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Article

An Exploration of the Barriers and Facilitators Shaping Vaping Cessation Among Australian Young Adults

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Abstract: This study of 18–24-year-old young adults (YAs) in Australia who use, or used to use, nicotine vape products (NVPs) sought to explore their experiences when attempting to quit vaping to understand the barriers and identify facilitators of cessation. We analysed data from a survey ($n = 532$) of 422 YAs who vape and 110 YAs who used to vape, as well as interactive workshops ($n = 12$) and semi-structured interviews ($n = 3$), which included 7 YAs using and 8 no longer using NVPs. Social Cognitive Theory informed the data collection, with open-ended questions exploring how personal, environmental and behavioural factors shaped vaping cessation. Qualitative analyses revealed 11 themes shaping vaping cessation, including the normalisation of vaping, easy access and a desire to fit in. Vaping cessation was complicated by using NVPs to manage symptoms of mental ill-health. Additionally, former vapers reported using combustibles to replace vaping, highlighting the risk of health impacts from smoking. Potential support sources included friends and general practitioners, or family doctors. Support service development must consider de-normalising vaping, addressing underlying mental health issues and providing effective campaigns around the health risks of vaping and smoking. The findings highlight the need to invest in vaping cessation, and they can inform the design of vaping cessation programs to better support those trying to quit and ensure the success of their quit attempts.

Keywords: vaping cessation; young adults; barriers; facilitators; support



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1. Introduction

The number of people using nicotine vape products (NVPs), or vaping, has increased globally [1] and in Australia [2] over the last decade. Of particular concern is use among young people, with the highest current use in Australia among 18–24-year-olds at 21% between 2022 and 2023 [2]. Most Australian young adults initiate vaping out of curiosity and not due to pre-existing tobacco smoking [2]. The smoking-naïve are at a three-fold increased risk of commencing tobacco smoking following vaping initiation [3], potentially increasing the risk of nicotine dependence and associated health impacts of combustible cigarette use [4].

Global evidence indicates that there is an increasing number of people who vape but wish to quit and need support [5,6]. People using NVPs have contacted smoking cessation services or used approved smoking cessation therapeutic aids to quit [7,8], with many unsuccessful in their attempts [9,10] or reporting multiple attempts [11]. Australian young adults have also reported attempts to quit vaping, with 59.7% of a sample ($n = 422$) of current vapers reporting an attempt within the last 12 months [12]. The evidence of quit attempts suggests that people who vape are experiencing difficulties quitting, and it is important to understand why.

Vaping cessation has previously been examined in a systematic review of barriers and facilitators to NVP cessation, identifying similarities and differences in quitting tobacco [13]. Barriers included a fear of returning to and dependency on tobacco and using NVPs to

reduce stress [13]. Facilitators included reducing nicotine, changing the flavour and using nicotine replacement therapy, whilst social influence, cost and health beliefs could both hinder and support cessation [13]. However, eight out of the ten studies were based on a different regulatory context in the United States (US), with many surveys using tick-box responses, thus limiting the possibility of nuanced insights. Research has examined vaping cessation strategies of people who used to vape [14] or currently vape [15], but not both, or different populations such as adolescents [16] or older adult age groups [8]. The findings from these studies include how the insights of people who used to vape can facilitate cessation support development [14] and illustrate how vaping use differs between age groups [8,16]. Vaping cessation has previously been examined in a sample of posts on an online Reddit platform by people who vape [17], highlighting addiction as a significant barrier and how a positive mindset can facilitate cessation. This study could not, however, identify the demographics or regulatory contexts of users, and the findings must therefore be interpreted with caution when trying to understand young adults' vaping cessation.

