Young people's internet use, social media activity, and engagement with social media influencers

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Table of Contents

List of Tables and Figures

Executive Summary

Social media has radically altered corporations' marketing of unhealthy products to young people. Social media influencers embody these shifts, and yet – particularly in an Aotearoa New Zealand context – we know little about the nature or extent of their practices. Influencers are part of covert, under the radar marketing strategies unique to social media. These blur lines between user-generated and commercial content, making existing public health marketing regulations less effective. To explore these practices, we conducted a research project entitled *Instagram influencers, unhealthy products, and covert marketing to young people* (funded by a Health Research Council New Zealand Explorer Grant). Focusing on alcohol, tobacco, and vaping, this research used innovative methodologies to explore influencer marketing on Instagram.

The research project involved three stages: 1) a survey with young people; 2) an analysis of influencer accounts; and 3) interviews with influencers. This report focuses on the stage one survey, and presents findings that provide the context and background for the broader project. It outlines the methods employed in undertaking the survey, a description of the sample, and findings related to access to digital devices, internet access and use, social media activity, and respondents' engagement with influencers.

Methods: An online survey was developed, piloted and finalised containing 5 sections: demographics, internet access, social media use, engagement with social media influencers, and knowledge of unhealthy product marketing. The survey and data collection procedures were approved by Massey University ethics committee. Recruitment took place in high schools, universities and polytechnics in the lower North Island in 2021. There were 807 respondents who completed more than 70% of the survey. They were aged 16-20 years (Mean = 17.1 years). The sample included a range of gender identities (58% female, 33% male, 7% another gender, 2% did not give their gender) and ethnicities (65% Pākehā; 20% Māori, 3% Pasifika, 11% another ethnicity).

Key findings: Respondents were highly engaged internet users. They accessed the internet through a range of digital devices both inside and outside of the home, and 98% reported using the internet several times a day or almost constantly. They were also highly engaged users of social media, having used an average of 7.5 platforms. The apps they used most frequently were YouTube, Instagram, Snapchat, Facebook/Facebook Messenger, and TikTok; 87% of the sample reported using Instagram daily. Respondents were asked about social media influencers, and 83% said they followed at least one influencer, and also listed up to three names of influencers whose content they enjoy and follow regularly. A highly diverse group of 891 social media influencers were identified, including 698 influencers who were named once and 193 who were named two or more times. The top-named influencers were most often based in the USA, followed on Instagram and represented fashion and lifestyle types of influencers.

Conclusions: These findings demonstrate that young people in Aotearoa are connected online for much of their lives through a range of devices. They actively use multiple social media platforms, and many are highly engaged, using some platforms continuously throughout the day. Over four-fifths of the sample follow social media influencers, and named hundreds of influencer accounts as favourites, that were highly diverse with influencers who were based primarily outside Aotearoa.

Introduction

Social media has radically altered corporations' marketing of unhealthy products to young people. Social media influencers embody these shifts, and yet – particularly in an Aotearoa New Zealand context – we know little about the nature or extent of their practices. Influencers are part of covert, under the radar marketing strategies unique to social media. These blur lines between user-generated and commercial content, making existing public health marketing regulations less effective. To explore these practices, we conducted a research project that started with exploring the views of young people aged 16-20 years. We aimed to investigate young people's internet and social media use, the influencer accounts they follow, the online influencer content with which they engage, and their exposure to unhealthy product marketing (vape, alcohol and tobacco).

The results of the survey informed the next two stages of the research. This included collecting and analysing the content of popular influencers' accounts as identified by survey participants, including instances of unhealthy product content and marketing. The survey results also helped to identify New Zealand-based influencers who were approached to take part in the third stage of the research, namely in-depth interviews about what it means to be an influencer and views on unhealthy product marketing.

This report presents our survey methods and key survey data from the first stage of our project. It explores young peoples' hardware access, internet access and use, their social media use and activity, and the influencer accounts they follow - including the platforms they follow them on and their categorisation of the content that influencers post. Young peoples' perceived exposure to unhealthy product marketing and findings from stages two and three of the project are being disseminated through peer-reviewed journal articles.

Survey methods

Development of the survey

An online Qualtrics survey was developed to obtain information from young people aged 16-20 years. The survey questions were created after reviewing different online approaches to collecting self-report information about social media use in young people (e.g., Pew Research Centre (2018); Crothers et al. (2016)). The survey was piloted by a range of high school and university students not participating in the study, for clarity, length, and ease of use. Questions were subsequently revised based on the 'think-aloud' responses they gave to researchers as they went through the survey. The final survey consisted of five major sections: Demographics, internet access, social media use, engagement with social media influencers, and knowledge of unhealthy product marketing. A copy is provided in Appendix A.

Procedure and Recruitment

During March – July 2021, students aged 16-20 years in 19 high schools, two universities and two polytechnics in the lower North Island of Aotearoa New Zealand were invited to complete a web-based survey. A member of the research team gave in-person presentations to classes or year group assemblies in 17 schools that were located in cities, towns and rural areas (11 greater Wellington region, 4 Manawatū region, 4 Taranaki region). Two schools were sent a recorded video presentation that introduced the research for students to watch due to restrictions around the Covid-19 pandemic and schools not hosting visitors on site.

Within universities, recruitment posters were placed around the campus (toilet blocks, cafes, main thoroughfares etc.). Posters outlined details of the research and invited students to participate in the study by scanning a QR code on the poster, which took them directly to the online survey (see Appendix B). It also informed them of the prize draw and Human Ethics Committee approval details. Researchers also spoke to 7 undergraduate classes in media studies, psychology, and health, explaining the details of the study and eligibility criteria. These details as well as a link to the survey were uploaded on relevant online course sites.

The survey took approximately 15-20 minutes to complete. Participants had the option of leaving the survey incomplete and returning to it later. At the end of the survey participants could provide their details (on a separate link) to enter a draw for one of three $100 gift vouchers. Contact information was deleted once the draw had been conducted.

Ethical considerations

Survey participants were fully informed prior to taking part. The information sheet outlining the aims of the study and what participation would involve was on the survey landing page, and participants were required to agree to take part under these conditions before they were able to start the survey. Participation in the survey was voluntary and anonymous, participants had the option of pulling out of the survey at any stage, and skipping any question they chose not to answer. Details entered for the prize draw were recorded and stored separately from participation responses so identifying information could not be linked to survey responses. The study was approved by the Massey University Human Ethics Committee (ID 4000023065).

SECTION A: THE SURVEY SAMPLE: DEMOGRAPHIC AND DESCRIPTIVE INFORMATION

Sample size and completion rates

Data for the survey demographics were calculated including all participants who had completed at least one section of our key areas of interest (influencers and marketing). Participants who had completed at least one of these sections had completed 73% of the survey and were included in all further analyses. There were 807 participants (69.3%) in this group. Analyses were undertaken to compare the demographics of this group with those who dropped out partway through (n=357, 30.7%) and results showed that these groups did not systematically differ from the 807 participants. The numbers of participants who completed each section of the survey are shown in Table 1 below.

Table 1: Completion rates for the survey

Survey stage	Percentage	Number of responses
Opened survey, but didn't progress	20.3%	236
Completed only demographic section	2.5%	29
Completed demographic and internet section	4.2%	49
Completed demographic, internet, and social media sections	3.7%	43
Completed demographic, internet, social media, and influencers sections	1.9%	22
Completed all sections	67.4%	785
Total	100.0%	1164

Sample age, gender, ethnicity, educational institution, and geographical location

The sample was predominately aged under 18, as set out in Table 2. The mean age was 17.1 years.

