BEN ACCES

Vaping and anime: a growing area of concern

Heather Lynn Wipfli , ¹ Minji Kim, ² Julia Vassey , ³ Cassandra Stanton , ⁶ ⁴

¹Population Sciences and Public Health, University of Southern California, Los Angeles, California, USA ²Department of Health Promotion, Education, and Behavior, University of South Carolina, Columbia, South Carolina, USA ³Population and Public Health Sciences, University of Southern California, Los Angeles, California, USA ⁴Behavioral Health and Health

Correspondence to

Policy Practice, Westat Inc,

Rockville, Maryland, USA

Dr Heather Lynn Wipfli, Population Sciences and Public Health, University of Southern California, Los Angeles, CA 90007, USA; hwipfli@usc.edu

Published Online First 26 April 2022 Anime, or Japanese animation which combines graphic art, characterisation and cinematography, is experiencing a global boom after having doubled its market size over the past decade. The industry was valued at \$23.5 billion in 2020 and is continuing to grow rapidly. Anime is popular among adolescents and young adults, who are targeted with content related to romantic attraction, teen relationships, depression and despair.²³ A 2020 survey in the USA found twice as many 18-year-olds to to 29-year-olds (27%) had a very favourable impression of anime as compared with 30-year-olds to 44-year-olds. Notably, smoking by anime characters is not uncommon. Popular examples of anime smokers include Asuma Sarutobi from Naruto, Spike Spiegel from Cowboy Bebop and Sanjo from One Piece. 5 Vaping by anime characters has yet to be systematically analysed, although a scene from Netflix's original anime, Neo Yokio, produced in 2017 with talent that included Jaden Smith, Jude Law and Susan Sarandon, included a viral scene in which a character asks to, and then proceeds to use a vaping device (figure 1).

Given anime's growing popularity among teens worldwide, we investigated if and how tobacco companies, including those that exclusively sell e-cigarettes and other vape devices, are using anime to market vaping products, through an exploratory online search of 'anime', 'e-cigarettes' and 'vape' conducted in September 2021. We conducted the search on Duckduckgo.com, an independent search engine that does not store personal data and search history, to minimise bias from authors' personal search history. We found numerous examples of strategies previously found to be effective in promoting tobacco use among adolescents and young adults, including linking products and behaviour to popular movies and



Figure 2 Product of Yami Vapor (https://vapedrive.com/brand/yami-vapor/) featuring anime artwork and flavor (Taruto) named after an anime show Magical Meow Meow Taruto (accessed October 11, 2021).

video games;⁶ ⁷ using cartoon-based marketing;⁸ and leveraging social media to market to youth.⁹ We identified manufacturers branding their products after anime shows and characters; for example Yami Vapour is named after the character Yami in the show *To Love-Ru*, now steaming on Hulu.¹⁰ We also found nicotine liquid named and marketed after popular anime shows and characters, including



Figure 1 Viral meme image from Netflix original Neo Yokio. The image is widely available in meme form on multiple internet sites. An example site where you can embed it into your own social media post (https://awwmemes.com/i/good-thing-ibrought-my-vape-animeboston----make-a-52d887ec8099434eb98fb88aaf123 8b7).





Figure 3 Vape devices covered in (A) Naruto, one of the most well-known anime shows worldwide, and (B) stereotypical anime blond girl in sailor uniform; both marketed by StayLit Designs, October 11. (https://www.staylitdesign.com/products/510-threaded-battery-naruto-starter-kit).



© Author(s) (or their employer(s)) 2023. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

To cite: Wipfli HL, Kim M, Vassey J, *et al. Tob Control* 2023;**32**:803–805.

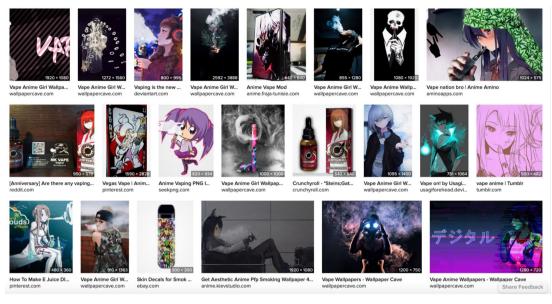


Figure 4 Screen capture of a group of publicly available images resulting from a search of DuckDuckGo.

Taruto from Magical Meow Meow Taruto (figure 2), Yamato from Space Battleship Yamato¹¹ and Onoki from Naruto.¹² Anime-inspired artwork was also observed on product packaging from vendors or on separately purchased accessories such as skins/wallpapers for e-cigarette devices (figure 3). There are also examples of anime art depicting young girls and boys vaping that are shared over multiple websites and social media platforms including Instagram, Reddit and Twitter and linked through hashtags (eg, #animevape; #japanesevapor) (figure 4). It is unclear if these images are within the animator's artistic license or if they represent paid promotion.

The US Food and Drug Administration's Centre for Tobacco Products can take steps to prevent tobacco companies, including those that exclusively sell e-cigarettes, from leveraging the growing popularity of anime to market their products using the strategies identified. For example, the use of anime-inspired imagery (cartoons) on e-cigarette product packaging and accessories can be banned, as can the use of labelling that reflects youth and young adult-associated entertainment. Regulators can also support continued surveillance of anime-associated combustible tobacco and e-cigarette marketing strategies and assessment of the impact this cartoon-based imagery may have on youth attitudes, norms and health perceptions.