There is a dearth of vaping cessation focused research in Australia. Previous studies have examined the barriers and facilitators to switching from smoking to vaping [18] and using NVPs as smoking cessation aids [19]. In the former research, current vapers described the lack of access to information regarding using NVPs as a barrier to a successful transition when switching to vaping [18]. They advised people considering using NVPs to find the right product and to persist through the transition phase, informing those who smoke of the perceived health benefits of switching to NVPs [18]. Lum et al. [19] reported how the hand-to-mouth action of NVP use and the nicotine 'hit' facilitated smoking cessation. The behaviours of Australians who vape and their associations with quit attempts were examined with quantitative measures in a mixed sample of adolescents and young adults aged 14-25 years [20]. To the best of the authors' knowledge, this is the first study to examine the barriers and facilitators to vaping cessation among Australian young adults, addressing the recent call for research to explore quit attempts [20]. It is important to understand the experiences of this age group, given their reported quit attempts [12], to understand how best to support them in the quitting process. Young Australian adults are navigating a rapidly changing regulatory context for vaping, with strict importation controls and a prescription requirement to access NVPs [21]. An upcoming change will enforce a ban on all vape sales through general retail and allow sales of regulated therapeutic vapes in pharmacy settings by October 2024 [22]. This change has been met with strong opposition by pharmacists unwilling to provide NVPs without a prescription [23]. Such changes may impact a young adult's access to NVPs, their quitting strategy and support mechanisms. Pharmacist-assisted cessation services may support those wishing to quit NVPs [24], but it remains unknown as to whom young Australian adults have or would seek NVP cessation support from. Therefore, this research aims to explore the factors that shape the quit attempts of YAs who vape or used to vape.

2. Materials and Methods

2.1. Study Design and Participants

This study explored vaping cessation by gathering data from a survey, two interactive workshops and three semi-structured interviews. This inquiry is part of an ongoing project developing a vaping cessation program; the current paper draws on the exploratory questions surrounding young adults' quit attempts. Qualitative methods facilitated the collection of data rich in contextual insights into the lived experiences of young Australian adults [25]. Social Cognitive Theory (SCT) guided the data collection, which describes the interaction between personal, environmental and behavioural factors of behaviour change [26]. SCT constructs such as knowledge, social support and expectations align closely with the nuances of vaping [27], positing this as a suitable exploratory framework. These constructs were embedded within data collection processes to guide exploration.

Participants were recruited via convenience sampling. Recruitment took place between March and the end of May 2023 using a digital flyer on social media platforms,

including Facebook, Instagram and LinkedIn, and the university broadcast for volunteers. Additionally, a paper flyer was used in community settings such as cafes, youth centres and gyms, with their permission. This recruitment strategy was used in an effort to avoid a solely university-based sample and to be representative of the wider young adult population. Eligibility included young adults aged between 18 and 24 years who were currently using or used to use NVPs and were Australian Citizens or Permanent Residents living in Australia. These criteria ensured that the sample best reflected the experiences of an Australian population of young adults in the context of the Federal Government's regulatory framework around vaping. Survey participants were offered the opportunity to enter a draw to win an AUD 300 Prezzy Gift Voucher.

2.2. Procedure and Measures

2.2.1. Survey

An anonymous online survey of current and former vapers measured demographic characteristics and quit attempts. YAs using NVPs who had made a past-year quit attempt were asked, (1) 'Thinking of the last quit attempt, please explain in your own words why you feel this quit attempt was not successful', and all YAs using NVPs were asked, (2) 'If you needed support to quit vaping, who would you (and would you not) approach?'. Former vapers were asked, (1) 'What strategies or tactics did you use to stop vaping?'; (2) Why do you feel this current quit attempt has been successful so far?'; (3) 'What strategies or tactics were unsuccessful?'; and (4) 'When you were quitting vaping, who and what helped you?'.

2.2.2. Interactive Workshops and Semi-Structured Interviews

Upon survey completion, participants were invited via an anonymous link to take part in a workshop or semi-structured interview to further explore vaping cessation. Two interactive workshops ($n = 12$) were hosted online in July 2023 via Microsoft Teams to accommodate participants' varying geographical locations. An anonymous poll at the beginning of each workshop recorded participant vaping status. The anonymity of this poll aimed to encourage the participation of all participants regardless of their vaping status and prevent initial discomfort from this disclosure. Additional recruitment in October 2023 via the university broadcast for research volunteers procured further participants ($n = 3$), who opted for an individual online semi-structured interview. A Padlet virtual notice board was used for visual prompts and questions, with participants given secure access to post their responses and ideas during both workshops and interviews. Participants were also able to respond verbally, with responses audio-recorded and transcribed verbatim. Participants were asked what they knew about quitting vaping and why young people might find it hard to quit vaping. To maintain confidentiality, participants were assured that no identifying information would be used in reporting. All workshop and interview participants were informed they would be offered an AUD 50 digital gift voucher on completion as a token of our thanks for their contributions.

