media, portraying smoking as acceptable or desirable.
 - Frequently seeing others smoke in various environments, making it seem normal within their social circles.

Figure 2: Factors influencing smoking from a young age



Behavioural reinforcing loops within smoking

Reinforcing loops happen when two or more factors keep influencing each other in a circular way (rather than a one-way influence). Suffolk's County Council's Behavioural Science Team identified five reinforcing loops that could explain why people continue to smoke, shown in figure 3. The five reinforcing loops are also listed below.

1. To cope with physical health issues

- People smoke to deal with pain and other symptoms. However, smoking actually makes those health problems worse, leading to them smoking more.

2. Cope with mental health, stress, and anxiety.

- Stressful life events (such as caring for others) not only compel people to keep smoking but also cause them to relapse after quitting.
- People believe that smoking helps cope with mental health conditions such as stress. However, smoking does not relieve these conditions- continuing this loop.
- Society says that 'smoking is bad'. Therefore, individuals who smoke may feel shame. The shame people feel from smoking, ultimately increases likelihood of individuals feeling stressed or anxious. These mental health conditions are key factors causing people to want to smoke in the first place.
- Society advertising the negative health implications and consequences of smoking could also increase feelings of stress or anxiety when an individual smokes.

3. To satisfy nicotine addiction.

- Cigarettes are used to meet the nicotine craving which then maintains the physiological addiction.

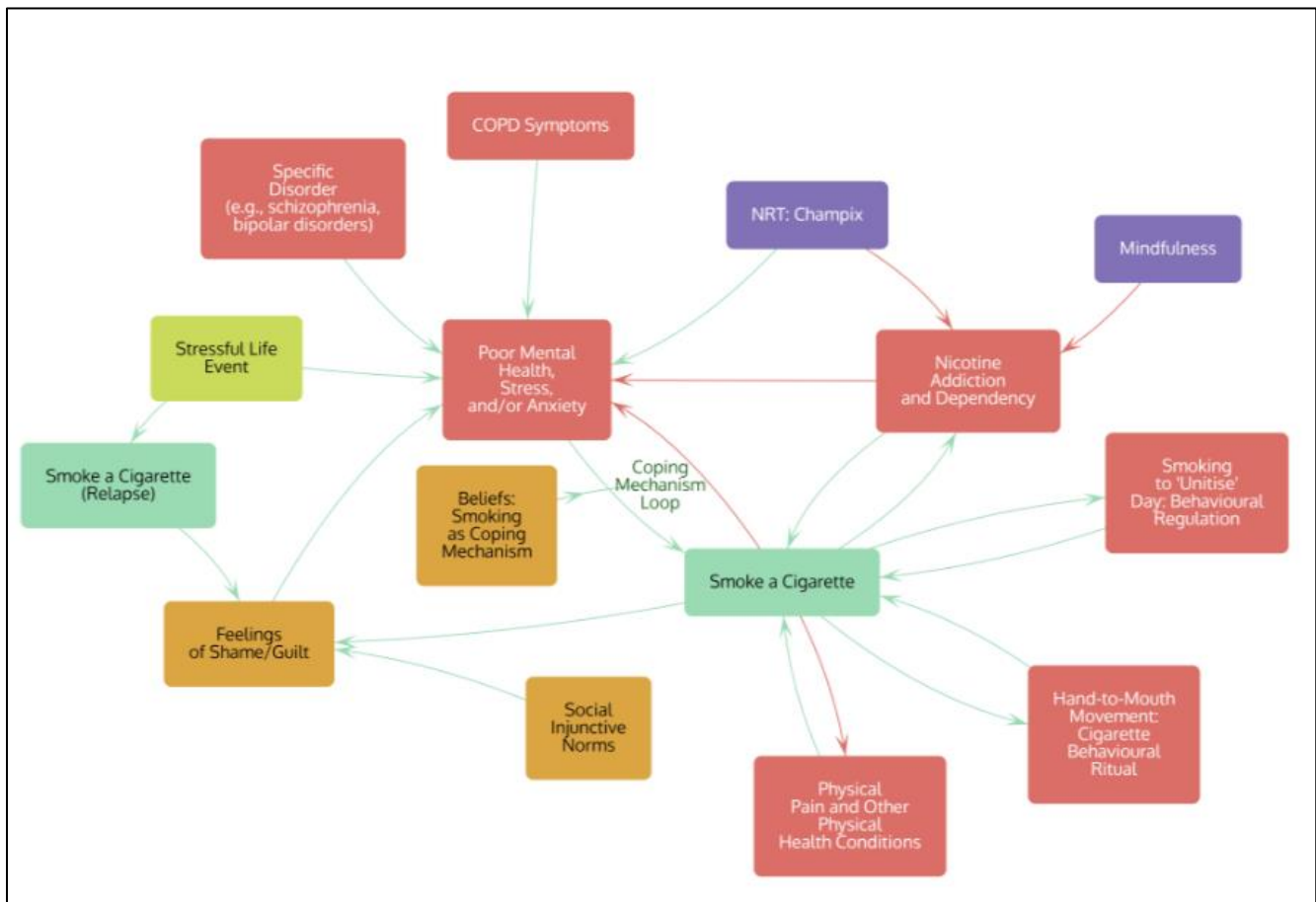
4. To 'unitise' or structure the day.

