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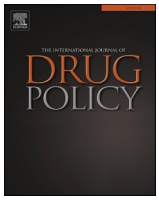

Research Paper

"I've lost my children to vaping": A frame analysis of the Australian media's construction of the "Youth vaping crisis"

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ABSTRACT

Background: Youth vaping has become an issue of extreme concern in the Australian public and political discourse, recently culminating in the announcement of further restrictions on the sale and use of nicotine vaping products (NVPs) by the Federal Government. We examine how youth vaping has been framed in the Australian news media in the six months leading up to the announcement of these new measures in May 2023.
Methods: Drawing a sample from the Factiva database, we conducted a frame analysis on articles published during this six month period, identifying media framings that included the necessary components of a distinct *Problem Definition, Causal Attribution, Moral Evaluation*, and *Treatment Recommendation*.
Results: We identified 123 relevant articles, and four dominant framings being applied. Most common was that of *A Failure of Control,* followed by *A Poisonous Epidemic, A Health Behaviour Needing Regulation*, and *A Moral Failure*.
Conclusion: These findings are discussed in the context of moral panic theory and how framings are constructed by the media in collaboration with policy actors to support particular policy measures.

Introduction

Use of e-cigarettes or nicotine vaping products (NVPs) has increased in many countries, particularly in the last five years (Tehrani et al., 2022) alongside the introduction of easy-to-use disposable devices using salt formulations that facilitate higher nicotine concentrations (Ellen et al., 2023; Tattan-Birch et al., 2023). In countries such as the UK, Canada, USA, and New Zealand/Aotearoa, NVPs have been incorporated into tobacco control efforts, and recommended by some authorities as a valuable harm reduction tool to address the ongoing tobacco pandemic (ASH, 2023; Balogun, 2023; Gottlieb & Zeller, 2017; Health Canada, 2023). Despite evidence to support the harm reduction benefit of NVPs for people who smoke and their efficacy as a smoking cessation aid (Hartmann-Boyce et al., 2022), these products remain hotly contested, particularly in Australia, due to their relative recency, the potential influence of the tobacco industry, widespread non-therapeutic use, aggressive marketing to young people, and the lack of long-term data on health effects (Banks et al., 2023; Hall et al., 2019; Leung et al., 2023).

The severity of the social, moral, and public health dangers associated with increased NVP use has been a subject of ongoing debate, with significant divergence between available evidence, public understanding, and media representations. Australian media reporting on NVPs has included sometimes outlandish claims, such as that they contain *'flesh-eating horse tranquiliser'* (Mcdonald, 2023) or toxic levels of radioactive polonium (Miles & Pollard, 2023), and that vaping can lead to a *'lifetime of gangster crime'* (Harris, 2022). This rhetoric can harm public health efforts. Latest figures from the UK indicate that 11.9 % of young people incorrectly believed vaping was known to be more harmful than smoking, and 32.1 % thought that the harms were about the same (McNeill et al., 2022). Conflicting information regarding the risks of smoking and vaping exacerbates this confusion and further limits any potential public health benefit from NVPs (Svenson et al., 2022). This media environment can also potentially exacerbate stigma and exclusion for young people caught vaping, while simultaneously normalising the idea that vaping is common among young people, thereby reducing barriers to use (Yazidjoglou et al., 2024). Therefore, while heightening the tenor of public and media discourse may be useful to drive policy action, elevating it beyond the evidence can produce confusion and ineffective policy. In this paper we analyse how some of that confusion has come about in the media portrayal of youth vaping in Australia, and how it mirrors other moral panics over drug use.

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The vape debate

The causes of youth vaping are multifactorial. The availability of multiple fruit and other sweet flavourings play an important role in youth uptake, making NVPs more attractive than smoking for many young people (Chaffee et al., 2023; Sidhu et al., 2023). Youth vaping is also positively associated with other forms of drug use (Curran et al., 2018; Lanza et al., 2020; Temple et al., 2017), and having contact with police (Boccio & Jackson, 2021; Jackson et al., 2019), implying many other social and structural forces at play in how the behaviour is distributed in populations. Young people in Australia report using NVPs due to social exposure, perceptions of its normality and acceptability, and the desire to fit in with peers (Yazidjoglou et al., 2024).

While vaping is not harmless, the extent and nature of the harm remains uncertain and debated due to the lack of data on health outcomes associated with long-term use (Banks et al., 2023; Chan et al., 2021; Marques et al., 2021). The acute dangers are often the result of inadequate product regulation or human error, such as children accidentally ingesting e-liquid left out by carers, or faulty devices causing injuries such as burns due to battery explosions (Banks et al., 2023). The risk-benefit trade-off with NVPs also differs for people who have never smoked versus current smokers. Among people who do not smoke, vaping provides no health benefit. There is also evidence to suggest that initiating NVP use can make smoking more likely among non-smokers (Baenziger et al., 2021; Chatterjee et al., 2016). This claim is disputed, however, (Chan et al., 2021; Hall et al., 2019; Mendelsohn & Hall, 2020), and is likely another concern that is difficult to validate or disprove during the acute phase of increased vaping. From a toxicology perspective, NVPs appear to be less harmful than combustible cigarettes, while still demonstrating cytotoxicity and other adverse effects (Akiyama & Sherwood, 2021; Marques et al., 2021).