Table 2: Age of sample

Age	Number of Responses	Percentage
16	295	36.6%
17	278	34.4%
18	115	14.3%
19	67	8.3%
20	39	4.8%
Under 18	573	71.0%
18 and over	221	27.4%
Missing	13	1.6%
Total	807	100.0

The gender of participants is outlined in Table 3, where those who selected more than one gender or selected a gender minority were categorised as "gender diverse". As shown, over half of the sample were female (58%), 33% identified as male, 6% identified as non-binary, transgender, fa'afafine, intersex or something else, with 3% not yet sure of their gender or preferred not to say.

Table 3: Gender of sample

Gender	Number of Responses	Percentage
Girl/Woman	469	58.1
Boy/Man	267	33.1
Gender diverse	49	6.1
Don't know/prefer not to say	22	2.7
Total	807	100.0

An overview of the ethnicity of the sample is provided in Table 4. For the purposes of this summary, ethnicity was calculated based on taking all participants that had selected multiple ethnicities and first categorising any who mentioned Māori as "Māori" and then any who mentioned a Pacific Island ethnicity as "Pasifika" and then anyone who mentioned Pākehā as "Pākehā". Anyone who didn't mention any of those ethnicities was grouped and categorised as other. For example, if someone selected Pākehā, Māori, and Cook Island for their ethnicity, they would have been categorised as "Māori" in this simplification. This method for recording the data suggests over half the sample were Pākehā/NZ European (65%), 20% were Māori, and 3.3% Pasifika. The remainder were classified as "other" (11.4%), which included ethnicities such as Chinese and Indian, while a very small minority preferred not to provide their ethnicity (1%).

Table 4: Ethnicity of sample

Ethnicity	Frequency	Percentage
Pākehā/NZ European	522	64.7
Māori	160	19.8
Pasifika	27	3.3
Other	92	11.4
Prefer not to say	6	0.7
Total	807	100.0

The educational institution attended is outlined in Table 5, which shows the sample is dominated by high school students (77%).

Table 5: Educational institution of sample

Institution	Number of Responses	Percentage
High School	618	76.5%
University	189	23.5%
Total	807	100.0

The school decile for high school students is provided in Table 6. Missing data represents schools where no governmental decile information is available (for example, private schools). The deciles have been grouped low, medium, and high. This tripartite categorisation suggests, where decile information is available, the sample is skewed towards higher (36%) over lower (20%) decile schools, with most schools classed as medium (44%).

Table 6: School decile of sample

Institution	Number of Responses	Total Percentage	Valid Percentage
Low (1-5)	112	18.1%	20.0%
Medium (6-8)	246	39.8%	44.0%
High (9-10)	201	32.5%	36.0%
Total	559	90.4%	100.0%
Missing Decile	59	9.6%	
Total	618	100.0%	

Participants were asked to self-report where their household was located, i.e., in an urban (city/town) or in a rural area. The results, presented in Table 7, suggest the majority of our sample of young people live in urban areas (69%).

Table 7: Geographical location of household

Institution	Number of Responses	Percentage
Urban	557	69.0%
Rural	170	21.1%
Don't know/prefer not to say	80	9.9%
Total	807	100.0

SECTION B: HARDWARE ACCESS, INTERNET ACCESS, AND INTERNET USE

Overall, our survey suggests that our sample of young people are highly engaged internet users with access through a range of hardware devices both inside and outside of the home.

Table 8 shows responses to our first question regarding access to four different types of device within the household where participants currently live. The table excludes six of the 807 participants who answered, "Don't know/prefer not to say". Almost everyone reported having access to a mobile phone (99%) and a desktop/laptop computer (97%), although access does not necessarily indicate personal ownership of the device by the young person.

Table 8: Access to hardware within the home

Device	Number of Responses	Total Percentage	Percentage of Cases
Mobile Phone	793	33.6%	99.0%
Desktop/laptop	780	33.1%	97.4%
Gaming Console	413	17.5%	51.6%
iPad or tablet	374	15.8%	46.7%
Total	2360	100.0%	

Table 9 summarises the Internet connection available to participants in their homes. Response categories for this question included: broadband (including Wi-Fi), mobile phone data, dialup/phone modem, "other" (with open text response), cannot connect, and don't know/prefer not to say. Participants could choose more than one category. Table 9 suggests access is primarily via broadband and mobile phone data. Note that the survey was completed at a time when dial up services were ending in Aotearoa New Zealand, with Vodafone/One withdrawing its last dial up plans in May 2021.

Table 9: Type of Internet connection in the home

Connection Type	Number of Responses	Total Percentage
Broadband & mobile phone data	448	55.5%
Broadband (only)	272	33.7%
All connection types selected	35	4.34%
Cannot connect at home	19	2.4%
Mobile phone data (only)	12	1.5%
Broadband and dialup	7	0.9%
Other connection	6	0.7%
Don't know/prefer not to say	5	0.6%
Dialup (only)	2	0.2%
Mobile phone data and dialup	1	0.1%
Total	807	100.0%

Participants were asked to specify the capacity of their main source of Internet connection, with the following response categories: Unlimited, capped (with an open text response to specify the limit), and don't know/prefer not to say. Table 10 indicates most participants (80%) have access to an unlimited data plan for their main Internet connection.

Table 10: Capacity of main Internet connection

Capacity	Number of Responses	Percentage
Unlimited	648	80.3%
Capped	66	8.2%
Don't know/prefer not to say	93	11.5%
Total	807	100.0%

Participants were asked whether they had access to the Internet outside of the home through wireless handheld devices such as a mobile phone or a tablet. Table 11 demonstrates that 95% of the sample had mobile internet access.

Table 11: Access to the internet outside of the home

Access outside home	Number of Responses	Percentage
Yes	769	95.3%
No	17	2.1%
Don't know/prefer not to say	21	2.6%
Total	807	100.0%

Participants were asked how often they used the Internet, either on a computer, tablet, or a mobile phone. Results are shown in Table 12 and indicate 98% of our sample use the internet several times a day or almost constantly.

Table 12: Frequency of Internet use

How often use Internet?	Frequency	Percentage	Cumulative Percentage
Almost constantly	470	58.2%	58.2%
Several times a day	321	39.8%	98.0%
About once a day	2	0.2%	98.2%
Several times a week	2	0.2%	98.4%
Less often	1	0.1%	98.5%
Don't know/prefer not to say	11	1.5%	100.0%
Total	807	100.0%	

SECTION C: SOCIAL MEDIA USE

As with use of the Internet generally, overall, our survey suggests that the sample of young people are highly engaged users of social media across a variety of different sites and messaging apps. In this section we identify the variety of social media used by participants and outline differences in the number of sites used across different demographic groups. We also discuss participants' favourite sites and sites they use but would prefer not to.

Variety of social media sites used and frequency of engagement

Participants were asked to name all the social media and messaging apps that they have used at any stage (not necessarily currently). Table 13 and Figure 1 outline the top sites named and the proportion of the sample that use or had used them (percentage of cases). Table 13 and Figure 1 exclude 7 of the 807 participants who answered that they had never used any social media sites at all. YouTube, Instagram, Snapchat, Facebook/Facebook Messenger, and TikTok are most popular.