- Organising one's working day with cigarette breaks helps to regulate other work-related behaviours (i.e. providing a break or downtime), which in turn reinforces the use of smoking to regulate behaviour.

5. To satisfy habitual hand-to-mouth rituals

- Smoking satisfies the habit of bringing the hand to the mouth, but also maintains that habit.

Figure 3: Five behavioural reinforcing loops



Behaviours influencing peoples abilities to quit smoking

The Healthwatch Suffolk stakeholder engagement found that there were around an equal number of factors that made it harder or easier to quit smoking- behavioural system map shown in figure 4.

Barriers to quitting

Barriers that made quitting harder included:

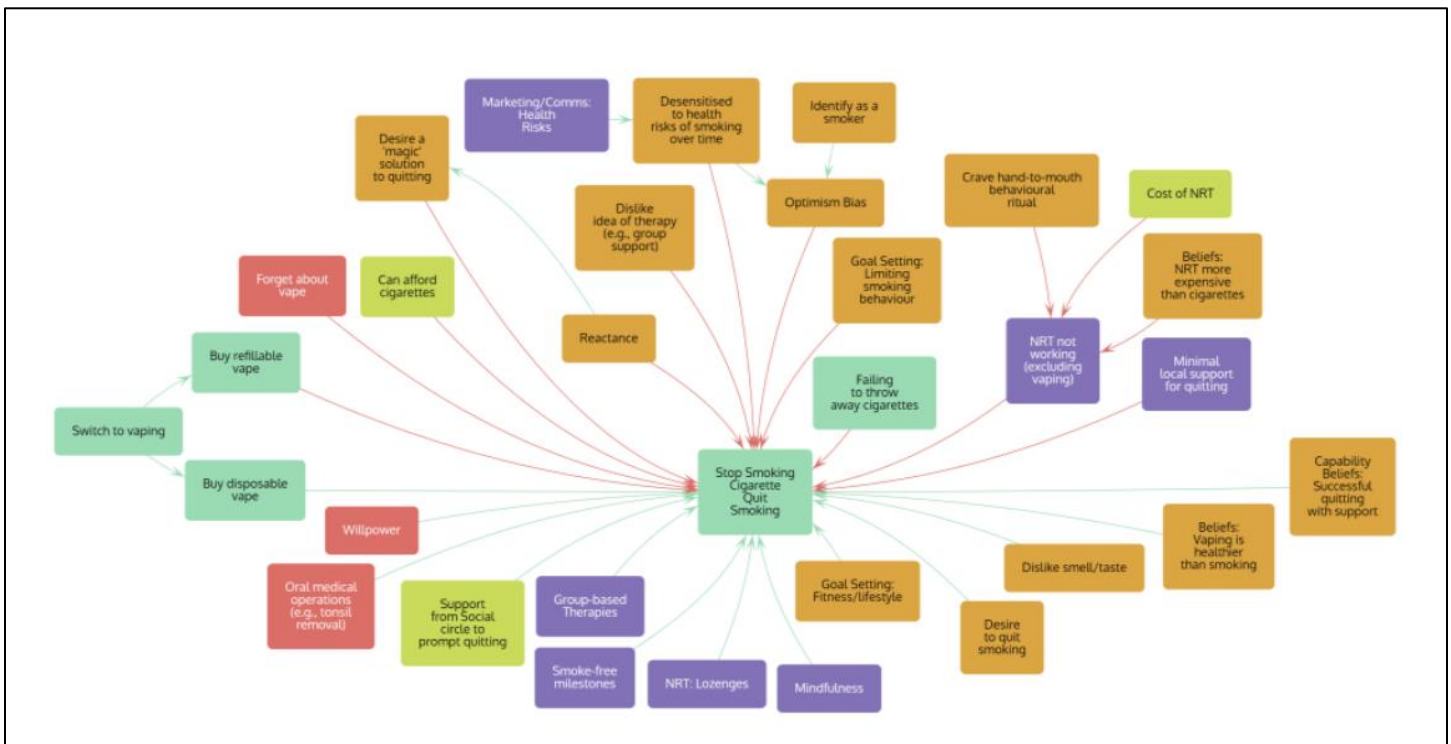
- **Optimism Bias:** Individuals tended to underestimate or downplay the actual health risks of smoking, thinking "it won't happen to me."
- **Ease of access:** having easy access to cheap cigarettes and not getting rid of leftover cigarettes
- **Motivational barriers relating to previous quit attempts:** examples include having a negative experience with quit aids such as nicotine patches/gum or believing the cost of NRT is too much.
- **Issues with vaping:** for example, buying refillable vape pens but forgetting to use them or refill them. Also mistakenly thinking a 'smoker's cough' is from vaping.
- **Psychological reactance:** In other words, individuals may feel rebellious and want to smoke just because others are telling them to quit. This could be related to an individuals fear of failing to quit.