There are also specific risks to consider regarding use of NVPs by young people, who may be at increased risk of developmental and mental health issues secondary to nicotine use (Overbeek et al., 2020; Yuan et al., 2015). While the hypothesising of these youth specific effects is reliant primarily on animal studies and observational literature (Leslie, 2020), the absence of long-term data makes risk estimation an evolving challenge, rather than a settled question. In this case the absence of evidence is not evidence of absence, given the fact that NVP use has escalated so recently, and health effects can sometimes take many years to become apparent.

For someone who smokes cigarettes, however, transitioning to NVP use is likely to significantly reduce their risk of adverse health effects (Holt et al., 2023). NVP use is also associated with more frequent attempts to quit nicotine use altogether (Jackson et al., 2020). The most recent Cochrane review concluded NVPs were an effective aid for smoking cessation (Hartmann-Boyce et al., 2022), although they may lead to a higher likelihood of long-term nicotine use post smoking cessation compared to nicotine replacement therapies (Hanewinkel et al., 2022). Many countries aim to strike a balance between enabling people to access NVPs as a cessation aid without facilitating non-therapeutic use by underage people who do not smoke (ASH, 2023; Balogun, 2023; Gottlieb & Zeller, 2017; Health Canada, 2023). In some contexts, however, prohibition is taking priority over this kind of balance.

The Australian context

Australia has an increasingly restrictive regulatory regime for NVPs (Gartner & Bromberg, 2019). Use of NVPs containing nicotine is only allowed for therapeutic purposes, such as smoking cessation, and has required a prescription since 2011. Seven of eight states and territories have allowed nicotine-free vaping products to be sold under similar restrictions that apply to smoked tobacco products (minimum purchase age of 18, retail display bans etc.). One jurisdiction (Western Australia) banned the sale of all vaping products regardless of nicotine content in 2014. Because no NVPs have been approved as therapeutic goods in Australia, legal use is only facilitated by regulatory pathways for accessing unapproved therapeutic goods. Theoretically, possession or use of NVPs without a prescription is punishable with large fines and possible imprisonment in some Australian jurisdictions (Gartner & Bromberg, 2019). Despite these potential penalties, disregard for these laws is widespread and NVPs are common in the Australian retailing landscape, where their nicotine content is often not disclosed to make regulatory action more difficult (Gartner, 2023). The black market for illicit NVPs in the state of Victoria alone was recently estimated to be valued between $306.2 m and $503.4 m per annum (Victorian Parliametary Budget Office, 2024). The latest National Drug Strategy Household Survey found 87 % of people that vape reported buying them illegally (Australian Institute of Health & Welfare, 2024).

NVP use has increased particularly among Australian teens. Past month NVP use among students aged 12–17 has tripled from 4.5 % in 2017 to 15.7 % in 2022/23 (Scully et al., 2023). Most adolescent use, however, appears to be short lived, with 29.9 % of respondents reporting ever having vaped, whilst only 4.8 % reported regular vaping, and 3 % vaping daily (Scully et al., 2023). One study involving 70 schools in three Australian states (New South Wales, Queensland, and Western Australia) similarly estimated the prevalence of current regular NVP use to be 5.7 % in 2022 among 14–17 year olds (Gardner et al., 2023). These figures are similar to estimates from other countries with more liberal access to NVPs. For example, 14 % of high school students in the US vaped in the past month in 2022 (Cooper et al., 2022), 18 % of New Zealand Year 10 students vaped at least monthly in 2022 (Action for Smokefree 2025 (ASH), 2022), and 13 % of Canadian youth aged 15–19 years vaped in the past month in 2021 (Statistics Canada, 2022).

In response to the widespread illicit availability of NVPs and reports of increasing youth uptake, Mark Butler, the Australian Federal Minister for Health and Aged Care, announced further restrictions for NVPs (Box 1) in May 2023 (Butler, 2023) that are being implemented throughout 2024 (Brookfield et al., 2024).

These measures mark Australia out yet further for its restrictive NVP regulations, which seem discordant with the moderate tone struck by health authorities such as the Royal College of Physicians (2024). In July 2024 these restrictions were moderated after political negotiations that were required for the passing of the legislation. It was then announced that NVPs would be a pharmacist-only medication from October, meaning they would be available without prescription via pharmacies, while still outlawing all non-therapeutic product sales. This increases accessibility of NVPs, however Australia remains the only country to have implemented this model. Understanding these policy announcements therefore requires further contextualisation, particularly within the media landscape in which they were made.

Moral panics

How drug use is reported in the media can shape public perceptions of the issue and define narratives to which the government and regulatory bodies respond (Cohn et al., 2019; Lancaster et al., 2011). In a content analysis of Australian news media from 2003 to 2008, Hughes et al. (2011, p. 290) observed a common framing of drug use in terms of crime and deviance that was significantly more pronounced for specific drugs and also during *'episodes of heightened public concern'*. Analysis of 1364 Australian print media articles covering methamphetamine use similarly found drug use consistently framed as a legal issue, with people using drugs characterised as violent, dangerous, and deviant (Rawstorne et al., 2020). These reflexive and stigmatising portrayals can bias public opinion and policy away from responses focussed on treatment and support, toward heavy-handed or punitive attempts to regain control over a perceived threat. In particular, the risk of harm to young people may facilitate sensationalist media coverage that contributes to an atmosphere of moral panic.