Table 13: Top social media sites participants have ever used

Social media Site	Frequency	Percentage of cases
YouTube	772	96.5%
Instagram	768	96.0%
Snapchat	710	88.8%
Facebook Messenger	689	86.1%
Facebook	683	85.4%
TikTok	621	77.6%
Pinterest	497	62.1%
WhatsApp	412	51.5%
Twitter (now "X")	358	44.8%
Reddit	264	33.0%
LinkedIn	72	9.0%
Signal	18	2.2%
Other	63	7.9%
Total	5927	

Figure 1: Top social media sites participants had ever used (percentage of cases)
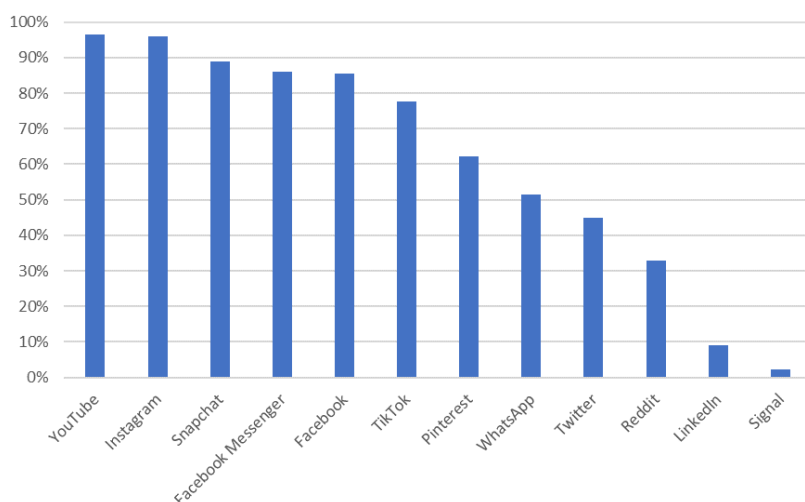
The following six tables (Tables 14-19) describe the frequency of use for the top six sites and messaging apps identified in Table 13. Figure 2 summarises the percentage of each platform's *user base* that visits each site at least once per day. On this metric, the sites that attract the most engagement from their user base are Instagram (89.8%), Snapchat (82.9%), and TikTok (81.4%), while YouTube - the site with highest overall users (96.5%) - is lower in engagement 65.9%). Facebook (8.2%), Snapchat (6.8%), and TikTok (6.6%) have the highest percentage of ex-users.

Table 14: Frequency of use for YouTube (96.5% usage)

YouTube users	Frequency	Percentage	Cumulative Percentage
Almost constantly	120	15.6%	15.6%
Several times a day	215	27.8%	43.4%
About once a day	174	22.5%	65.9%
A few times a week	147	19.0%	84.9%
Every few weeks	67	8.7%	93.6%
Less often	35	4.6%	98.2%
No longer use	14	1.8%	100.0%
Total	772	100.0%	
Never used YouTube	28		
Total	800		

Table 15: Frequency of use for Instagram (96.0% usage)

Instagram users	Frequency	Percentage	Cumulative Percentage
Almost constantly	175	22.8%	22.8%
Several times a day	444	57.8%	80.6%
About once a day	71	9.2%	89.8%
A few times a week	38	4.9%	94.7%
Every few weeks	10	1.3%	96.0%
Less often	15	2.0%	98.0%
No longer use	15	2.0%	100.0%
Total	768	100.0%	
Never used Instagram	32		
Total	800		

Table 16: Frequency of use for Snapchat (88.8% usage)

Instagram users	Frequency	Percentage	Cumulative Percentage
Almost constantly	243	34.2%	34.2%
Several times a day	267	37.6%	71.8%
About once a day	79	11.1%	82.9%
A few times a week	31	4.4%	87.3%
Every few weeks	19	2.7%	90.0%
Less often	23	3.2%	93.2%
No longer use	48	6.8%	100.0%
Total	710	100.0%	
Never used Snapchat	90		
Total	800		

Table 17: Frequency of use for Facebook Messenger (86.1% usage)

FB Messenger users	Frequency	Percentage	Cumulative Percentage
Almost constantly	57	8.3%	8.3%
Several times a day	177	25.7%	34.0%
About once a day	160	23.2%	57.2%
A few times a week	151	21.9%	79.1%
Every few weeks	50	7.2%	86.3%
Less often	59	8.6%	94.9%
Don't know	2	0.3%	95.2%
No longer use	33	4.8%	100.0%
Total	689	100.0%	
Never used FB Messenger	111		
Total	800		

Table 18: Frequency of use for Facebook (85.4% usage)

Facebook users	Frequency	Percentage	Cumulative Percentage
Almost constantly	39	5.7%	5.7%
Several times a day	175	25.7%	31.4%
About once a day	171	25.0%	56.4%
A few times a week	115	16.8%	73.2%
Every few weeks	67	9.8%	83.0%
Less often	59	8.6%	91.6%
Don't know	1	0.2%	91.8%
No longer use	56	8.2%	100.0%
Total	683	100.0%	
Never used Facebook	117		
Total	800		

Table 19: Frequency of use for TikTok (77.6% usage)

TikTok users	Frequency	Percentage	Cumulative Percentage
Almost constantly	180	29.0%	29.0%
Several times a day	234	37.7%	66.7%
About once a day	91	14.7%	81.4%
A few times a week	41	6.6%	88.0%
Every few weeks	17	2.7%	90.7%
Less often	17	2.7%	93.4%
No longer use	41	6.6%	100.0%
Total	621	100.0%	
Never used TikTok	179		
Total	800		

Figure 2: Percentage of the user base for top six sites that visits the site at least once per day
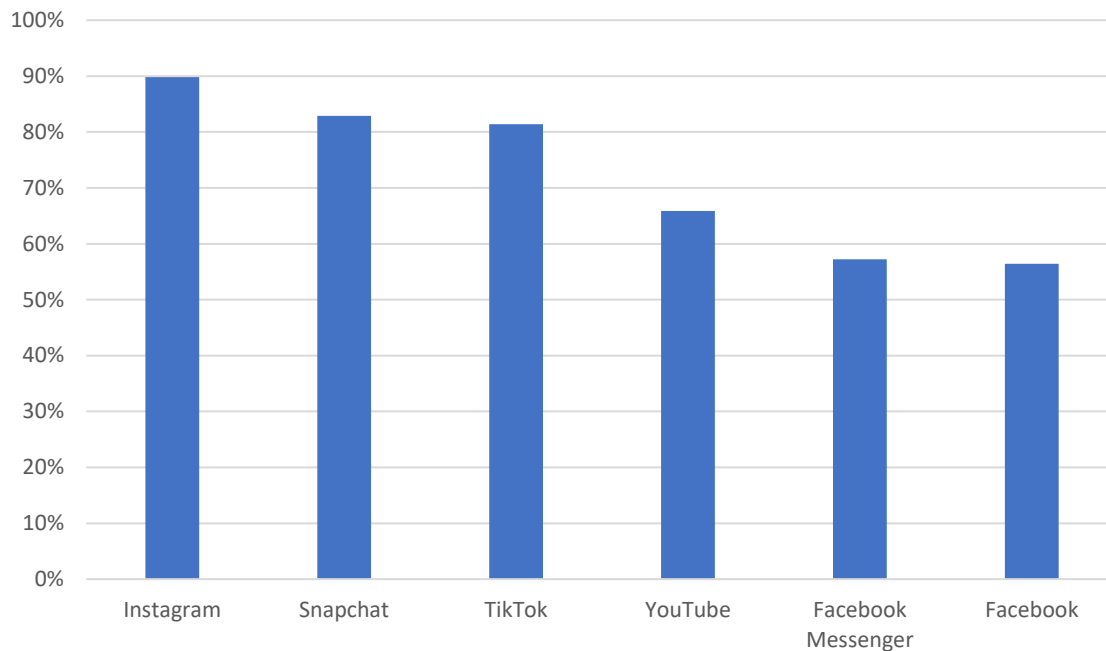
The final frequency of engagement table (Table 20) provides a holistic overview of social media engagement across the whole social media ecology as identified in Table 13. Table 20 outlines the number of users that visit each site identified in Table 13 at least once per day and expresses this as a percentage of the total number of social media users (n=800). Instagram, Snapchat, YouTube and TikTok, and to a lesser but still significant extent Facebook and Facebook Messenger, are most often visited. Pinterest, Twitter (now "X"), WhatsApp, and Reddit engage a much smaller minority of users, while Signal and LinkedIn barely register as sites visited regularly.

