COLUMN

Unpacking vaping in schools

It is critical that we gain a better understanding of students, teachers and parents' knowledge, attitudes and experiences of e-cigarette use to inform school-based prevention strategies.

Background

Electronic cigarettes (e-cigarettes or 'vapes'), are battery-powered devices that heat liquids containing nicotine and/or other chemicals to produce vapour. "Vaping" is the act of inhaling roduced by an e-cigarette [1]. The use of e-cigarettes is rapidly increasing, hong young people. The 2017 Australian Secondary Students' Alcohol and Drug urvey indicated 14% of 12 – 17-year-olds had ever tried a vape, with 32% reporting using a

Nothing new under the sun
May 13, 2022

Unaccredited registrars: have they been forgotten?
May 13, 2022

Unpacking vaping in schools
May 13, 2022

Doctor innovation
May 13, 2022

Your Quality Care: Taxed
May 13, 2022

Recent Media Releases

Unpacking vaping in schools
May 13, 2022

AMA (NSW) signals high hopes for a strong health budget
May 12, 2022

Rural he inquiry h desperat

vape in the past month [2]. The pandemic, however, has affected the collection of new data and anecdotally we know the figures are higher.

There is emerging evidence of the harms associated with vaping, particularly for young people. Young people who use e-cigarettes, either with or without nicotine, are on average three times as likely to take up tobacco smoking as those who have not used e-cigarettes [3]. There is also evidence of other immediate health risks associated with e-cigarette use, including e-cigarette, or vaping, product use-associated lung injury (EVALI) [1].

In early 2021, Principals from western Sydney high schools informed us about the rise in student vaping observed across all year groups and expressed their concerns about the impacts on student health, behaviour and learning. They directly appealed to our team for help in trying to tackle this problem.

Before an appropriate school-based intervention can be developed, it is important to understand high school students' knowledge and understanding of vapes, beliefs about the potential benefits and harms of vaping, and experiences of vape use. Adolescent focus group studies have been conducted in the UK [4, 5], Canada [6], and the US [7] however, there is limited information in the Australian context. This is particularly important in western Sydney, where there are additional socio-cultural factors to take into consideration. In addition, few studies have included parents and teachers, or have taken the discussions one step further to explore "where to next"? It is vital that this work is conducted in a timely fashion to inform school-based prevention programs.

The aims of this project were to (1) explore high school students', teachers' and parents' knowledge, attitudes and experiences of e-cigarette use, and (2) determine what vaping information is important to adolescents, and how to effectively communicate vaping prevention messages. The pilot session findings will inform themes for a larger research study we are conducting in 2022.

Methodology

In partnership with one western Sydney high school, we conducted consultation sessions with students, teachers, and parents during school Terms 2 and 3 in 2021 (see Acknowledgements).

Study design

The school selected a group of interested students to take part in a 90-minute face-to-face (F2F) consultation session. We held a 60-minute F2F session with group of volunteer teachers. Due to the COVID-19 Delta outbreak and school closures, the 60-minute parent session was conducted via Zoom online meetings platform. Specific activities and questions were developed for the student, teacher, and parent sessions. Questions were broadly categorised under four headings: vaping knowledge, attitudes, behaviours, and prevention. The student and teacher sessions involved a combination of interactive activities, small-group brainstorming, and opportunities for open discussion. For the zoom parent session, we used a focus group format to allow for in-depth discussion.

Data analysis

All qualitative data was coded line-by-line and subject to thematic analysis. The data was entered into Microsoft Excel, coded, and organised into themes and sub-themes. Both

l deductive approaches were used – some themes were predetermined based
ure in this field, while others emerged during analysis. Initially, student, teacher,
eidentified responses were analysed separately. We then explored similarities and differences in themes and sub-themes between the student, teacher, and parent groups.

for more funding, AMA (NSW) says
May 6, 2022

Flu season around the corner – time to plan
April 26, 2022

Injured workers deserve timely access to care: AMA (NSW)
April 23, 2022

Results

Participant characteristics

Nineteen students from years 7 and 10 (aged 12 – 16 years) took part in the student consultation session. Twenty-four teachers took part, representing a diverse spread of faculties. Six parents were involved in the zoom session.