Facilitators to quitting

Factors that made quitting easier included:

- **Willpower/belief:** Enhancing positive feelings around quitting and increases the ability to control urges reducing chances of relapse after quitting.
- **Sensory experience:** Disliking the smell/taste of cigarettes can decrease likelihood of relapse after quitting.
- **Trusting information provided by healthcare professionals:** for example, believing vaping as a healthy alternative to cigarettes.
- **Desire:** Wanting to quit smoking
- **Adopting health behaviours:** Refers to incorporating interventions and behaviours that support quitting such as mindfulness, smokefree milestones, group therapy, utilising nicotine alternatives such as vapes or lozenges

Figure 4: Factors associated with quitting



Behaviours influencing people’s desire to quit smoking

Barriers influencing people’s desire to quit

The Healthwatch Suffolk stakeholder engagement identified two biases or predispositions that make it harder for people to quit smoking:

1. **Optimism bias:** People tend to be overly optimistic about their ability to quit. This bias therefore tricks people into thinking quitting will be easier than it is.
2. **Pessimism bias:** On the flip side, some people are overly pessimistic and underestimate their capability to successfully quit smoking. They might feel there’s little value in even trying to quit, especially if they have conditions such as COPD.

Quitting strategies

Different methods of quitting were shown to impact individuals desire to quit:

- Setting small goals to cut back was shown to do little to facilitate quit attempts. This may be because it creates an illusion of control bias over smoking. This refers to the mistaken belief that a person has more control or influence over their smoking behaviours than they actually do, providing an unrealistic, overconfident perspective that minimises the challenge of quitting. What's more, if this strategy ends up failing because the nicotine addiction is so powerful, it can reinforce the counterproductive belief that willpower alone should have been enough to quit successfully, reinforcing an unhelpful fixed mindset.
- Goals around improving fitness and lifestyle were shown to be more motivating for quitting. This may be because these goal tapped into deeper values and self-perceptions that smokers have. Smokers may place value on being healthy and physically fit. With this in mind, smokers may also be aware that their smoking habits are making them unfit and unhealthy. When these two factors work together it can create a motivating force to quit smoking.