Table 20: Percentage of social media users that visit the site at least once per day

Platform/app	Responses	Percentage of social media users
Instagram	690	86.7%
Snapchat	589	74.0%
YouTube	509	63.9%
TikTok	505	63.4%
Facebook Messenger	394	49.5%
Facebook	385	48.4%
Pinterest	116	14.6%
Twitter	102	12.8%
WhatsApp	100	12.6%
Reddit	66	8.3%
Signal	9	1.1%
LinkedIn	8	0.2%

<u>Demographic differences in the number of sites participants had ever used</u>

The total number of social media sites and messaging apps each participant had ever used was calculated and the results are provided in Table 21 and Figure 3. The number of sites ever used ranged from zero to fourteen. The mean was 7.42 and the median was 8. The table also includes a trichotomised site count which groups social media users into low (1-5), medium (6-9) and high (10-14), in terms of the number of sites ever used.

Table 21: Number of social media sites/messaging apps ever used

Number of Platform/apps used	Frequency	Percentage	Cumulative Percentage
0	7	0.9%	0.9%
1	4	0.5%	1.4%
2	9	1.1%	2.5%
3	19	2.4%	4.8%
4	33	4.1%	8.9%
5	55	6.8%	15.7%
6	111	13.8%	29.5%
7	149	18.5%	48.0%
8	172	21.3%	69.3%
9	123	15.2%	84.5%
10	81	10.0%	94.5%
11	33	4.1%	98.6%
12	6	0.7%	99.4%
13	5	0.5%	99.9%
14	1	0.1%	100.0%
Total	807	100.0%	
Low (1-5)	120	15.0%	
Medium (6-9)	555	69.4%	
High (10-14)	125	15.6%	
Total	800	100.0%	

Figure 3: Frequency of social media sites/messaging apps ever used
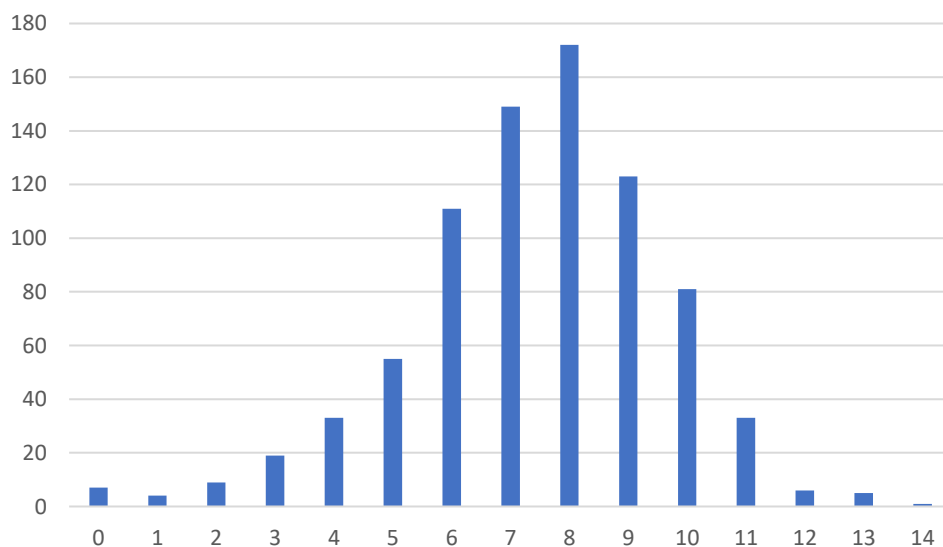
The trichotomised site count variable (low, medium, high) shown in Table 21 was used to explore differences in the number of sites ever used across different sociodemographic groups. A series of Chi-square analyses were undertaken to analyse differences in number of sites ever used by age, gender, school decile, ethnicity, and geographic location. Results are provided in Tables 22-26.

As shown in Table 22, participants who were aged over 18 were significantly more likely to have used a greater number of social media platforms and messaging apps, as we might expect.

Table 22: Differences in number of social media sites ever used across age groups

Age analysis		Social media site count			Total
		Low	Medium	High	
Under 18	Count	92	398	78	568
	% within age	16.2%	70.1%	13.7%	100.0%
18 and over	Count	26	147	46	219
	% within age	11.9%	67.1%	21.0%	100.0%
Total	Count	118	545	124	787
	% of total	15.0%	69.3%	15.8%	100.0%

Chi square (2, N=787) = 7.48, p = .02, Cramers V = .10

There were also significant differences in number of sites ever used across the gender groups, as shown in Table 23. Participants in the diverse gender identity category were more likely to report using more sites, while male participants were more likely to report using fewer sites than females or other genders.

Table 23: Differences in number of social media sites ever used across gender groups

Gender analysis		Social media site count			Total
		Low	Medium	High	
Girl/women	Count	45	353	70	468
	% within gender	9.6%	75.4%	15.0%	100.0%
Boy/man	Count	63	166	36	265
	% within gender	23.8%	62.6%	13.6%	100.0%
Diverse	Count	9	25	13	47
	% within gender	19.1%	53.2%	27.7%	100.0%
Total	Count	117	544	119	780
	% of total	15.0%	69.7%	15.3%	100.0%

Chi square (4, N=780) = 34.37, p<.001, Cramers V = .15

There were no significant differences in number of social media sites used by high school students across the different school decile groups, as shown in Table 24.

Table 24: Differences in number of social media sites ever used across decile groups

School decile analysis		Social media site count			Total
		Low	Medium	High	
Low decile	Count	18	83	10	111
	% within decile	16.2%	74.8%	9.0%	100.0%
Medium decile	Count	47	160	38	245
	% within decile	19.2%	65.3%	15.5%	100.0%
High Decile	Count	26	143	27	196
	% within decile	13.3%	73.0%	13.8%	100.0%
Total	Count	91	386	75	552
	% of total	16.5%	69.9%	13.6%	100.0%

Chi square (4, N=552) = 6.08, p= .19, Cramers V = .07

Number of social media sites ever used varied significantly by ethnicity, as shown in Table 25. Pasifika participants were more likely to report using fewer social media sites than other ethnicity groups.

Table 25: Differences in number of social media sites ever used across ethnicity groups

Ethnicity analysis		Social media site count			Total
		Low	Medium	High	
Pākehā	Count	75	364	81	520
	% within ethnicity	14.4%	70.0%	15.6%	100.0%
Māori	Count	17	119	22	158
	% within ethnicity	10.8%	75.3%	13.9%	100.0%
Pasifika	Count	9	15	2	26
	% within ethnicity	34.6%	57.7%	7.7%	100.0%
Other	Count	19	54	18	91
	% within ethnicity	20.9%	59.3%	19.8%	100.0%
Total	Count	120	552	123	795
	% of total	15.1%	69.4%	15.5%	100.0%

Chi square (6, N=795) = 15.72, p= .02, Cramers V =.10

Finally, Table 26 suggests that number of social media sites ever used varied significantly by geographical location. Participants located in rural localities reported using fewer social media and messaging apps than those located in urban localities.