Ethical approval was granted by the University's Human Research Ethics Committee (Ref: GU 2022/925), with all participants providing voluntary signed informed consent.

2.3. Data Analysis

Inductive reflexive thematic analysis was used to analyse qualitative data, including audio transcripts and Padlet responses [28]. The researcher (NR) engaged with the data during the familiarisation stage of analysis, reflecting on personal and theoretical assumptions, experiences and understandings, for how these may meaningfully shape their coding practice. Code identification then facilitated the development of the initial themes. These themes were iteratively reviewed and refined by the research team (NR, BS, ES). The research team met periodically through the analysis process to ensure agreement that the final themes were coherent and fully realised.

3. Results

3.1. Survey Participant Characteristics and Descriptive Analysis

A total of $n = 532$ young adults aged 18–24 years completed the survey, with a mean age of 19.62 (SD 1.71). Over half of the participants were female ($n = 360$, 67.7%), and the majority were of Caucasian ethnicity ($n = 443$, 83.3%) and had lived in Australia for more than 10 years ($n = 507$, 95.3%) (Table 1). The sample included young adults of varying educational attainment, income and study status, with 192 (36.1%) not enrolled in studies, as per Table 1. The sample consisted of current vapers ($n = 422$) and former vapers ($n = 110$). Of the 422 YAs who vape, 252 reported a past-year quit attempt and answered the question regarding the success of that attempt. All 422 YAs who vape answered the question of who they would approach for support. All 110 former vapers responded to their relevant questions.

Table 1. Survey sample characteristics ($n = 532$).

Variable	<i>n</i>	%	<i>M</i>	<i>SD</i>
Age (range 18–24 years)			19.62	1.71
Gender				
Male	95	17.9		
Female	360	67.7		
Other	77	14.5		
Ethnicity				
Aboriginal and Torres Strait Islanders	13	2.4		
Caucasian	443	83.3		
Asian	19	3.6		
Hispanic	3	.6		
African	5	.9		
Bi-racial	23	4.3		
Prefer not to say	15	2.8		
Other	11	2.1		
Educational attainment				
Year 11, 10 or below	37	7.0		
Year 12	291	54.7		
Post-High School Certificate/Diploma	137	25.8		
University Degree	67	12.6		
Current study status				
Full-time university	214	40.2		
Part-time university	50	9.4		
Full-time TAFE/VET ^a	39	7.3		
Part-time TAFE/VET ^a	22	4.1		
Not currently enrolled in studies	192	36.1		
Other ^b	15	2.8		
Income ^c				
AUD 0–249/week	153	28.8		
AUD 250–499/week	161	30.3		
AUD 500–999/week	166	31.2		
>AUD 1000/week	52	9.8		

Note: ^a TAFE/ VET = Technical and Further Education/Vocational Education and Training; ^b Apprenticeship, Certificate III, Deferred, High School; ^c Average weekly, pre-tax from all sources.

3.2. Workshop and Interview Participant Characteristics

Two interactive workshops were conducted with four females and two males in the first group and five females and one male in the second ($n = 12$). The average age of the participants was 20.75 years (range 18–24). Of these participants, there were seven (7) current vapers and five (5) former vapers. The participants lived in Queensland ($n = 7$), Victoria ($n = 4$) and New South Wales ($n = 1$). Semi-structured interview participants ($n = 3$) were all female former vapers, aged 20, 22 and 24 years from Queensland.

3.3. Themes of Barriers and Facilitators to Vaping Cessation

Eleven themes describe factors that act as challenges to or facilitators of vaping cessation (Figure 1). Social Cognitive Theory served as a framework to make sense of these factors and guide the theme development. The themes are situated within SCT’s environmental, personal and behavioural domains. Quotations are represented by survey current vapers (SCVs), survey former vapers (SFVs), or workshop (WP) and interview participants (IPs).