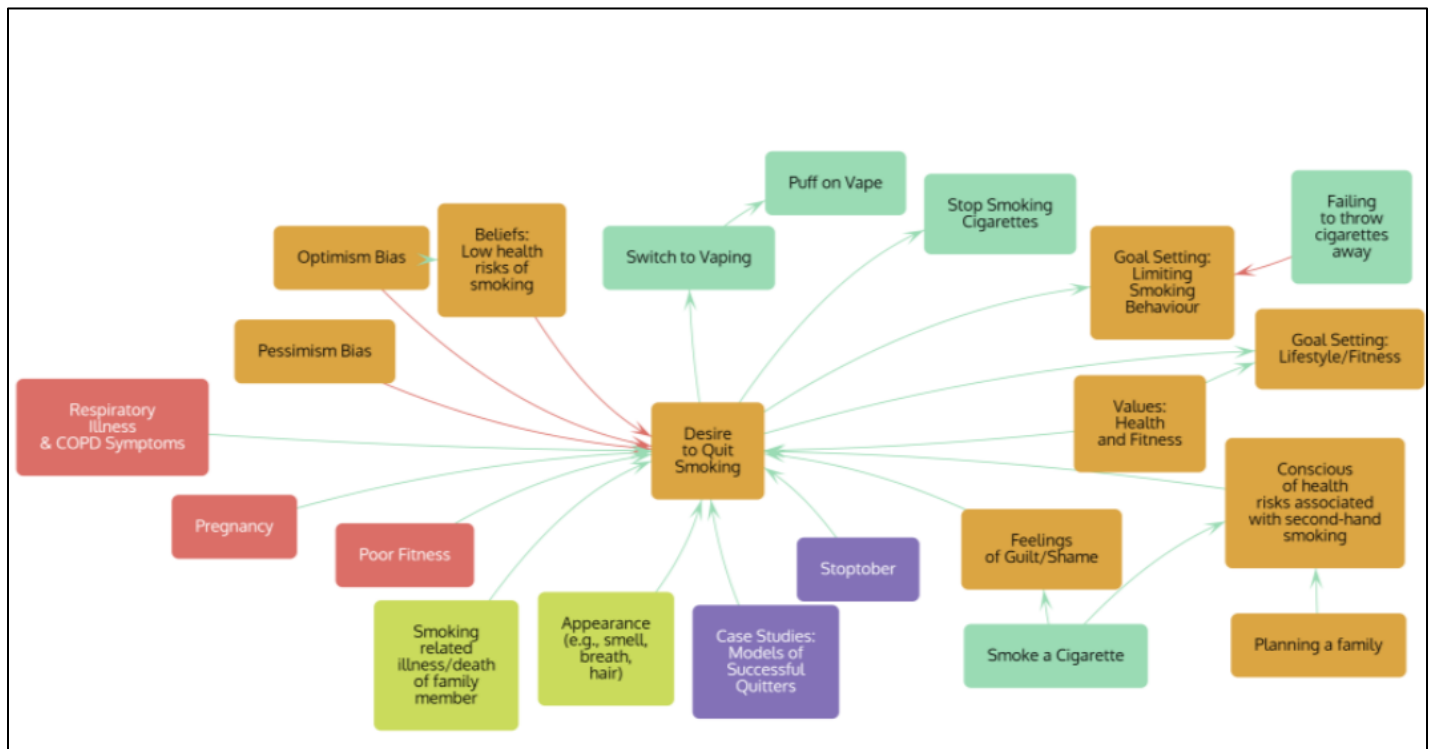
Facilitators influencing people's desire to quit

The Healthwatch Suffolk engagement work found several factors that increased an individual's desire to quit, these included:

- Pregnancy
- Developing a respiratory illness including COPD symptoms
- Consciousness of second-hand smoke to family members
- Concerns about appearance
- Feelings of guilt/shame from still smoking
- Support and encouragement from loved ones
- Illness or death of a family member can prompt individuals to re-evaluate their health behaviours.
- Stop smoking events (e.g. Stoptober) and success stories

All motivations and opportunities that led someone to want to quit smoking highlight how crucial it is for that person to develop a strong self-awareness during their attempt to quit. In other words, what really seemed to drive a sincere desire to quit wasn't just external factors, but connecting deeply with personal internal motivations, identity and lived experiences. The desire to quit also led some to switch from smoking to vaping instead. The behavioural system map is shown in figure 5.

Figure 5: Factors associated with a desire to quit smoking



Vaping

Vaping behaviour and associated factors can be viewed independently of smoking behaviour. The Healthwatch Suffolk stakeholder engagement showed that views on vaping are mixed- behavioural system map shown in figure 6.