Table 26: Differences in number of social media sites used across geographical location groups

Urban/rural analysis		Social media site count			Total
		Low	Medium	High	
Urban	Count	70	386	99	555
	% within location	12.6%	69.5%	17.8%	100.0%
Rural	Count	34	117	17	168
	% within location	20.2%	67.1%	10.1%	100.0%
Total	Count	104	503	116	723
	% of total	14.4%	69.6%	16.0%	100.0%

Chi square (2, N=723) = 10.00, p = .007, Cramers V = .12

Participants' social media and messaging app preferences

Participants were asked their favourite social media site or app to visit and use. Responses are shown below (including instances where more than one social media site was mentioned).

Table 27: Participants' favourite social media site or app

Social media site/app	Frequency	Percentage
Instagram	217	26.1%
Snapchat	209	25.2%
TikTok	126	15.2%
YouTube	99	11.9%
Pinterest	30	3.6%
Reddit	19	2.3%
Messenger	14	1.7%
Twitter	13	1.6%
No favourite	12	1.4%
Facebook	11	1.3%
Discord	10	1.2%
Instagram and Snapchat	10	0.7%
Don't' know/prefer not to say	6	1.2%
WhatsApp	6	0.7%
Snapchat and TikTok	6	0.7%
Instagram and TikTok	5	0.6%
Tumblr	4	0.5%
Instagram Snapchat and TikTok	3	0.4%
Line	2	0.2%
Porn Hub	2	0.2%
WeChat	2	0.2%
Instagram and Twitter	2	0.2%
Instagram and YouTube	2	0.2%
Pinterest and TikTok	2	0.2%
Pinterest and YouTube	2	0.2%
Instagram and Pinterest	2	0.2%
All sites are favourite	1	0.1%
Discord and Xbox app	1	0.1%
Gibbo Hub	1	0.1%
No site specified	1	0.1%
QQ	1	0.1%
Reddit and 4chan	1	0.1%
Snapchat and Messenger	1	0.1%
Snapchat Instagram Messenger and TikTok	1	0.1%
The Hub	1	0.1%
Tumblr and Twitter	1	0.1%
Twitch	1	0.1%
Twitch and Youtube	1	0.1%
Xbox app	1	0.1%
YouTube and TikTok	1	0.1%
Total		100.0%

The total times a social media site was mentioned was counted, which showed that Instagram was mentioned the most often, followed by Snapchat, TikTok, and YouTube as shown in Table 28 and Figure 3.

Table 28: Summary of participants' most mentioned favourite social media site

Platform/app	No. times mentioned
Instagram	242
Snapchat	230
TikTok	144
YouTube	105
Pinterest	36
Reddit	20
Facebook Messenger	16
Twitter	16
Facebook	11

Figure 4: Frequency of participants' most mentioned favourite social media site
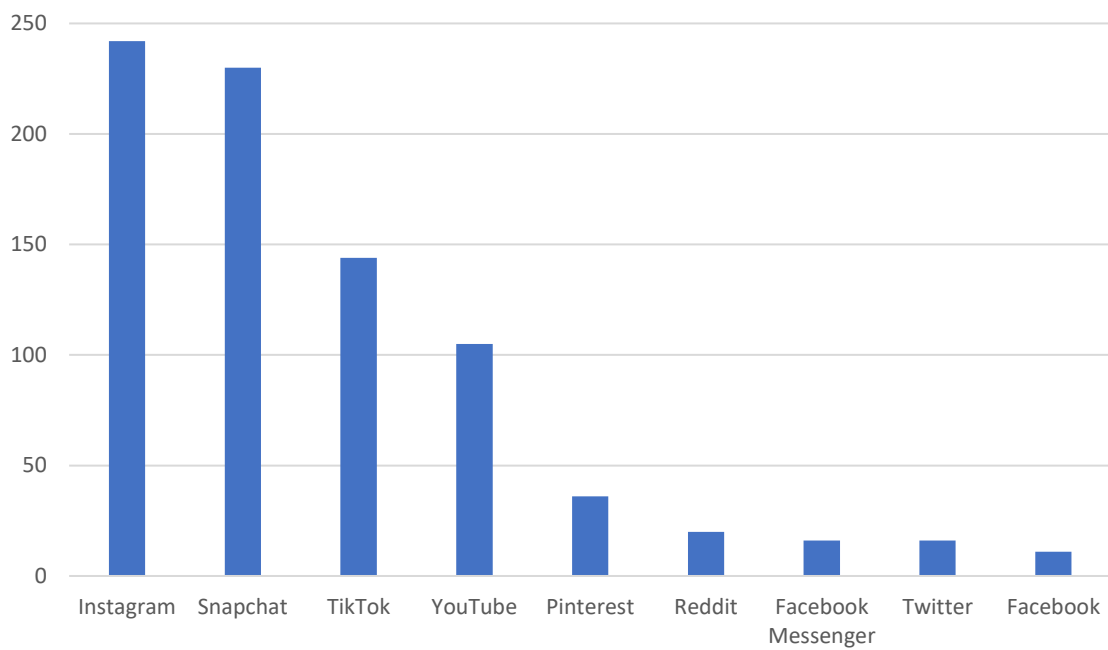
Participants were then asked to name any social media sites or apps they use even though they do not enjoy visiting them. Findings are shown in Table 29 below (including instances where more than one social media site or app was mentioned). Many participants (n=375) had no sites or apps in this category, but the standout answer for site used despite not enjoying the experience is Facebook (n=163).

Table 29: Participants' social media sites or apps they use but do not enjoy

Sites use but don't enjoy	Frequency	Percentage
None	375	46.8%
Facebook	163	20.3%
Instagram	62	7.7%
Snapchat	49	6.1%
TikTok	25	3.1%
Twitter	17	2.1%
Messenger	14	1.7%
WhatsApp	14	1.7%
Yes	14	1.7%
Don't know/Prefer not to say	9	1.1%
Pinterest	8	1.0%
Majority	5	0.6%
Facebook and Messenger	4	0.5%
Messenger and WhatsApp	4	0.5%
Facebook and Instagram	3	0.4%
Facebook and Snapchat	3	0.4%
Instagram and Snapchat	3	0.4%
LinkedIn	3	0.4%
Reddit	3	0.4%
YouTube	3	0.4%
Discord	2	0.2%
Capcut	1	0.1%
Facebook and WhatsApp	1	0.1%
Facebook Instagram and Youtube	1	0.1%
Gibblatron.com	1	0.1%
Google classroom	1	0.1%
Instagram and TikTok	1	0.1%
Instagram and Youtube	1	0.1%
Line	1	0.1%
Outlook	1	0.1%
Porn hub	1	0.1%
School Apps	1	0.1%
Snapchat and Messenger	1	0.1%
Stories	1	0.1%
Telegram	1	0.1%
The hub	1	0.1%
WeChat	1	0.1%
WhatsApp and WeChat	1	0.1%
Zootube	1	0.1%
Total		100.0%

The total number of times a social media site that participants use but don't enjoy was counted, and results are shown in Table 30 and Figure 4 below. While the site most frequently mentioned was Facebook by a considerable margin, Instagram and Snapchat also feature prominently in the list.