Box 1
New measures announced to regulate vaping products in Australia

- Restricting importation of NVPs to pharmacies (i.e., no personal importation or nicotine-free vaping product sales via general retailers).
- Increasing minimum quality standards for NVPs including flavours, colours, and other ingredients.
- Requiring pharmaceutical-like packaging for all NVPs.
- Allowing all medical practitioners and nurse practitioners to prescribe NVPs for domestic pharmacy supply without additional approvals (post prescribing reporting is required via an online form).
- Reducing the allowable nicotine concentration and volume for NVPs.
- Banning all single use, disposable NVPs.

Stanley Cohen (1972) first developed the moral panic hypothesis in response to a clash between the youth subcultures of Mods and Rockers, to articulate how the media and public emphasised and escalated incidents of cultural conflict. Cohen's theory of moral panics defined five stages to the process (Box 2).

More recently Goode and Ben-Yehuda (1994) presented an attributional model of moral panics, describing five necessary criteria: concern, hostility, consensus, disproportionality, and volatility. They also differentiate moral panics generated by elites, interest groups, and also via 'grass roots' methods. Critcher (2008) highlights the distinction between this attributional, social constructionist model, and Cohen's (1972) 'processual' model, where panics may be more shaped by the mass media, but can also be considered emergent phenomena without any single driver, arising when the incentives of different groups such as politicians, the media, and powerful sections of the public align. This framework has been developed further in the contemporary neoliberal context, leading to Heir's (2019, p. 883) definition of 'panic-as-regulation', which views moral panics as *'formative moments in the long-term reproduction of social order qua moral regulation'*. Rather than responses to aberrations in the social order, moral panic can also be an operation of power that reliably arises to preserve existing power structures. Hall et al. (1978) claimed a similar process to be at work in the construction of 'mugging' as a youth crime epidemic in the 1970s, which they traced to class and economic issues of the time that required ruling classes to exert more force via the police to maintain hegemony and authority over an increasingly disenfranchised population, which public concern over muggings legitimised and excused. This case study is cited by Critcher (2008) as an exemplar of the processual understanding of moral panic.

Moral panics are liable to flare up around many health issues, such as the perceived moral failings of people who ineffectively manage and preserve their own wellbeing and become a 'burden' on society (Mannion & Small, 2019; Pereira & Scott, 2016). These kinds of issues present a challenge to public health, as they arise due to tension between different values-based interpretations of events, rather than a direct response to empirical data (Brookfield, 2023). The rise of vaping particularly in private and upper-class high schools, causing embarrassment for teachers, parents, police, and governments, is the ideal issue for aggravating this tension and necessitating panic (Toxward, 2021). The political commitment to further restrictions on Australian NVP access and supply therefore presents a valuablecase study to explore the media discourse on youth vaping in Australia, and how contemporary moral panics emerge.

Method

We systematically searched the Factiva database for mainstream media reporting on youth NVP use published in Australia between November 2022 and May 2023. To be included, articles needed to be published in an Australian print newspaper or digital outlet, and mention youth vaping in either the headline or first paragraph. This six-month period was selected as it had been a time of increased media coverage, leading up to a turning point in the debate and policy development around youth vaping, and provided a sample estimated to be large enough to capture the range of media narratives employed, without being so large as to prevent in-depth analysis given the scope of the project.

Duplicates were removed from the sample, including instances where the same article was published across multiple sources. Similar stories published with somewhat different wording and content were recorded as separate stories. Articles were also removed for being a transcript of a TV or radio story rather than print media, being inaccessible behind paywalls or full versions no longer being available. Press release transcripts were also excluded. Details of the selection process are reported in Fig. 1. Initial Factiva search criteria were for the five-year period prior to the government announcement, to provide data for a different study. A subset of the last six months was used for this framing analysis.

Box 2
Cohen's five sequential stages of moral panic (1972)

1. An event, condition, episode, or someone is defined as a threat to the values, safety and interest of the wider society.
2. The media then amplifies these apparent threats through inflammatory rhetoric. These portrayals appeal to public prejudices, creating villains in need of social control (folk devils) and victims (the moral majority).
3. The publicity surrounding the threat creates a sense of social anxiety leading to a public outpouring of concern.
4. Government then responds to the public outcry and frames the alleged threat as being symptomatic of a wider social malaise that must be addressed.
5. The moral panic and the responses to it transform the regulation of economy and society with the aim of tempering public outrage.