The increasing popularity of anime shows featuring e-cigarette use may encourage uptake among adolescents and young adults, as has been the case with exposure to combustible tobacco use imagery in other entertainment media. 13 While the transnational nature of the anime industry could make regulatory efforts to limit content difficult, the frequency, content, and source of tobacco content including e-cigarette in anime shows with majority teen and young adult viewership should be further studied and potentially addressed by the global tobacco control community. If, for example, e-cigarette companies are paying for their products to be prominently featured, then tobacco control advocates could challenge such paid placements as they did with paid placement of combustible products in traditional television shows and movies. The opening credits of Netflix's recent live action rendition of the award-winning anime show, Cowboy Bebop, begin with an animated smoking character evolving into a real man smoking on screen.¹⁴ It is exactly this transformation from cartoon to real life that we need to prevent among

youth anime viewers for both combustible tobacco and e-cigarette products.

Twitter Heather Lynn Wipfli @hwipfli

Contributors All the authors assisted with the study design, research and paper content. HLW took the lead on the paper draft while the other authors assisted with edits.

Funding Research reported in this publication was supported in part by the National Cancer Institute and the Food and Drug Administration Center for Tobacco Products (CTP) funded Tobacco Centers of Regulatory Science (TCORS) at the University of Southern California (U54CA180905), and the National Institute of Drug Abuse and FDA CTP's Center for Coordination of Analytics, Science, Enhancement, and Logistics (CASEL) in Tobacco Regulatory Science (U54-DA046060-01). The content is solely the responsibility of the authors and does not necessarily represent the official views of the funders or affiliated institutions.

Competing interests None declared.

Patient consent for publication Not applicable.

Ethics approval Not applicable.

Provenance and peer review Not commissioned; externally peer reviewed.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: http://creativecommons.org/licenses/by-nc/4.0/.

ORCID iDs

Heather Lynn Wipfli http://orcid.org/0000-0001-9020-2033 Julia Vassey http://orcid.org/0000-0003-3002-2000 Cassandra Stanton http://orcid.org/0000-0001-5329-6261

REFERENCES

- 1 Grand View Research. Anime Market Size, Share &Trends Analysis Report by Type, By Region, and Segment Forecasts, 2021-2028, 2021. Available: https://www.grandviewresearch.com/industry-analysis/anime-market#:~:text=b.-,The%20global%20anime%20market%20size%20was%20valued%20at%20USD%2023.56,USD%2048.03%20billion%20by%202028 [Accessed 11 Oct 2021].
- 2 Axis. Why do teens love Anime and Manga? 2021. Available: https://info.axis.org/blog/why-do-teens-love-anime-and-manga [Accessed 11 Oct 2021].
- 3 Bloomberg News. Netflix to Launch 40 new Anime shows after 'Blood of Zeus' win, 2021. Available: https://www.bloomberg.com/news/articles/2021-03-27/netflix-to-launch-40-new-anime-shows-after-blood-of-zeus-win [Accessed 11 Oct 2021].
- 4 Navarro JG. Attitudes to anime movies among adults in the United States as of January 2020, by age group. Statista, 2021. Available: https://www.statista.com/ statistics/1095757/anime-movie-opinions-us-by-age/ [Accessed 11 Oct 2021].

- 5 Widjijanto W. Top 10 Anime smoking characters. honeys Anime, 2016. Available: https://honeysanime.com/top-10-anime-smoking-characters/ [Accessed 11 Oct 2021].
- 6 Dalton MA, Sargent JD, Beach ML, et al. Effect of viewing smoking in movies on adolescent smoking initiation: a cohort study. Lancet 2003;362:281–5.
- 7 Forsyth SR, Malone RE. Tobacco imagery in video games: ratings and gamer recall. *Tob Control* 2016;25:587–90.
- 8 DiFranza JR, Richards JW, Paulman PM, et al. RJR Nabisco's Cartoon camel promotes camel cigarettes to children. JAMA 1991;266:3149–53.
- 9 Hébert ET, Case KR, Kelder SH, et al. Exposure and engagement with Tobacco- and E-Cigarette-Related social media. J Adolesc Health 2017;61:371–7.
- 10 Jam S. Yamato flavored e-juice available for purchase. Available: https://www.zamplebox.com/e-juice/space-jam-yamato [Accessed 11 Oct 2021].

- 11 Vape Crusaders. Onoki flavors e-juice for purchase. Available: https://www.vapecrusaderseliquid.com/products/onoki [Accessed 11 Oct 2021].
- 12 VaporDNA. Yami vapor brand landing page accessible. Available: https://vapordna.com/collections/yami-vapor [Accessed 11 Oct 2021].
- 13 Jackson KM, Janssen T, Gabrielli J. Media/Marketing influences on adolescent and young adult substance abuse. *Curr Addict Rep* 2018;5:146–57.
- 14 Hersko T. 'Cowboy Bebop': Netflix Unveils Opening Credits for Live-Action Series. Indiewire, 2021. Available: https://www.indiewire.com/2021/09/cowboy-bebop-netflix-opening-credits-watch-1234667016/ [Accessed 11 Oct 2021].
- 15 Netflix. Cowboy Bebop opening credits, 2021. Available: https://www.youtube.com/ watch?v=Yq2N-9EmedA&t=6s [Accessed 11 Oct 2021].