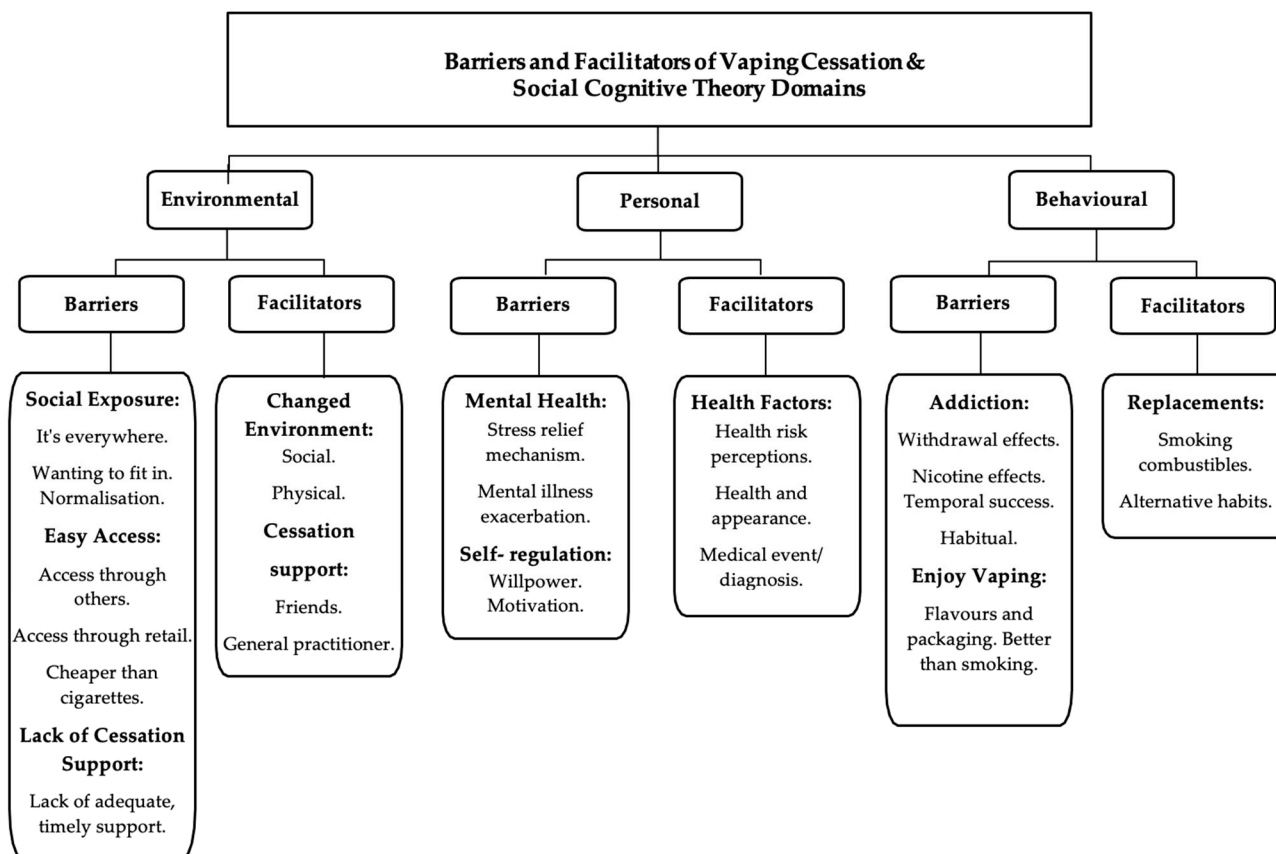


Figure 1. Barriers and facilitators to vaping cessation among participants.