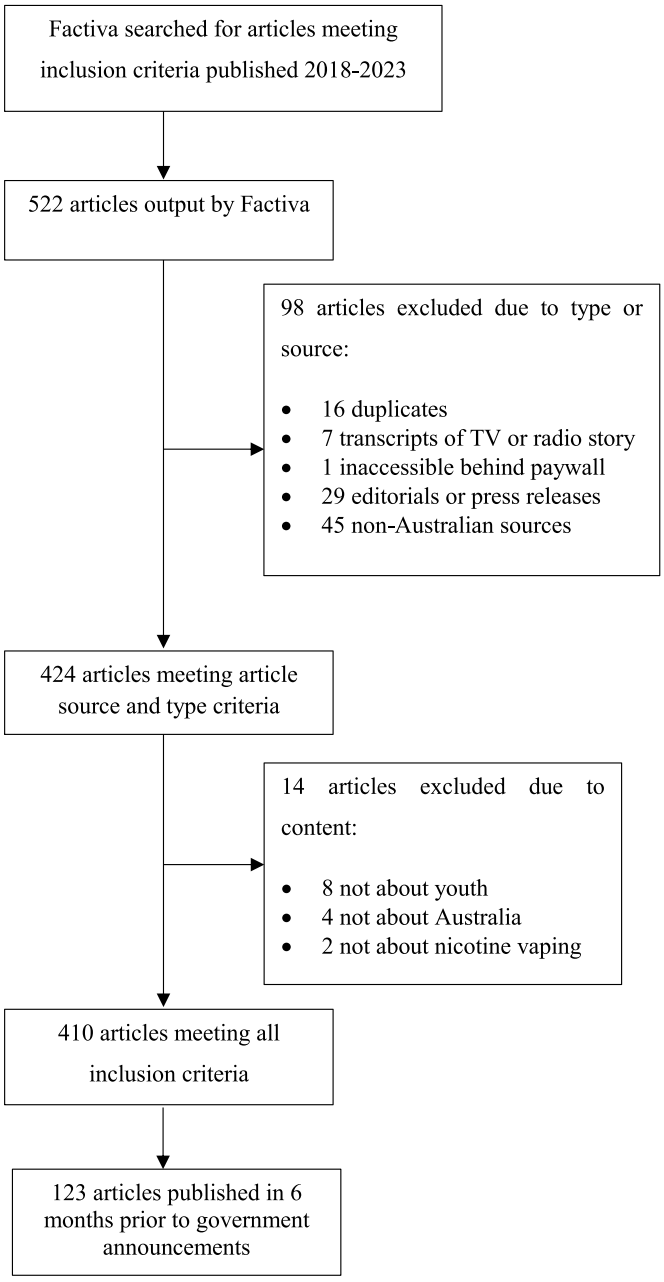

Fig. 1. Flow diagram demonstrating article selection process.

Framing analysis

Framing analysis examines how different aspects of an issue are made more or less prominent through the ways they are presented (Entman, 1993). In the context of news stories, a frame represents a certain view of the world, entailing central organising ideas around which facts, data, anecdotes, and agendas can coalesce (Blood & McCallum, 2005; Carah & van Horen, 2011). A critical framing analysis questions the implicit assumptions and associations present in texts and media, how these compare to established evidence, and also how these repeated ideas influence the world in which they are published and contribute to a specific context in which future media will be received.

For an aspect of our sample to stand alone as an independent framing, it had to include the four components described by Entman (1993) of problem definition, causal attribution, moral evaluation, and a treatment recommendation. While each of these did not have to be present within a specific news story, they were implicit components of the overarching frame observed across stories. As Entman (1993, p. 52) describes:

> A single sentence may perform more than one of these four framing functions, although many sentences in a text may perform none of them. And a frame in any particular text may not necessarily include all four functions.

The first 50 articles were coded first by S.B. to inductively establish frames. During this period, the shape, contents, and terminology of the frames were refined in response to the dataset. Once this process was complete, those 50 articles were re-analysed to ensure the set of developed frames was now stable and could be applied across the dataset without requiring constant modification. Each article was analysed in-depth to identify dominant and subsidiary framings present within the article. To qualify as a dominant frame, it had to be present in the headline and first paragraph of the story and represent the most prevalent framing of the issue in the article. Subsidiary frames were alternative or secondary perspectives also presented in the article.

Results

The final sample meeting these criteria included 123 media articles that were published in the six months prior to the policy announcement, equating to an average of one news story every 1.5 days. Four frames were identified: *A Poisonous Epidemic, A Health Behaviour Needing Regulation, A Failure of Control,* and *A Moral Failure.* Their prevalence within the sample is presented in Table 1, with percentages rounded to the nearest whole number. Thirty-nine stories had only a dominant framing with no subsidiary framing. Fifty-three stories had one subsidiary framing and 32 had two subsidiary framings.

The majority of these stories were published by NewsCorp ($n = 75$), indicating an editorial agenda more strongly emphasising the issue of youth vaping in comparison to the main competing media company Nine ($n = 14$). A small number of other stories were published by the Australian Associated Press ($n = 5$), the Australian Broadcasting Corporation (ABC) ($n = 7$) and other independent sources ($n = 22$).

The different problem definition, causal attribution, moral evaluation, and recommended solution for youth vaping entailed in each of these frames are described below and summarised in Table 2. These findings reveal how these frames occur both within and across published stories. Each story not only enacts its own frame on the subject matter but is itself framed by the wider media landscape.

A poisonous epidemic

The first frame characterised increased youth NVP use as a 'poisonous epidemic', emphasising the uncontrolled escalation of young people using a highly toxic substance leading to a 'public health disaster' (McCormack, 2023) and a 'youth vaping crisis' (Moodie, 2023). Within this frame the problem is defined as the availability and use of toxic, addictive products escalating out of control reinforced by statements

Table 1
Prevalence of each framing device in stories published Nov 2022–Apr 2023.

	A poisonous epidemic	A health behaviour needing regulation	A failure of control	A moral failure	Total
Dominant Framing	$N = 42$ (34 %)	$N = 18$ (15 %)	$N = 50$ (41 %)	$N = 13$ (10 %)	$N = 123$ (100 %)
Subsidiary Framing	$N = 31$ (25 %)	$N = 19$ (15 %)	$N = 23$ (18 %)	$N = 26$ (21 %)	$N = 99$ (79 %)
Total	$N = 73$ (59 %)	$N = 37$ (30 %)	$N = 73$ (59 %)	$N = 39$ (31 %)	

Table 2
Components for each identified framing device.