Table 30: Summary of sites participants used but did not enjoy

Site use but don't enjoy	# times mentioned
Facebook	175
Instagram	71
Snapchat	56
TikTok	26
Facebook Messenger	23
Twitter	17
WhatsApp	20
Pinterest	8

Figure 5: Frequency of sites participants used but did not enjoy
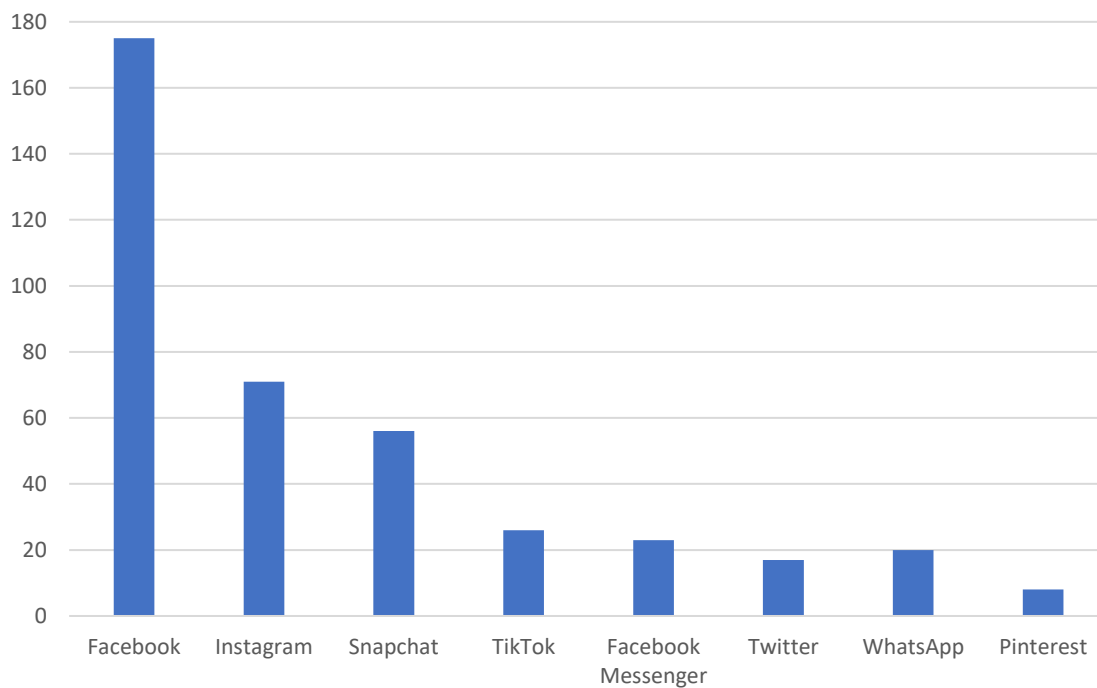
SECTION D: SOCIAL MEDIA INFLUENCERS

In this section we report on the influencers that our participants followed, or considered their content important in their online lives. Our approach was to be as inclusive as possible in obtaining this information. We aimed to capture, for the first time in Aotearoa New Zealand, the online personas that young people themselves considered "influential", including more "micro influencers" who may only have a few thousand followers.

Before answering any of the questions in this section of the survey, young people received the following information, which was developed from the literature and through survey pre-testing (see page 5, "Development of the survey" section):

> In the next section, we're going to ask you some questions about social media influencers.
> Who are social media influencers?
> Influencers aren't just on Instagram--they're people who can be found on other social media including Facebook, YouTube, Tik Tok and so on. Across different platforms, influencers have some things in common. They tend to:
>
> - have built some form of reputation for their knowledge, opinions, interest, or expertise on a specific topic
> - regularly produce engaging content on their preferred social media channels
> - have followings of enthusiastic people who engage with their content
> - usually have large followings, from a few thousand to millions of people
>
> We're also interested in who YOU find influential even if those people have fewer followers. Celebrities can also be influencers if you find them influential.

The findings in this section were developed from responses to survey questions presented following this introductory information.

Frequency of engagement with influencers

Participants were initially asked if they followed or regularly saw content from any social media influencers on social media. Table 31 provides an overview of participant responses and suggests that social media influencers form a part of many of our participants' experiences on social media (83%).

Table 31: Frequency of participants engagement with influencers

Follow an influencer or regularly see their content?	Number of Responses	Percentage
Yes	665	82.9%
No	88	11.0%
Don't know/prefer not to say	49	6.1%
Total	807	100.0%

Chi-Square analyses were undertaken to examine if sociodemographic differences in engagement with influencers were evident, but no statistically significant effects were found for age, gender, school decile, ethnicity, or location.

The 665 participants who answered yes in Table 31 were asked to name up to three influencers that they could recall. 1571 responses (out of a potential of 1995) were provided. Answers that did not relate to identifiable influencer accounts were removed, including brands named (e.g., "Red Bull"), organisations (e.g., "New Zealand Police"), and generic answers (e.g., "celebrities"), resulting in 1505 named influencer accounts. After accounting for those named twice or more, *891 different influencers were identified, which included 698 named once and 193 named two or more times.*

Diversity of influencers engaged with by participants

Findings show that participants engage with a highly diverse group of social media personalities operating accounts/profiles that they consider to be influential in their online social worlds. This diversity is difficult to summarise. However, the top twenty influencer accounts identified are outlined in Table 32 in descending order, including their Instagram follower count as of March 2022 (the top platform for influencer engagement – see Table 34) and their nationality. This top twenty list tends towards influencers with higher follower counts, including both established celebrities who actively use social media through to those who became well known through social media.

Table 32: Top twenty influencer accounts identified

Influencer	# of participant followers	Instagram follower count Mar. 2022	Nationality
Emma Chamberlain	45	13,500,000	USA
Kendall Jenner	29	181,000,000	USA
Kylie Jenner	28	257,000,000	USA
Addison Rae	18	39,700,000	USA
Billie Eilish	17	90,000,000	USA
Kim Kardashian	15	243,000,000	USA
David Dobrik	14	12,900,000	USA
Tana Mongeau	14	5,700,000	USA
KSI (Olajide Williams)	13	10,400,000	UK
PewDiePie (Felix Kjellberg)	12	21,600,000	Sweden
The Sidemen (7 members, incl. KSI)	12	13,300,000	UK
Bretman Rock (Bretman Sacayanan)	11	17,500,000	Philippines
Markiplier (Mark Fischbach)	11	9,100,000	USA
The Rock (Dwayne Johnson)	10	266,000,000	USA
Olivia Neill	10	732,000	Ireland
Anna Paul	9	719,000	Australia
Bella Hadid	9	44,800,000	USA
Sarah's Day (Sarah Stevenson)	9	1,200,000	Australia
Zendaya (Zendaya Coleman)	9	103,000,000	USA
Harry Styles	8	39,000,000	UK

We examined the top influencers identified by participants from different sociodemographic groups, and some differentiation in influencers followed was evident. An example is provided Table 33.