3.3.1. Environmental Factors—Barriers

Exposure

Vaping was described as a social phenomenon that was ‘everywhere’ and ‘more common than wearing shoes’ (SCV), with participants reporting exposure through friends who vaped: ‘My close friends are constantly vaping, so I am always surrounded by it’ (SCV). This exposure was a barrier to cessation: ‘It’s hard because of environmental factors. Friends, buddies and almost the majority vape or smoke around here’ (SCV). Participants expressed a desire to fit in, which, for some, was in response to pressure: ‘It’s hard to quit as there is pressure from your peers to fit in, if you don’t vape and everyone else is vaping then you are just not fitting in’ (SCV). However, for several others, the desire was in the absence of pressure: ‘You don’t like feeling like an outsider... but no one went here, smoke it, smoke it...’ (IP). Vaping was perceived as socially normal and without negative connotations: ‘You could be anywhere and doing it right? Like you could be at uni, at work and no one comments’ (IP).

Easy Access

Participants described easy social access to vapes whilst trying to quit: ‘A lot of people around me have vapes so even if I didn’t have a vape of my own, I always had someone near me with one I could use’ (SCV) and ‘You could ask anyone, any stranger’ (IP). Easy access led to participants re-commencing vaping: ‘My attempts to quit vaping before always failed because a friend would offer me some of their vape and I’d accept’ (IP). Proximity to retail outlets also

proved to be a barrier to quit attempts: *'You can still get vapes everywhere really easily despite legislation, so this makes it really hard'* (IP). A sub-theme to easy access was the lower cost of vapes compared to cigarettes, making vaping an attractive alternative to smoking: *'They're only like, 25 or 30 bucks. And that's so cheap, right, compared to cigarettes'* (IP).

Lack of cessation support

A lack of cessation support was an influential factor for some in their recent failed quit attempt. This was reported as a lack of *'adequate support'* in general and the need for timely support: *'Didn't have access to early intervention supports'* (SCVs). A lack of cessation support was described more specifically regarding the physiological effects of cessation: *'I didn't have adequate resources to deal with withdrawals'* (SCV).

3.3.2. Environmental Factors—Facilitators

Changed environment

A change of environment facilitated vaping cessation for many. This included making a proactive decision to change the physical environment, such as their living arrangement: *'Going away for a week to try and start quitting somewhere I knew I couldn't access a vape'* (SFV). This also occurred less intentionally and without purposeful planning: *'I went camping for 3 weeks and had no access, so it forced me to sweat it out'* (SFV). A change of social environment was also a positive influence on quitting, not just *'staying away from places where people vape'* but also changing social groups: *'I quit because I went into a better social crowd... I think a big part of quitting is the people around you. If you're hanging around people who don't wanna quit, it's gonna be so much harder'* (IP).

Cessation support

Former vapers reported that talking to close friends for support in their decision to quit facilitated cessation: *'Being open with my friends that I wanted to stop, and them hyping me up and supporting me'* (SFV) and *'They all respected my request not to vape around me for the first two weeks of quitting, and they didn't offer me vape hits'* (SFV). The desire to be supported by friends was evident in current vapers' responses: *'I would probably tell my friends about it so they can help me'* (SCV) and *'I would ask friends to keep me accountable'* (SCV). More specifically, this included friends who do not vape or who could be a quitting partner: *'Possibly also try to quit with a friend who vapes at the same time might help in feeling less alone and uncomfortable'* (SCV). One former vaper interviewed cited a romantic partner as being their main support *'forcing'* them to quit, whereas another described this support as an organic process: *'He didn't know that I smoked. It just came up. I hadn't been trying to hide it from him... He provided me an enormous incentive to quit'* (IP).

In addition to friends, current vapers reported seeing a general practitioner (GP) as someone who could give cessation advice and provide emotional support: *'I'd go to a GP because mine is very supportive but also understanding so that helps a lot'* (SCV) and *'Probably my GP so that they could give me advice on where to go or what anti-smoking products to use'* (SCV).

3.3.3. Personal Factors—Barriers

Mental health

Participants' mental health was reported as a contributing factor to the difficulties experienced when trying to quit. Vaping was often used for stress relief, with many reporting they started vaping again during periods of stress: *'I started again because I missed the rush and peace it would bring me in stressful times'* (SCV). Vaping helped participants when *'feeling overwhelmed'* during a difficult time and was compared to how cigarettes were used in the past: *'Just like people back then used to smoke cigarettes... people nowadays are using vaping to cope with stress. It's the same cycle'* (WP). Vaping was seen as an unparalleled stress relief mechanism: *'I have found it quite difficult to break the habit... the action and satisfaction from picking up a vape after a stressful day is not matched by anything'* (SCV).