		Frame components			
		Problem definition	Causal attribution	Moral evaluation	Treatment recommendation
Framing Devices	**A Poisonous Epidemic**	Widespread use of toxic, addictive products is escalating out of control	Addictive nature of nicotine and cultural normalisation of NVPs due to a breakdown of barriers to using in schools.	The epidemic is a tragic situation where something must be done immediately.	'Crack down' and 'stamp out' NVP use through the urgent implementation of widespread measures.
	A health behaviour needing regulation	A culturally shaped health behaviour is putting young people at risk.	Issues with youth mental health and cultural normalisation of NVPs through peer reinforcement.	Moral components are minimised, as youth vaping is a health issue arising from multiple incentives and a lack of education and support for harm reduction.	Enhanced NVP regulation. Expanding harm reduction strategies. Providing further education and support for people using NVPs.
	A failure of control	There has been a loss of control over NVP retailers and over youth, by the government, police, schoolteachers, and parents.	A result of ineffective policing, NVP product design eluding detection, and 'dark advertising' to young people via social media platforms.	There has been a moral failure on the part of parents and police complicit in NVP normalisation, and a decline in behavioural standards among young people.	Increase control over young people and NVP retailers through vape detectors in school, increasing surveillance of children at school, and criminalising most NVP use.
	A moral failure	Personal morals have broken down for individuals who use NVPs, NVP retailers, and politicians that do not condemn the issue strongly enough.	Character defects result in ineffective and insufficient responses to NVP use by individuals, industry bodies, retailers, and politicians.	Children's wellbeing is being inexcusably damaged by retailers, and other youth who promote and normalise NVP use. Regulators have failed to protect youth.	Personal censure for individual offenders via exclusion from debate, school expulsion, and delegitimisation of non-prohibitionist perspectives.

that NVPs are *"a public health menace"* (Davey, 2023b) and *"a public health disaster in the making"* (Sunshine Coast Daily, 2023).

A key example of this frame is the article published by the Guardian: *"'I've lost my children to vaping': the tragic stories behind the soaring rates of youth addiction"* (Davey, 2022). This story features a doctor who reports supplying his 14-year-old son cigarettes to help him stop vaping. The story then refers to anecdotal evidence from doctors, teachers, and psychologists reporting that youth vaping rates have climbed *'rapidly'* in the previous 12 months. The story includes claims by the health minister, Mark Butler, that NVPs are being marketed to children. Another mother is quoted saying *'when he's clean from vapes he's an early, good sleeper … but on vapes he stays up late and can't get up for school'*. Her son purportedly became verbally abusive and aggressive when she tried to hide his vape from him. She also reports that her son gets vapes and *'drugs'* delivered to the home *'faster than Uber Eats'*, that he had been expelled from his private school, and that her younger daughter had followed a similar path, with the mother ultimately saying *'I have lost my children to vaping, and it is heartbreaking'*. The unspoken implication of the article is that these two dramatic vignettes are representative of the young people constituting the *'soaring rates of youth addiction'*.Data on the rates of youth nicotine dependence rather than any or past use is not mentioned.

Present in this story are the voices of parents, doctors, and politicians. Options for intervention include replacing vaping with tobacco and *'shouting'* (in the case of the GP father), federal reforms on product regulation, and calling Quitline. Absent from the story are the voices of the children and teenagers about their experiences of these events. Discussion of the reasons for the vaping is limited to the addictive nature of nicotine, commercial marketing activities, and the cultural normalisation of NVPs due to a breakdown of barriers to using nicotine in schools and among youth. There is no discussion of how this behaviour interacts with other parts of the young people's lives, and other social issues that may have contributed. The article also does not cover effective ways to engage with young people experiencing nicotine dependence. It is notable that the narrative of vaping is that it will *'alter their educational and life trajectory'*, while smoking tobacco is rarely discussed in these terms.

The moral evaluation here is focused on the tragic nature of youth vaping and the imperative for something to be done. Characterising the phenomenon as an epidemic narrows the possible treatment recommendations to urgent widespread measures to 'crack down' (Davey, 2023a) and 'stamp out' (Wachsmuth, 2023) NVP use. Therefore, this framing facilitates intensive and rapid interventions in response to a desperate situation.

A health behaviour needing regulation

The second framing approached youth NVP use as a health behaviour in need of regulation, with a focus on harm reduction, treatment and support for people using NVPs recreationally or who had developed nicotine dependence, and product regulation through Australia's Therapeutic Goods Administration and other bodies. This frame was much less common. Under this frame, the youth vaping problem is defined as a culturally shaped health behaviour which is putting young people at risk, causally attributed to issues of youth mental health, human psychology in response to novel substances, and cultural normalisation. This viewpoint minimises the moral components, with NVP use understood pragmatically as a situation in which people respond to incentives and require support to reduce drug-related harm. The recommended solution is the enhanced regulation of NVPs, expanding harm reduction strategies, and providing further education and support for young people using NVPs. This was best exemplified by articles such as *'How can I help my teen quit vaping?'* published in *The Conversation* and authored by an expert in health promotion and behaviour change. This article treats NVP use as an issue of motivation and incentives, to be managed compassionately with practical strategies tailored to the individual without moral judgement or stigmatising young people who vape. The author advises:

> There are many reasons people vape. Among them is a vaping industry, with deep pockets, that's expert at manipulating young people to start and continue vaping. So be compassionate and try not to judge your teen. Lecturing, criticising and being punitive won't help them quit. Position yourself as someone they can rely on.