Table 33: Top ten influencer accounts identified by educational institution

Educational Institution	Influencer	# of followers (within institution)	Instagram follower count Mar. 2022	Nationality
High School (low decile)	The Sidemen (7 members, incl. KSI)	8	13,300,000	UK
	Addison Rae	5	39,700,000	USA
	David Dobrik	5	12,900,000	USA
	Jacksepticeye (Seán McLoughlin)	5	7,500,000	Ireland
	Kylie Jenner	5	257,000,000	USA
	LeBron James	4	96,600,000	USA
	Anna Paul	3	719,000	Australia
	Kim Kardashian	3	243,000,000	USA
	Markiplier (Mark Fischbach)	3	9,100,000	USA
	The Ace Family	2	1,200,000	USA
High School (medium decile)	Emma Chamberlain	13	13,500,000	USA
	Kylie Jenner	11	257,000,000	USA
	Kendall Jenner	9	181,000,000	USA
	Billie Eilish	7	90,000,000	USA
	PewDiePie (Felix Kjellberg)	7	21,600,000	Sweden
	Bella Hadid	5	44,800,000	USA
	David Dobrik	5	12,900,000	USA
	Kim Kardashian	5	243,000,000	USA
	Markiplier (Mark Fischbach)	5	9,100,000	USA
	Tana Mongeau	5	5,700,000	USA
High School (high decile)	Emma Chamberlain	9	13,500,000	USA
	Kendall Jenner	8	181,000,000	USA
	Addison Rae	7	39,700,000	USA
	KSI (Olajide Williams)	6	10,400,000	UK
	Tana Mongeau	6	5,700,000	USA
	Mia Khalifa	5	25,200,000	USA
	NELK Boys	5	4,100,000	USA
	The Rock (Dwayne Johnson)	4	266,000,000	USA
	Hannah Barret/Laity	4	93,200	NZ
	Lana Rhodes	4	16,500,000	UK
University	Emma Chamberlain	18	13,500,000	USA
	Kendall Jenner	6	9,100,000	USA
	Sarah's Day (Sarah Stevenson)	4	1,200,000	Australia
	Cody Ko	3	2,000,000	Canada
	David Dobrik	3	12,900,000	USA
	Devon Lee Carlson	3	1,400,000	USA
	James Charles	3	24,800,000	USA
	Jazz Thornton	3	138,000	NZ
	Lil Nas X (Montero Lamar Hill)	3	11,100,000	USA
	Sam Robinson	3	650,000	Australia

Note that for Table 33, where the number of followers for the institution is tied, inclusion in the top ten list was based upon the influencers' overall follower count in the sample as a whole.

Platforms on which influencers are engaged with and followed

After naming up to three influencers, participants were asked to name each social media platform where they followed them, or where they routinely came across their content. The question offered a pre-selected list of sites, with "other" also being an option (with an invitation to name the site in an open text response). Multiple answers were possible, and many participants engaged with influencers and/or their content across more than one platform. Table 34 summarises participant responses, showing the number of yes responses to each platform, summed across the three nominated influencers and then across the sample. Importantly, these are counts of responses not of respondents. The number of respondents is hard to summarise as it varies by influencer and platform. The response frequencies are shown in descending order, with Instagram, YouTube, and TikTok being the top sites where influencers are followed and/or their content seen.

Table 34: Platforms where influencers were followed and/or their content seen

Platform	Number of Responses	Percentage
Instagram	1226	36.4%
YouTube	842	25.0%
TikTok	516	15.3%
Twitter	206	6.1%
Snapchat	176	5.2%
Facebook	146	4.3%
Pinterest	89	2.6%
Reddit	39	1.2%
Facebook Messenger	20	0.6%
WhatsApp	14	0.4%
WeChat	8	0.2%
Other	82	2.5%
Total	3364	100.0%

Categorising influencers

We asked survey respondents to categorise chosen influencers according to the influencer's type, from a list of pre-determined categories including an "other" option with a prompt to provide an open text response. Table 35 outlines their choices for the top twenty influencers and notes the number of respondents who chose to use multiple categories. A majority responded with two or more categories, and their distribution suggests an influencers' "personal brand" can mean different things to different respondents. There are exceptions here, for example PewDiePie (Felix Kjellberg) and Markiplier (Mark Fischbach) are clearly "gamers" in the minds of survey participants. But the differentiation of responses remains suggestive of a diversity of engagement with influencers and potentially a diversity of meanings made from influencers' content. Despite this overall picture, fashion/lifestyle influencers dominate the top of the list. It is also notable that, even where influencers are well known celebrities their influencer persona can supplement or exceed their pre-established identities. For example, The Rock (Dwayne Johnson) – predominantly known as a film star which is evident in his online postings – is categorised as a health, lifestyle, and sports influencer, while Billie Eilish – a popular musician – is also categorised as a fashion influencer.

Table 35: Participants' Categorisation of the Top Twenty Influencers

Influencer	Followers	Fashion	Gaming	Heath	Travel	Lifestyle	Food	Pets	Parenting	Sports	Activism	Creative Art	Music	Other	Coded >1 category	%
E. Chamberlain	45	**41**	0	7	6	**40**	13	2	0	1	0	6	1	4	39	87%
Kendall Jenner	29	**26**	0	5	13	**23**	4	3	1	0	0	0	0	1	20	69%
Kylie Jenner	28	**24**	0	8	12	**20**	4	2	11	0	0	0	0	1	19	68%
Addison Rae	18	**14**	0	4	1	**14**	1	0	0	0	2	1	5	4	16	89%
Billie Eilish	17	**10**	0	1	0	1	0	1	0	0	3	2	**15**	0	11	65%
Kim Kardashian	15	**12**	0	5	5	**12**	0	1	6	0	0	0	0	1	9	60%
David Dobrik	14	1	1	0	6	**12**	3	2	1	2	1	2	4	**6**	10	71%
Tana Mongeau	14	**8**	0	0	3	**12**	3	0	1	0	0	2	5	5	10	71%
KSI	13	2	**10**	1	2	6	2	1	0	7	1	0	**8**	2	11	85%
PewDiePie	12	0	**12**	0	0	2	0	0	0	0	0	2	**3**	1	7	58%
The Sidemen	12	2	**11**	2	4	7	4	1	1	**8**	3	4	5	0	11	92%
Bretman Rock	11	7	1	4	3	9	5	5	1	0	2	6	2	2	9	82%
Markiplier	11	0	**11**	0	0	0	0	2	0	0	0	1	0	1	4	36%
The Rock	10	3	0	**9**	2	**6**	2	0	2	**6**	2	1	0	1	10	100%
Olivia Neill	10	**8**	0	1	7	**9**	2	0	0	0	0	1	0	1	9	90%
Anna Paul	9	**5**	0	3	**5**	9	5	0	0	0	0	0	0	1	8	89%
Bella Hadid	9	**8**	0	1	3	**6**	1	0	0	0	0	1	0	1	7	78%
Sarah's Day	9	4	0	**8**	3	**9**	7	2	4	3	1	1	0	0	8	89%
Zendaya	9	**8**	1	1	1	3	1	1	0	1	3	**5**	3	2	7	78%
Harry Syles	8	**5**	0	1	0	2	0	0	0	0	3	2	**7**	1	6	75%

Header grouping: *Frequency of participants' categorisation of influencer type (bolded frequency = top two categories)* spans Fashion through Other; *Participants' use of multiple categories* spans Coded >1 category and %.

References

Crothers, C., Urale, P. W. B., Smith, P., & Bell, A. (2016). *World Internet Project New Zealand. The Roll-out of Ultra-Fast Broadband (UFB) in New Zealand, 2015: A Report to the Ministry of Business, Innovation and Employment (MBIE)*. Auckland, New Zealand: Institute of Culture, Discourse & Communication, Auckland University of Technology.

Pew Research Center (2018) *Teens, Social Media and Technology 2018*. Washington D.C: Pew Internet Research Center.