In addition to stress relief, vaping was reported by participants as being integral to more specific reports of mental health diagnoses, such as anxiety, depression and eating disorders. Participants described how quitting had failed due to an *'inability to manage stress,*

ADHD and anxiety' (SCV). Vaping was seen as helpful in these circumstances, as cited by a participant who *'...got diagnosed with PTSD'* and another describing their mental ill-health: *'I gave up on life, so didn't care that I was vaping'* (SCVs). Quitting exacerbated symptoms and brought on previous anxiety that they had recovered from. The exacerbation of mental illness was further expressed as an emerging issue:

'One of my friends has an eating disorder, and they use nicotine to suppress their appetite. Another friend has depression and uses vapes in a "self-destructive" way. This becomes important, especially when we consider how studies are showing that more and more young people are being diagnosed with mental health conditions' (WP).

Self-regulation

The inability of individuals to control their willpower to resist temptation was a barrier to quitting, described by participants as *'Not strong willed enough'*, *'I didn't have the willpower to decline a hit when someone offered'* and *'I ended up giving in and buying a new vape after a few days'* (SCVs). For others, this self-regulation was more a lack of motivation to achieve their quitting goal, describing their efforts as *'Half-hearted'* and *'It took one minor inconvenience in my life to start vaping again. It's a lot easier to vape than not and I believe it requires a certain state of mind'* (SCVs).

3.3.4. Personal Factors—Facilitators

Health factors

Health risk perceptions facilitated vaping cessation: *'This was the main reason I stopped. The fear of something happening to me because of vaping was enough to keep me away from them'* (SFV). One participant researched how *'vaping and nicotine changes the brain'* to help them understand what is happening when quitting. Similar health concerns helped some participants quit for their health: *'The longer I smoked the more I was concerned about the long-term health effects, and I knew I couldn't do it anymore for my wellbeing'* (SFV). These concerns helped some keep on track: *'I would vape daily, my throat and chest would become extremely uncomfortable and painful, and I knew that this was because of the vapes'* (SFV). Feeling the physical benefits from quitting helped participants stay quit: *'I was no longer constantly out of breath, exercise didn't make me feel so winded anymore, and I stopped getting random lung infections'* (SFV).

Health and appearance appeared to positively influence vaping cessation, with participants describing how their quitting was motivated by how they looked:

'For me... it's super vain, but you talk to everyone now... everyone's getting Botox, lip filler... Everyone's super into, you know, health and wellness or whatever... you need to associate it with vanity to get people because people are vain' (IP).

The occurrence of a medical event or planned surgery was also a health factor shaping vaping cessation: *'I was undergoing surgery that I couldn't vape for 24hrs before or 2 weeks after. The fear of it hindering my recovery got me through the difficult first week period and after that it was much easier'* (SFV).

3.3.5. Behavioural Factors—Barriers

Addiction

Addiction to nicotine was described as a barrier to cessation, with participants describing their quit attempts as short-lived due to their strong addiction: *'I see quitting as full abstinence, which I haven't been able to do for more than a week at a time'* (SCV). The length of time using nicotine contributed to the addiction: *'I started smoking when I was 12, so I think the time I've been smoking and since I was so young has accumulated to a constant need for nicotine products'* (SCV). Intense withdrawal effects made participants *'way too irritated'* and *'depressed, like seeing the world in black and white'*, describing *'terrible migraines'* and how they *'felt like passing out at times or vomiting'* (SCVs). There appeared to be no ideal time for enduring withdrawal effects, described as intolerable whilst working full-time: *'The side effects I get from withdrawal negatively impact my work performance'* (SCV). Additionally, the

habitual nature of vaping was hard to break, with participants reporting it becoming ‘an unconscious action’ (SCVs).

Enjoy vaping

Positive perceptions of NVPs and vaping, such as enticing flavours and colourful packaging, proved too powerful for some when trying to quit. Vaping was seen as ‘so convenient’ compared to smoking and a pleasurable experience: ‘Vaping is just a more satisfying experience, I can do it anywhere, and it tastes better than cigarettes’ (SCV). These factors contributed to difficulties vapers faced when considering the risks and benefits of the behaviour change.