This article refers to the predations of the NVP industry and alludes to potential regulatory failures driving the issue, but also acknowledges the multifaceted issues contributing to youth vaping and emphasises responses that are treatment and support oriented, rather than punitive.

A failure of control

The third framing focused on the law-and-order aspect of youth NVP use, describing the situation as primarily a failure of control over NVP retailers, marketers, and over youth themselves, whether by the government and police, schoolteachers, or parents. This has been especially salient in stories about mass school suspensions and 'scandals' often involving elite private schools where NVP use has been discovered (Toxward, 2021). This frame supports solutions that increase control over young people and the vape market, such as installing vape detectors

in school bathrooms, locking school bathrooms to prevent student access, rebuilding toilet blocks to be more transparent (to increase surveillance of children) and criminalising most NVP use.

A classic example of this framing is the article *'Big admission on Aussie vaping law'* (McLeod, 2023) published by Nine Entertainment, which situates the issue of *'children vaping'* in the context of current requirements for NVPs to be acquired by prescription. David Littleproud, the leader of the National Party in Australia, is quoted blaming the prescription requirement for the *'explosion'* in illegal NVP sales, which is contrasted with current government plans to *'toughen border controls'*. In this news article, a Public Health Association of Australia spokesperson calls Littleproud's claim dangerous, and likens proposals for regulating NVPs like cigarettes to committing *'today's children and future generations to lifelong nicotine addiction'*. It is emphasised by the authors of this news article that Littleproud's political party, the Nationals, still accepts tobacco industry donations. Each of these points are relevant, however there is little interrogation of why current regulations are being disregarded, or why similar controls are not being considered for tobacco products. Only two regulatory options are presented (the same framework as cigarettes or further intensification of the current prescription model), with one negated by statements that it would be dangerous and *'isn't expected to be taken up,'* and an allusion to a conflict of interest by the politician proposing the model. (It is notable that since this article was published, Australia has indeed adopted a third option by making NVPs a pharmacist-only product). The story reports facts and accurate statements but presents them in an order and arrangement that has the rhetorical effect of emphasising a fundamental loss of control as the primary issue requiring redress. Simultaneously the story leaves out any reference to actual evidence regarding the potential harms of NVPs, only referring to *'several health experts'* that criticise the regulation proposal. The crisis that youth vaping presents is assumed and unquestioned, while the article projects an imagined world where governments can and should effectively *'clamp down'* on NVP use. Possible secondary or unintended effects are similarly left out of the frame.

A moral failure

The fourth and final frame was that of a moral failure, enacted either by reckless youth and individuals using NVPs, companies motivated by greed and exploitation, or corrupt politicians obfuscating the issue and enabling harm. This framing takes a more explicitly personal and individualised approach, and often focused on specific instances of behaviour to generate its narrative around vaping. Here the problem definition is focused on personal characteristics, with the problem being that people are reckless, greedy, and corrupt, allowing NVP use to increase and youth vaping to become prevalent either through their own personal use or allowing others to use NVPs. One installer of vape detection devices reports how previously schools were declining his service, as they would tell him that *"we have good kids and our kids don't vape",* whereas now they were saying *"when can we get them? Everyone's vaping and it's gotten out of control"* (Roy, 2023). In this framing, vaping represents more than a harmful behaviour; it means the kids are no longer 'good'. The recommended solution is typically personal censure, with harmful or dangerous individuals being managed through exclusion from debate, school expulsion, and delegitimising the perspectives and opinions of people who use NVPs.

The framing of moral failure was most salient in the spate of stories from both News Corp and Nine Entertainment about a video of a teenaged mother holding a vape device to her 11-month-old son's mouth, with headlines such as *"'I wish I didn't do it': vape baby Mum"* (Cuneo, 2023). Another article from this incident published in the Daily Telegraph gives more details on the consequences for the mother. It foregrounds the apologetic 16-year-old, assuring the reader she has learnt a *'massive lesson'* after the video was posted. The story reports the girls' mother giving the context that *'it's not easy for her, she's 16 and she's on her own … she's trying her best and she is a good mum'*. The article then refers to the torrent of abuse the girl had received as the result of the media reporting and quotes multiple aggressive social media posts made about her, including a prominent radio host posting that *'this is one of the WORST things I've ever seen'*. Confrontational posts by the 16-year-old in response to the online reaction are also quoted, such as *'every c*** got the hide to sit there and talk about me and my child, take a look in yas own backyard'*. The article closes by saying that the family have had to travel interstate out of fears for their safety, and police are investigating death threats made against her. This article minimally acknowledges the struggles of the young woman in question, before giving more space and detail to the aggressive insults posted online, further amplifying the abuse. The story also presents the young woman's own words in an unflattering light without considering whether further reporting of the event will exacerbate the negative impact on her life and further disseminate the vitriol she has experienced. NVPs are positioned at the centre of the story, both as the sign of moral contamination and a tool of those who are morally suspect.

Discussion

These findings demonstrate how the dominant framings of youth vaping in this sample of Australian media stories focused on the concept of epidemics and the need for more control over individuals, with a minority presenting this form of drug use as a health issue in the way other harmful drug use is increasingly understood by individual consumers, health services, and governments internationally. These framings exacerbate and dramatise the morality and urgency of the issue. Vaping in Australia has become the ideal subject to trigger a moral panic. Media attention has been captured by a *'considerable moral disturbance'* (Young, 2009, p. 4) in the form of NVPs spreading through schools across socio-economic levels (and particularly schools with higher income families). Its presence challenges the authority and competence of teachers, police, and health authorities, incentivising each of these institutions to demonstrably respond. A school "vaping epidemic" is an easily understandable narrative from which the media has derived regular stories that generate outrage, following the well-worn path of previous 'epidemics' of drug use or other stigmatised behaviour, but with an eye-catching and literally colourful new central figure.