Negative factors attributed to vaping

There are a few key reasons and thought patterns that made people hesitant to switch from smoking to vaping or start vaping:

1. Control concerns

- Some worried that they won't be able to control their vaping behaviour. This could be driven by the strength of an individual's nicotine addiction or because they crave the hand-to-mouth behaviour.
- Similarly, vaping can be done more easily/frequently than smoking which could increase worry/anxiousness over controlling their vaping behaviour.

2. Addiction mindset

- Individuals may have viewed smoking and vaping as different addictions, and do not wish to switch one addiction for another.

3. Dislike of vaping experience

- The flavour or feeling of vaping did not appeal to some smokers.

4. Biased thinking

- Despite data showing that vaping is safer than smoking, some mentally dismissed the positive statistics that vaping reduces risks.

- There's a tendency to stick with the known dangerous of smoking over the uncertainty around vaping risks.
- Misinformation about vaping effects may make these biases worse.

5. Health symptom misinformation

- If uninformed, individuals may associate the residual coughing or COPD symptoms after quitting smoking with vaping itself, rather than the underlying smoking effects.

Positive factors attributed to vaping

On the other hand, several positive factors attributed to vaping were also highlighted:

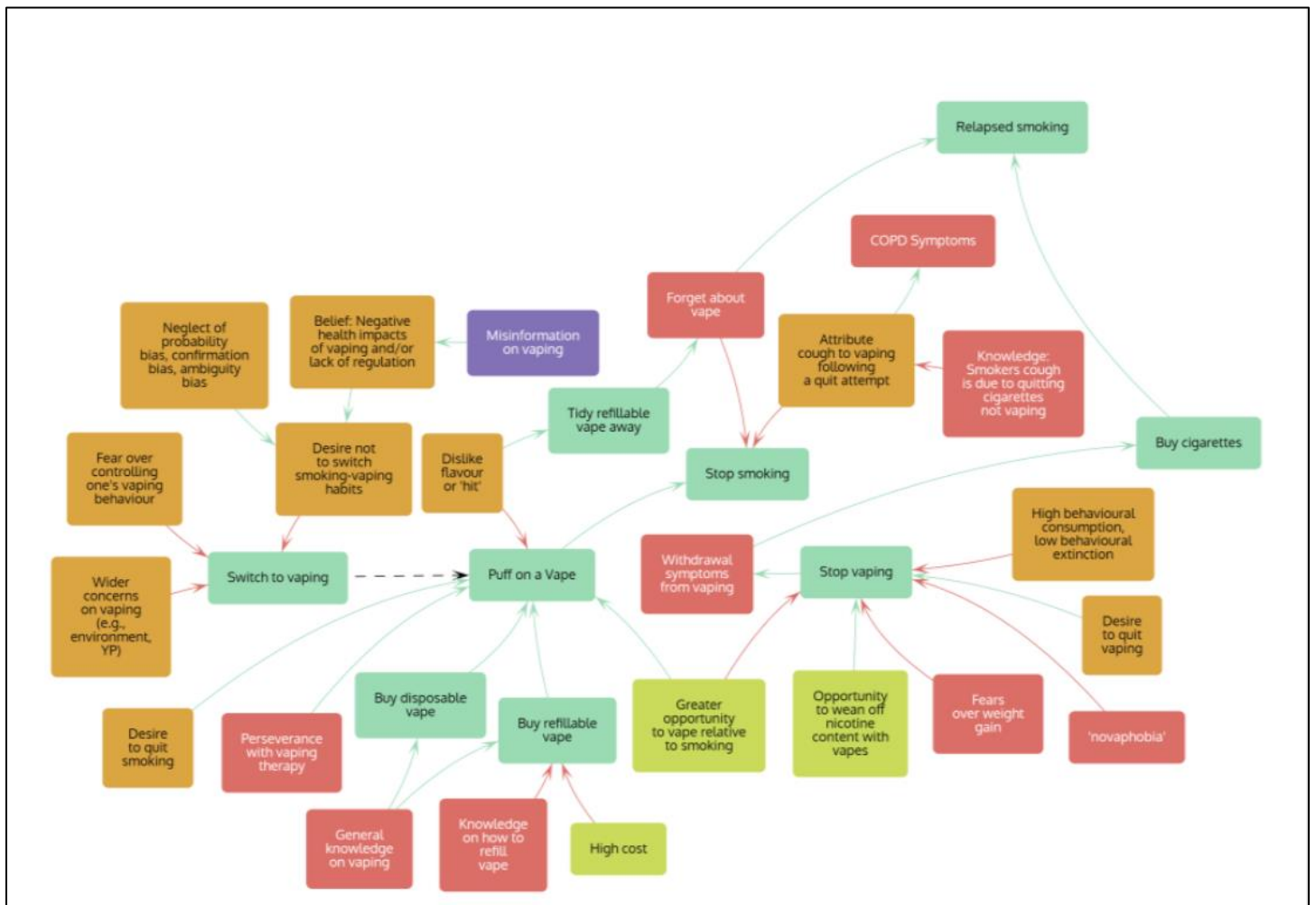
1. Benefits to vaping

- Many individuals saw vaping as a healthier alternative to smoking cigarettes and saw it as a way to improve their overall health.
- The desire to quit smoking often led to people trying vaping as a cessation method.
- The hand-to-mouth motion of vaping satisfies the ingrained habit of smoking, making the transition easier.
- Disposable vape pens tend to help people quit smoking more successfully than refillable vaping systems.

2. Buying and quitting vapes

- How much vaping costs and one's knowledge level about vaping products was shown to impact purchasing decisions.
- Vaping offers greater opportunities to manage nicotine intake, which is helpful for those wanting to quit nicotine altogether.
- The (mistaken) belief that vaping prevents weight gain motivates individuals to switch to vaping. However, this same belief can make it harder for some to quit vaping after using it to quit smoking.

Figure 6: Factors associated with vaping behaviour



Further social opportunities influencing smoking behaviour

Several key influences not covered by other themes are noteworthy:

1. Smoking as a break

- Smoking provides an opportunity to take a break, decompress, and get away from the 'daily grind', whether alone or socialising. This can reinforce the habit as a perceived coping strategy.
- There's a social reward and fear of missing out on that smoking 'timeout' with friends that is hard to give up.