3.3.6. Behavioural Factors—Facilitators

Replacements

Behavioural factors that supported vaping cessation included finding a replacement for vapes. Participants described their success with quitting vaping by replacing the behaviour with cigarettes, which decreased their vaping consumption: ‘I was able to avoid cold turkey by switching to cigarettes, so I could avoid the nicotine for a while and then have a smoke instead of just vaping every couple minutes’ (SFV). The act of smoking combustibles was a less attractive alternative reported as requiring increased effort, supporting vaping cessation: ‘I’m smoking cigarettes instead for nicotine, as it’s a lot more work to go outside and stink of nicotine compared to vaping’ (SFV). The act of only being able to smoke in certain places was described as making it ‘easier to compartmentalise the habit’ (SFV).

Other alternative habits not based on smoking behaviours included listening to music, chewing gum or going for a walk. A few participants reported ‘Trying the lollipop trick, where you have a lollipop whenever you want to vape’ and replacing cravings with another habit such as ‘Drinking water every time I had cravings and eat more sweets and lollies’ (SFVs).

4. Discussion

To our knowledge, this is the first study exploring the barriers and facilitators to young adults’ vaping cessation within the unique regulatory landscape of Australia. The analysis of the insights and perspectives of both current and former vapers contributes to the expanding body of knowledge surrounding young adults’ vaping cessation [13,15,27]. Our findings highlight the complex interplay of environmental, personal and behavioural factors that shape the cessation experiences of young Australian adults. These empirical insights point to critical areas where vaping cessation support programs can be more effectively tailored.

The environmental factors shaping vaping cessation appear to reflect a widespread normalisation of NVP use. Vaping was described as ‘everywhere’, socially normal and without negative connotations, consistent with evidence from young adults in Canada [15]. The social disapproval of others, previously identified as both a facilitator [29] and a barrier to quitting [13], was not evident in participant responses. Rather, participants expressed a desire to ‘fit in’ with or without peer pressure. These findings highlight the need for campaigns to target de-normalising vaping and reverse the social acceptability of NVP use, as was historically successful with smoking [30]. Participants reported retail access as ‘too easy’ despite existing regulatory reforms to prohibit illegal NVP sales and uphold prescription-only access [21]. This contrasts with previous research, where vapers reported the lack of access to nicotine liquid as a barrier when switching from smoking to vaping [18] and may reflect the changing patterns of increasing use. Recent data reported that 87% of Australians aged 14 years and over purchase their nicotine vapes without a prescription [31], reflecting the rapid expansion of illegal markets. The cheaper cost of vapes in comparison to cigarettes also contributed to difficulties in quitting, unlike reports in differing regulatory contexts where vapes are more expensive than combustibles [15,32]. This evidence demonstrates the importance of restricting access to NVPs for therapeutic purposes, supporting Australia’s most recent regulatory changes to ban the sale of vapes in general retail settings [22].

Whilst personal factors in young adults such as vaping to cope with stress have previously been evidenced [15], our findings demonstrate an emerging distinct theme of vaping in the context of mental ill-health with specific diagnoses. Vaping appeared to be an unparalleled method of coping for participants with specific conditions such as depression, anxiety, attention-deficit/hyperactivity disorder (ADHD) or post-traumatic stress disorder (PTSD). Participants described the use of vapes as a necessary tool for managing the symptoms of their diagnosis, contributing to difficulties in quitting. A previous examination of NVP use and mental health comorbidities did not support an association with ADHD or anxiety in young adults, only adolescents [33]. However, more recent evidence shows that Australians aged 18 years and over with a mental health diagnosis were more likely to use NVPs than those without [34]. Increasing trends of mental ill-health among youth and young adults may contribute to vaping use and difficulties in quitting [33]. It is important, therefore, to address underlying mental ill-health as part of vaping cessation support [33]. This includes educating NVP users regarding misperceptions that NVPs help their mental health [35] and informing them that they may instead exacerbate the illness [33]. Such personal health risk perceptions have been demonstrated to facilitate cessation [13,20] and were described by former vapers in this study; however, this did not appear to deter the current vapers. This may be reflective of a lack of clear messaging around the long-term health impacts of vaping and highlights the need to increase awareness of the known health risks, such as nicotine dependence [36] and the risk of subsequent smoking [3].