Public health advocates, irate teachers, and desperate parents may not consider themselves to be engaging in morality work, but instead straightforwardly responding to a tangible and concrete threat to physical health in the form of NVPs, in the same way we might respond to a novel water pollutant. The framing of media stories can reflect, however, how the management of public health issues interacts with issues of identity, social capital, and political expediency, and the ultimately rhetorical purposes that both hard data and anecdotes can serve.

The media and others have constructed the NVP debate with the wellbeing of children at its centre, providing a simple and powerful way to engage audiences. Issues that threaten the health and safety of children resonate with parents and carers who are deeply emotionally invested, and anyone involved in the cause may then feel easily justified in whatever solutions are promoted regardless of possible secondary or unintended consequences. Similar constructions have been employed in previous news cycles around drug use and other social issues, to the point where 'think of the children' has become a cliché, even while its rhetorical power remains undimmed. When this cliché is invoked, critique becomes difficult, since the morality of the situation has been constructed in such simple terms that other concerns about NVP discourse or policy become secondary and minimised, such as the risk of exacerbating youth NVP use by normalising the behaviour (Yazidjoglou et al., 2024), justifying harmful responses such as school exclusion, and reinforcing the stigmatising rhetoric around drug use and addiction which researchers and advocates have worked hard to address (McGinty & Barry, 2020; Volkow et al., 2021).

Tunnel vision

This sample of news stories significantly privileged the perspectives of politicians and health experts that are critical of NVP use and generally favoured further restrictions on NVPs. There is ongoing debate, however, regarding the public health impact of NVPs (Chan et al., 2021; McNeill et al., 2022; Samet & Barrington-Trimis, 2021) that is not present in these articles. The consistent framing of youth vaping as an issue of inadequate control and enforcement constructs multiple stigmatised enemies and drives the debate towards binary conclusions. By focusing on the actions of individual retailers and people that use NVPs, how they contradict social values and norms, and characterising their actions as a 'disaster', 'crisis', or 'epidemic', the discourse moves further away from discussing a complex problem requiring nuanced solutions, and into a state of panic necessitating heavy-handed action and the expenditure of political capital.

In the final stage of Cohen's (1972) framework, a moral panic has a transformative effect on legislative, regulatory, or law enforcement bodies, as these organisations try to respond to the public outrage. The Federal Minister's announcement in May 2023 could represent this culmination in Australia. The Australian Federal Government's original policy proposals were attempting to transform the NVP market and the use of NVPs in a way that disrupted general retailing businesses, criminalised NVP users, and would likely require the reallocation of funding to enable law enforcement to tackle a now illicit trade. Concerns regarding these policies are left unaddressed, such as the potential distortion of the differences in risk perception between NVP use and smoked tobacco, and the inconsistency in regulation of a lower risk form of the same drug (nicotine) that is widely sold in Australia in a more harmful form (tobacco cigarettes) (Bonomo et al., 2019).

Dissent generally occurs either in stories written by individual advocates for NVPs (Mendelsohn, 2023), or voiced by political actors whose biases are highlighted and opinions discredited (McLeod, 2023). While expert opinion was frequently included in these articles, variations in expert opinion were rarely emphasised or presented as valid. Through negation and omission, and simply repeating newsworthy quotes, frames such as 'a poisonous epidemic' are constructed and legitimised over time. If journalists often rely on the same sources, they will tend to define problems in the same way these sources do. The need to present a simple and eye-catching narrative in few words can limit nuanced discussions of complex issues. Without necessarily being directly manipulated or manipulative, therefore, the media landscape may present multiple solutions for an issue like youth vaping, but only validate and amplify a narrow range of options.

Sources of panic

The actions of the media must be understood in the wider context of incentives to which they respond. The media contribute to a cyclical process in which public outrage is generated, politicians respond with statements that generate additional alarm solidifying support for a proposed policy response, which is reported by the media, generating additional public pressure for policy action. These contributions to the state of alarm by multiple actors within and external to the media may represent aspects of the 'panic-as-regulation' process, where panic that is facilitated or elicited can spur or justify regulatory efforts that would otherwise have received greater scrutiny or criticism (Hier, 2019).

Media outlets are frequently not neutral in how they report and present events; however, various actors contribute in an interactive and dynamic process, with influence flowing between governments, the media, law enforcement, health services and advocates, and the public (Hier, 2019). Commercial actors also play a role and seek to influence the debate in favour of less regulation (McKee & Stuckler, 2018) or to promote commercial solutions (e.g. vape detectors). Although the majority of articles referenced expert opinion, in most instances the quotes were brief and seemingly selective, with greater replication of quotes with alarmist tones. Journalists may accurately quote parents and professionals, however the overall story and broader media landscape in which they occur (the framing) determine the way they are received, and the impact they generate. Furthermore, the contemporary context of digital and social media has exacerbated the fluidity of this process, arguably allowing moral panics to develop more easily without needing the energising authority of elites and experts, giving people the ability to exorcise their anxieties through participation in setting 'digital wildfires' around ever evolving targets of concern (Hier, 2018, p. 7), such as the example of the teenage mother exposing her baby to nicotine. These 'participatory panics' further expand the repertoire of processes that can be grouped within the moral panic framework (Walsh, 2020, p. 846).