Key themes

Social influence

Students, parents, and teachers identified social influence as a significant contributor to e-cigarette use among adolescents. Peer influence was the main sub-theme that emerged, including peer pressure, a desire to belong, and to *"look cool"*. All participants identified the pervasiveness of vaping at school across all year levels, with students vaping in the bathrooms, playground, and the classroom e.g., *"Students will sometimes have to line up to use the toilets because there are people vaping inside the cubicles"*. Teachers identified that anywhere from 20-60% of students were vaping.

Social media also emerged as a form of social influence, whereby "influencers" had contributed to the perception of vaping as the cool thing to do e.g., *"videos on social media make it seem ok. Influencers do tricks with the vapes"*. TikTok, Instagram and Snapchat were the main social media platforms identified.

Incentivising product features

Students, teachers, and parents all identified specific design features of vapes as appealing to adolescents, including the discreet nature of the devices, the pleasant taste and smell, the packaging, price, and "the buzz". They also reported that vapes provided an alternative to smoking. The discreet nature of vaping devices was of particular concern to parents, who felt that this was aiding adolescents to smoke in any environment without getting caught *"when they get caught, they can pass it easily to a friend to put in a pocket and walk away."*

Intrinsic motivators

All three groups described intrinsic motivations such as stress-relief as a reason adolescents vape e.g., "*it is for stress relief …. It relaxes him and calms him down and he forgets about the problems at the time."* One parent indicated that they were not sure whether the stress-relief was due to the physiological effects of the vape, or whether there is an image attached to smoking as a relaxing pastime. Teachers saw vaping as an act of rebellion e.g., "*They are driven to it due to our awareness of them doing it*", whereas parents felt that risk-taking behaviours were a normal part of the teenage experience. One parent suggested vaping had replaced alcohol use for the current generation.

Risk perception

Students listed many harmful effects of vaping for both the health of the individual and others through second-hand smoke exposure, even identifying behavioural effects such as reduced concentration and *"community violence."* Students also recognised the addictive nature of vaping but despite this, they still felt it was *"not as bad as smoking".* Both teachers and parents felt adolescents are unaware of, and indifferent to, the harms of vaping e.g., "*They think because the information isn't out there its ok. Because there aren't long term studies ses cancer, it causes lung damage. Just so blasé*." Teachers and parents were of the long-term health effects of vaping and contents of vapes. Questions sed about the legality of vaping revealing confusion surrounding the laws in Australia. Parents indicated that this lack of understanding was hindering their ability to

communicate with their children e.g., *"and I myself don't know what's in the vapes so it's hard for me to give her the facts and evidence when I don't really know".*

Accessibility

All three groups agreed that e-cigarettes are easily accessible to adolescents through channels such as friends and family, social media (particularly Snapchat), and online websites (Gumtree, eBay, Amazon). Students also mentioned local suppliers, with parents saying that under the counter sales were occurring through local tobacconists. Students, teachers, and parents all told us that senior students are supplying vapes to younger students at school. One parent expressed that this was done for money-making purposes e.g., *"no she sold it to make money. And you know what, it sounds like there is a big business there".*

Sources of information

Parents identified that their sources of vaping information were their children and friends, whereas students and teachers also identified reputable sources such as NSW Health, PDHPE lessons and professional learning sessions delivered at school. All three groups named social media as a source of vaping information e.g., *"get their info on vaping from TikTok, Instagram and Snapchat" (teacher quote).*

Strategies for vaping prevention

Students and teachers acknowledged several vaping prevention strategies that had already been tried by their school, including distribution of information sheets for students and parents, locking the toilets during class times, checking the toilets during lunchtimes, and one-on-one conversations with the Deputy Principal if caught vaping. Locking the toilets during class times was one strategy that teachers felt was successful in reducing vaping at school. Teachers felt stricter consequences were needed, especially for those caught dealing at school.

Between-group comparison showed differences in opinion about school-based prevention strategies. Students and teachers felt peer-led initiatives were needed. Moreover, students felt that it was the responsibility of students to call out those who vape at school e.g., *"if you don't speak up you are part of the problem".* Parents felt that if a student stood up and said don't do it, it would be *"labelled as a goodie two-shoes".* Students and parents emphasised the need for vaping education to be "truthful" and to come from reputable sources. Parents liked the idea of providing vaping education as an alternative to suspension for students caught vaping at school. However, teachers felt that giving health information to students would have no impact on their vaping behaviours as there is *"no scary evidence yet!"*

Social media and TV advertising were identified as potential avenues for disseminating vaping prevention messages. Students suggested using someone influential such as a famous TikTok influencer to share these messages. Both teachers and parents raised the idea of using shock value in prevention campaigns but were unsure whether this was an appropriate strategy. Finally, teachers and parents saw value in relating the harms of vaping to short-term impacts on sports performance and using sporting heroes/idols as vaping prevention role models.