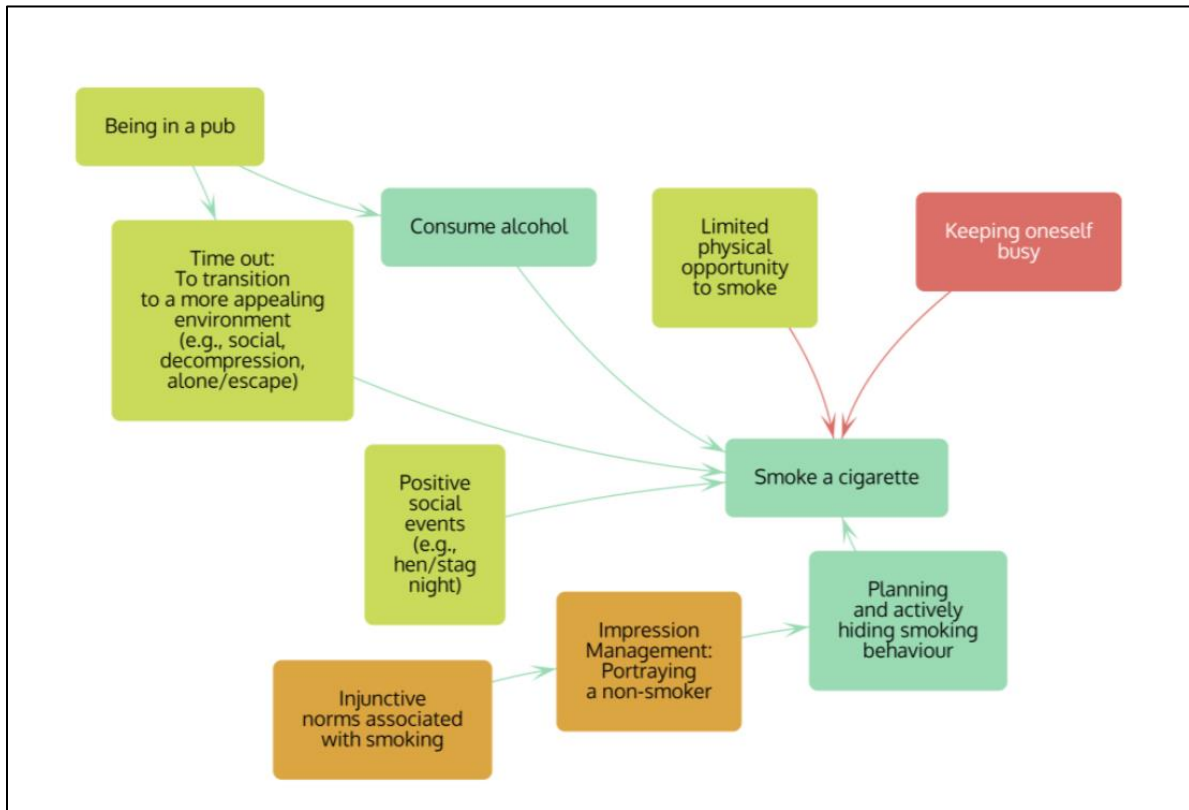
2. Relapsing at social events

- Big social celebrations (e.g. Hen/stag nights) create tempting opportunities to relapse and smoke again.

3. Managing impressions

- Some smokers will go to great lengths to hide their smoking, like only smoking in secrete spots. This covert smoking makes it harder to engage in group quit-programmes.
- Despite the social pressure not to smoke, smokers will still find ways to keep doing it to avoid giving it up.

Figure 7: Other factors relating to smoking



Recommendations from Behavioural Systems Map

No	Key Finding	Evidence / Theory links	Recommendation
1	Socially beneficial factors are implicit in starting smoking and outweigh factors relating to future health.	Proximal consequences are more relevant than distal ones (despite the 'cost' of each).	<ul style="list-style-type: none"> Prevention activities should focus on social factors (as well as health) Prevention work with young people could utilise proximal consequences (e.g. incentivisation with immediate rewards) ``
2	Stressful life events maintain current smoking AND are implicit in lapse/relapse of quits.	Smoking behaviour is strengthened due to negative reinforcement; it can quickly alleviate symptoms of stress which reinforces the belief that smoking is an effective coping crutch.	<ul style="list-style-type: none"> Stress management should form an important aspect of relapse prevention as part of behavioural support for stopping smoking. Similarly, behavioural support should tackle smokers' beliefs about smoking to reduce the likelihood of relapse. Stress management courses for current smokers could provide an opportunity to access current smokers and provide them with useful skills / knowledge which could attenuate their psychological reliance on smoking.
3	Desire to stop smoking varies, and is key in driving behaviour change YET knowledge on smoking is not enough	Reaching wider audiences will require leveraging other factors to facilitate desire to quit – motivation and emotion	<ul style="list-style-type: none"> Behavioural support and media programmes should broaden the narratives they present – directly addressing any elements that would undermine a desire, and capitalise on elements known to prompt a desire to change behaviour
4	Smokers' smoking behaviour varies greatly	Smokers vary on many psychological factors. Yet, self-awareness, and various other self-theories (e.g., ideal self) can help to shape support work.	<ul style="list-style-type: none"> Develop a toolkit that captures the behavioural aspects of smoking to inform a tailored approach to intervention implementation. Use the toolkit to offer tailored and targeted communications and intervention support that leverage suitable intervention functions, geared to heighten self-awareness.
5	Beliefs about quit products may inhibit quit attempts.	Confirmation biases, reactance and ambiguity biases associated with NRTs and vapes. Various opportunity and capability elements that challenge the switch to and exit from vaping.	<ul style="list-style-type: none"> Mass media campaigns could form a suitable intervention to promote benefits of NRT/vape as alternatives to smoking. Messaging should follow EAST. Media campaigns should encompass a broad range of motivations associated with the switch to vaping. Aspects of vaping – e.g., smoker's cough, use of disposable vapes – should feature in any education or media campaigns Behavioural support programmes should explore capability and motivation elements to facilitate the entry into vaping, and facilitate the exit from vaping by being cognizant of the capability, opportunity and motivation barriers that vaping presents