The media reacts to available stories and the shifting desires of their audience, while also generating an environment where similar stories are identifiable, more easily consumed, and well received. Balanced and non-sensationalist framing of an issue may be considered less newsworthy and in a competitive media landscape, more novel and 'shocking' examples are prioritised. Additionally, media stories (or academic articles) about NVPs that provide balance by incorporating multiple framings, including arguments in favour of harm reduction for adults who smoke, are in the unfortunate position of appearing to side with seemingly careless libertarians or even tobacco companies. This allows narratives and framings to be somewhat self-regulatory and self-perpetuating, as adherence allows actors to avoid risks as well as to participate in consensus. Defusing the panic over NVPs will therefore require not only media adherence to higher standards, but also greater efforts by those outside the field to limit its opportunities to confirm existing biases.

Constructing frames

The construction of framings within media stories can be a subtle process. Youth vaping is made part of a larger moral discourse partly by its prominence in stories about other crimes or events that receive sometimes oddly wide reportage. Examples include a video of a girl holding a NVP up to a quokka (a native Australian macropod species that is vulnerable to extinction) on Rottnest Island, an incident that received press attention in New Zealand, the UK, and India, the global significance of which now seems obscure. The incident was reported with quotes from the RSPCA describing it as *"disturbing"* and *"completely and utterly irresponsible and unacceptable for this poor defenceless, vulnerable animal to be subjected to that kind of cruelty"* (Livingstone, 2021). Other more serious examples include a man allegedly using the offer of NVPs to contact underage girls and assault them (McEachern, 2023), or a teen being hit by a car after a dispute over an alleged NVP sale (Priest & McDonald, 2021). These crimes are newsworthy events, however the foregrounding of NVPs contributes to an overall narrative that the products themselves are the source of the harm and risk, rather than the predatory or aggressive behaviours of people. This could be considered an example of what Falkof (2020) calls 'narrative layering' within and between moral panics, where moral panics draws from each other's targets. The epidemic of youth vaping can therefore be supported by the concurrent 'epidemic' of youth crime in Australia, and endemic concerns over the next generation's behaviour.

Youth vaping was also frequently discussed in a style that may seem arcane in the contemporary context of increased understanding regarding stigma and harm reduction. Rather than portraying NVP dependence as a health condition, more often, doctors and others refer to the risk of *'creating a generation of children addicted to nicotine'* (McCormack, 2023). Parents are quoted using the language of addiction associated with much more harmful substances, such as being *"clean"* (Davey, 2022). Associating NVPs with other harmful and addictive drugs through language choices raises the stakes of the story and both contributes to constructing the frame and builds on associations the audience may have with these language choices. Moral panics can in this way also be understood as a media 'genre', revealed by the ways familiar

tropes and phrases tell an old story with new characters (Falkof, 2020), but with the same harmful effect on those cast as villains or invoked as victims.

Limitations

This analysis of Australian news media has several limitations. The analysis only includes the text of articles without the associated images, which may also convey powerful meanings. Similarly, we did not include broadcast media such as television and radio. Another limitation is that this analysis was unable to determine the distribution and prominence of each of the frames in terms of audience reached, as this becomes increasingly difficult with multiple digital reproductions of stories across news and social media. We can, however, characterise the tone of this coverage as often inflammatory and escalatory, and identify how news publishers in Australia have aligned with Cohen's (1972) framework regarding how moral panic can manifest.

Conclusion

This analysis indicates that the dominant framings within the Australian news media have contributed to a moral panic over youth vaping, culminating in a yet more restrictive government policy agenda which has been constructed as the only morally, practically, and politically viable option, despite the sometimes fierce ongoing debate regarding NVPs within public health, clinical research, and criminology. While the discourse around youth NVP use has intensified within news media, this also represents only one aspect of a mutually reinforcing cross-sectoral system that allows certain framings to gather speed and become entrenched. Significant work has been done in the alcohol and other drugs field to counteract similar narratives of poisonous epidemics, moral failings, and punitive responses to substance use (Malinowska-Sempruch & Lohman, 2022; McGinty & Barry, 2020; Volkow et al., 2021). Those in the media have the duty to consider their own moral and social responsibility with regards to these issues, whereas it is the responsibility of others to regard the media as a powerful and unpredictable force that contributes to the creation and framing of the issues on which it reports. We recommend that public health experts assist in addressing potentially harmful media reporting by promoting adherence to best-practice guidelines when reporting on NVP use, such as the *Mindframe* guidelines (Everymind, 2019). While sensationalist media reporting of the youth vaping issue has a utility in spurring regulatory reform and policy action, the potentially harmful impacts such as further normalising youth vaping (Yazidjoglou et al., 2024), stigmatising young people, and exacerbating public confusion about the relative harms of vaping and smoking (Svenson et al., 2022), need to be considered.

Author contribution statement

Each author certifies that their contribution to this work meets the standards of the International Committee of Medical Journal Editors.

CRediT authorship contribution statement

Samuel Brookfield: Writing – review & editing, Writing – original draft, Visualization, Validation, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Nathan A. Chye:** Writing – review & editing, Visualization, Formal analysis. **Nicholas Carah:** Writing – review & editing, Methodology, Conceptualization. **Coral Gartner:** Writing – review & editing, Methodology, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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