Figure 1. Infographic with summary findings from Unpacking Vaping pilot consultation

n

The Unpacking Vaping pilot consultation sessions provided preliminary insights into the vaping knowledge, attitudes and experiences of students, teachers, and parents. Several reasons were identified for why adolescents vape, including social influences, stress-relief, and incentivising product features. These findings are supported by published literature [5, 7, 8]. Peer influence has long been acknowledged for its pivotal role in influencing adolescent health behaviours such as smoking [9, 10]. Throughout the consultation sessions, senior students were identified as important influences on the vaping behaviours of younger students, both through role modelling, and the distribution of vapes and vaping information. Peer-led initiatives, particularly those that engage older students as vaping prevention advocates, is one prevention strategy that could be considered for schools. Trials of peer-led vaping prevention programs in the US have shown promising results, including a reduction in student's likelihood to begin vaping [11-13].

Teachers felt that anywhere from 20 – 60% of students are vaping; a significantly higher proportion than indicated by national surveys [2]. Students across all year groups were known to be vaping, with students regularly and openly vaping at school. This normalisation of vaping at school is likely to have an impact on adolescent vaping attitudes and behaviours. The ease with which adolescents can access vapes was another key theme that emerged. The Australian Government introduced legislation on 1 October 2021 prohibiting the purchase of nicotine-containing e-cigarettes or e-liquids without a prescription [14]. Future consultation sessions should explore the impact of this legislation on e-cigarette accessibility and pricing.

The importance of family, in particular parental role modelling, was not raised in any of the consultation sessions as an influence on adolescents' decisions to vape. This is despite evidence showing exposure to smoking at home as a risk factor for continued e-cigarette use in adolescents [13]. Students identified parents as a source of vaping information, however parents felt that their lack of understanding of the health impacts and laws on vaping were preventing them from having meaningful discussions with their children.

The appealing flavours of vapes was identified as a product feature that directly appeals to adolescents. In the US and Canada, the sale of flavoured e-liquids other than tobacco and menthol is prohibited. Similar policies may be necessary in Australia, as has been recommended by organisations such as the Lung Foundation. Teachers, students and parents also identified stress-relief as a reason adolescents choose to vape. There is evidence for an association between vaping and mental health effects such as depression and anxiety [15, 16]. This information should be included in adolescent vaping education.

Parents identified the influence of industry marketing on adolescent vaping behaviours, whereas this was not identified by students or teachers. Parents were more aware of the covert advertising that occurs through social media "influencers", whereas students seemed to view influencers as peers exhibiting "cool" behaviours without acknowledging the mechanisms at play behind the scenes. Research has demonstrated the significant exposure of Australians to e-cigarette marketing through social media platforms such as Instagram and Twitter [17, 18]. Greater education of students on how to recognise, critically analyse and respond to industry marketing is necessary as a vaping prevention strategy.

There were differences of opinion between the three groups with regards to the best approach to prevent adolescent vaping. Students and teachers saw the value in targeting adolescents through social media, as well as using peer-led initiatives, but parents did not feel this would work. Parents instead saw the need for alternatives to suspension for students ıg at school, and information provided by credible individuals such as medical . Both teachers and parents alluded to a lack of long-term evidence on the ing as a barrier to changing adolescent attitudes and behaviours. There is a

need to educate teachers and parents on the short-term impacts of vaping on health and wellbeing [1] so that this can be communicated to adolescents.

Conclusions

The preliminary findings from the Unpacking Vaping pilot consultation sessions will inform strategies for the prevention of adolescent e-cigarette use. The follow-on ethics and SERAP approved research study will commence in Term 2, 2022, allowing these themes to be explored in greater detail with a broader sample of western Sydney high school students, teachers and parents.

Authors: Emma Sainsbury, Kym Rizzo Liu, Professor Smita Shah

Acknowledgement: We would like to thank the students, teachers, and parents from Erskine Park High school for their valuable contribution and acknowledge the support and organisation from the Principal Brenda Quayle and teacher Rebecca Lawson.