Behavioural factors shaping vaping cessation among participants included nicotine addiction, intolerable withdrawal symptoms and how the habit of vaping was hard to break, as previously evidenced [15]. Vapers have previously cited a 'fear of relapse to tobacco' when trying to quit e-cigarettes [13]. However, former vapers in this study described using combustible cigarettes to reduce nicotine vaping consumption and are now smoking tobacco instead. This signifies the risk of current vaping behaviours reversing the historical trends of cigarette smoking reduction in Australia [30] and the potential for increasing dual use along with the health risks associated with smoking [4]. Vaping cessation support must focus on harm reduction and, ultimately, the cessation of all nicotine products to address this public health issue [13] and equip young adults with skills and strategies to strengthen their resolve to quit all nicotine products.

Finally, the importance of the environmental factor of cessation support was identified. Participants expressed how the disclosure of their quit intentions to friends could be (current vapers) or was (former vapers) a facilitator for cessation. Friends were seen as accountability support and a part of the quitting journey. Social support has been demonstrated in adult smokers to increase quit intentions [37] and has previously been recognised by adolescent and young adult former vapers as useful in vaping cessation [14]. 'Support from others' was reported as a facilitator of vaping cessation in a study of posts on the social media forum Reddit [17]. However, in an environment where vaping is normalised, social influence is described as a major barrier to quitting [38], and young adults may experience difficulties in approaching friends for support. Education regarding strategies on how to address negative social influence should be included in future vaping cessation support programs to build the confidence of those wishing to quit and enhance potential social support.

Whilst former vapers rarely mentioned seeking help from a health professional, current vapers frequently indicated they would seek support from a general practitioner (GP) for advice on quitting. Vaping-related regulations are rapidly evolving in Australia, with recent planned changes to allow the sale of nicotine vapes as a therapeutic good in pharmacies, intended solely for the purpose of quitting smoking [22]. This will negate the requirement to visit a general practitioner to obtain a script for NVPs and therefore reduce the opportunity for cessation counselling. Young adults, however, appear to seek guidance to quit vaping, highlighting the importance of providing ongoing comprehensive cessation support, as seen with smoking cessation [39]. Future research on the preparedness of GPs and other allied health professionals to support young adults is recommended.

Limitations

This study has several limitations that should be acknowledged. First, the cross-sectional design included a relatively small number of participants in the workshops and semi-structured interviews. Recruiting young adults for health-related research has been recognised as challenging [40,41]. Whilst qualitative research allows for small sample sizes to explore the lived experiences of participants, a more diverse sample could provide additional insights into this population. Secondly, the survey focused on YAs using NVPs who had made a quit attempt in the past 12 months. Investigating vaping cessation among those who have not yet attempted to quit may elicit further nuances regarding barriers to cessation, given their continued use of NVPs. Further, recommendations for vaping cessation support may need to be adjusted to address the needs of young Australians not represented in this sample, such as minority groups, lower socioeconomic status or educational attainment.

5. Conclusions

Our study identifies the environmental, personal and behavioural factors shaping young adults' vaping cessation in Australia's unique regulatory environment. The findings highlight the need to invest in vaping cessation, based on the evidence of young adults' experiences, to better support those who are considering quitting and ensure the success of their quit attempts. Given the reported widespread social normalisation of vaping, support programs should seek to include education that equips young adults with the knowledge and skills on how to manage their cessation practice. Addressing underlying mental health factors with appropriate therapeutic and psychosocial support is also vital to minimise the use of vaping in these instances. Additionally, cessation support must focus on the end goal of total abstinence to not only reduce the risk of harm from vaping or dual smoking but also prevent the uptake of cigarette smoking when trying to quit vaping. Given that young adults report seeing GPs as potential support in the quitting process, it is also important to ensure that health professionals are adequately prepared and financially remunerated to help young adults. These findings may inform vaping cessation support program development targeted to young adults.

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