References

1. Munsif, M., M. Hew, and E. Dabscheck, *E-cigarette or vaping product use-associated lung injury (EVALI): a cautionary tale.* Medical Journal of Australia, 2020. **213**(3): p. 109-110.e1.
2. Guerin, N. and V. White, *ASSAD 2017 Statistics and Trends: Australian Secondary Students' Use of Tobacco, Alcohol, Over-the-counter drugs, and illicit substances. Second edition. 2020*. 2020: Melbourne, VIC.
3. Baenziger, O.N., et al., *E-cigarette use and combustible tobacco cigarette smoking uptake among non-smokers, including relapse in former smokers: umbrella review, systematic review and meta-analysis.* BMJ Open, 2021. **11**(3): p. e045603.
4. Brown, R., et al., *Ecological Exploration of Knowledge and Attitudes Towards Tobacco and E-Cigarettes Among Primary School Children, Teachers, and Parents in Wales: A Qualitative Study.* Tob Use Insights, 2020. **13**: p. 1179173×20938770.
5. Hilton, S., et al., *E-cigarettes, a safer alternative for teenagers? A UK focus group study of teenagers' views.* BMJ Open, 2016. **6**(11): p. e013271.
6. Hammal, F. and B.A. Finegan, *Exploring Attitudes of Children 12-17 Years of Age Toward Electronic Cigarettes.* J Community Health, 2016. **41**(5): p. 962-8.
7. Wagoner, K.G., et al., *Adolescent Use and Perceptions of JUUL and Other Pod-Style e-Cigarettes: A Qualitative Study to Inform Prevention.* International Journal of Environmental Research and Public Health, 2021. **18**(9).
8. Jha, V. and A. Kraguljac, *Assessing the Social Influences, Self-Esteem, and Stress of High School Students Who Vape.* Yale J Biol Med, 2021. **94**(1): p. 95-106.
9. Tyas, S.L. and L.L. Pederson, *Psychosocial factors related to adolescent smoking: a critical review of the literature.* Tobacco control, 1998. **7**(4): p. 409-420.
10. Conrad, K.M., B.R. Flay, and D. Hill, *Why children start smoking cigarettes: predictors of* J Addict, 1992. **87**(12): p. 1711-24.

H., et al., *A Middle School Program to Prevent E-Cigarette Use: A Pilot Study of My Breath".* Public health reports (Washington, D.C. : 1974), 2020. **135**(2): p. 220-229.

12. Wyman, P.A., et al., *Above the influence of vaping: Peer leader influence and diffusion of a network-informed preventive intervention.* Addictive Behaviors, 2021. **113**: p. 106693.
13. Chu, K.-H., et al., *Implementation of a cluster randomized controlled trial: Identifying student peer leaders to lead E-cigarette interventions.* Addictive behaviors, 2021. **114**: p. 106726.
14. Therapeutic Goods Administration. *Nicotine vaping product access*. 2021 1 April 2022]; Available from: https://www.tga.gov.au/nicotine-vaping-product-access.
15. Obisesan, O.H., et al., *Association Between e-Cigarette Use and Depression in the Behavioral Risk Factor Surveillance System, 2016-2017.* JAMA network open, 2019. **2**(12): p. e1916800.
16. Patten, S.B., *Vaping and Mental Health.* J Can Acad Child Adolesc Psychiatry, 2021. **30**(1): p. 3-5.
17. McCausland, K., et al., *E-Cigarette Advocates on Twitter: Content Analysis of Vaping-Related Tweets.* JMIR public health and surveillance, 2020. **6**(4): p. e17543.
18. Amin, S., A.G. Dunn, and L. Laranjo, *Exposure to e-cigarette information and advertising in social media and e-cigarette use in Australia: A mixed methods study.* Drug Alcohol Depend, 2020. **213**: p. 108112.

Contact Details

General Enquiries
AMA House, Level 6
69 Christie Street
St Leonards, NSW 2065
Mail:
PO Box 121
St Leonards, NSW, 1590,
Australia
T: +61 2 9439 8822
F: +61 2 9438 3760
Email:
enquiries@amansw.com.au

Membership
T: +61 2 9439 8822
Email:
members@amansw.com.au

Workplace Relations
T: +61 2 9439 8822
Email:
workplace@amansw.com.au

Media Enquiries
T: +61 419 402 955

Advertising and Sponsorship
T: +61 9439 8822

Federal AMA
www.ama.com.au

Connect with us
Facebook
Twitter
LinkedIn
Instagram