Appendix A: Online survey for HRC project *Instagram influencers, unhealthy products, and covert marketing to young people*

Sections:

> A. Demographics
>
> B. Internet Access
>
> C. Social Media Use
>
> D. Social Media Influencers
>
> E. Knowledge of Unhealthy Product Marketing

A. Demographics

Info: First, we're going to ask you some questions about who you are and where you are from. Remember that any information you provide will be kept anonymous.

QA1   Do you attend high school or university?

Response categories: High school or university

QA2   What is the name of your high school or university?

Response categories: Universities and high schools in NZ

QA3   How old are you?

Open text response. Survey ends if age<16

QA4   Which of the following best describe your current gender? Select all that apply.

Response categories: Girl/woman, Boy/man, Transgender, Non-binary, Agender, Takatāpui, Fa'afafine, I'm not yet sure of my gender, Something else, please state [open text response], prefer not to say

QA5   Which ethnic group(s) do you belong to? Select all that apply

Response categories: New Zealand European or Pākehā, Māori, Samoan, Cook Islands, Tongan, Niuean, Chinese, Indian, Other (please state)

QA6   Who do you live with?

Response categories: With my two parents together, Mainly with one of my parents, I move between my parents, I live with other family members, I board/ flat/live with another household/family (not my own family), I live in a flat with other peers, (If institution = high school) I live at boarding school or in a boarding hostel, (If institution = university) I live a university hostel, I live by myself, I live with my partner/spouse.

QA7   Is your household located in an urban area, i.e. a city or town, or in a rural area?

Response categories: Urban, Rural, Don't know, Prefer not to say.

QA8   Over the last 12 months have you worked for money or had a paid job? (you may choose as many as you need)

Response categories: Yes, a regular full-time job, Yes, a regular part-time job (e.g. paper run), Yes, I worked during the school/university holidays, Yes, I did casual work during the school/university term, No, I didn't work for pay in the last year.

B. Internet Access

Info: Next, we're going to ask you some questions about your internet access and activity in general.

QB1   Where you currently live, do you have or have access to (select all that apply): A mobile phone, A desktop or laptop computer, A gaming console, An iPad/Tablet.

Response categories: Yes, No, Don't know, Prefer not to say.

QB2   What type of internet connection do you have where you currently live ? Note: Internet access through a mobile phone counts if used at home. Fibre counts as broadband (select all that apply):

Response categories: Dial-up/Phone modem, Broadband (including the use of that broadband connection via wifi), Mobile phone data, Other (please state [open space], Can't connect to the internet at home, Don't know, Prefer not to say

QB3   Outside of the home, do you use the internet through wireless hand-held devices, such as a mobile phone or a tablet?

Response categories: Yes, No, Don't know, Prefer not to say.

QB4   About how often do you use the internet, either on a computer, tablet or a mobile phone? *Response categories: Almost constantly, Several times a day, About once a day Several times a week, Less often, Don't know, Prefer not to say.*

QB5   What is the capacity of your main source of internet connection,

Response categories: Unlimited, Capped (please specify the limit if known [open text]), Don't know, Prefer not to say.

QB6   Who pays for your main source of internet access?

Open text response.

C. Social Media Use

Info: Thank you for your responses so far. In the next section, we'll ask you some more specific questions about your social media use, including which sites you visit, how often you visit them, and what you do when you visit them.

QC1   Have you ever used any of the following social media sites or messaging apps (select all that apply)?

Response categories: Facebook, Facebook Messenger, Instagram, Snapchat, YouTube, Tik Tok, WeChat, WhatsApp, Twitter, Pinterest, Reddit, LinkedIn, Other (please provide [open text]), I have never used any social media sites or messaging apps, prefer not to say

QC2   Thinking about the social media sites or apps you use … About how often do you visit or use (list populated from responses to QC1).

Response categories: Constantly, Several times a day, About once a day, A few times a week, Every few weeks, Less often, Don't know.

QC3   How do you use the following social media sites or apps? Select all that apply (list populated from responses to QC1)

Response categories: I scroll through other people's content, I create my own content, I send direct messages

QC4   Which social media site or app is your favourite to visit and use? Why?

Open text response

QC5   Are there any social media sites or apps you use even though you do not enjoy visiting them? Why do you continue to use them?

Open text response

QC6   Are there any social media apps you have stopped using? Why did you stop using them?

Open text response

D. Social Media Influencers

Info: Nearly there! In the next section, we're going to ask you some questions about social media influencers.

Info: Who are social media influencers?

Influencers aren't just on Instagram--they're people who can be found on other social media including Facebook, YouTube, Tik Tok and so on. Across different platforms, influencers have some things in common. They tend to:

•   have built some form of reputation for their knowledge, opinions, interest, or expertise on a specific topic

•   regularly produce engaging content on their preferred social media channels

•   have followings of enthusiastic people who engage with their content

•   usually have large followings, from a few thousand to millions of people

We're also interested in who YOU find influential even if those people have fewer followers. Celebrities can also be influencers if you find them influential.

QD1   Do you follow or see content from any influencers on social media?

Response categories: Yes, No, Don't know.

QD2   If QD1 = Yes (If no or don't know go to QD6a) Please name up to three of your favourite social media influencers whom you can recall. Feel free open another browser tab or app to check your social media account if you need help remembering the name/handle of an influencer.

Open text response x 3.

QD3a   Which social media platform(s) do you follow/see content from these influencers on? (select all that apply)? [pipe influencer 1, 2, 3 into a matrix]

Response categories: Facebook, Facebook messenger, Instagram, Snapchat, YouTube, Tik Tok, WeChat, WhatsApp, Twitter, Pinterest, Reddit, LinkedIn, Other (please provide [open text])

QD3b   If QD3a = Other (for any influencer) You indicated you follow an influencer on a social media platform that isn't on our list. Please type the platform you see their content on below:

Open text response

QD4a   What type of influencer(s) are the following (select all that apply)?

Response categories: Fashion, Gamily, Health, Travel, Lifestyle, Food, Pets, Parenting, Sports, Activism, Creative/art, Music, Other, Prefer not to say

QD4b   If QD4a = Other (for any influencer) You indicated we needed a different category to describe an influencer(s) that you follow. Please describe what kind of influencer they are below

Open text resonse

QD5a.   Which social media influencers are most popular with your peers?

Response categories: Influencers that are popular with my peers (please name below): Open text response, I don't know which influencers are popular with my peers

QD5b   If QD1 = Yes. Do you also follow or see content from this influencer(s)?

Response categories: Yes, No, Prefer not to say.

QD6   Are you currently, or would you like to be in the future, a social media influencer?

Open text response.

E. Knowledge of Unhealthy Product Marketing

Info: Finally, we're going to ask you about your experience of marketing on social media posts related to alcohol, cigarettes, and vapes.

QE1a   Have you ever searched for vape information via social media?

Response categories: Yes, No, Don't know, Prefer not to say.

QE1b If QE3a = yes then (If no, don't know, prefer not say go to QE4)

How often do you access information about vape products via the following social media (list populated with positive responses from QC1)?

Response categories: Daily, Weekly, Monthly, Rarely, Never Don't know, Prefer not to say.

QE2a   Have you ever seen any vape product advertising on the following social media (list populated with positive responses from QC1)?

Response categories: Yes, No, Don't know, Prefer not to say.

QE2b. If any Q4a = yes then (if all no, don't know, prefer not to say go to QE5) Which, if any, of the following have you done in the last month?

- Liked a vape brand on social media
- Shared something related to a vape brand, such as a status, Tweet, or picture
- Followed a vape brand on social media
- Entered a competition run by an vape brand online or on social media
- Searched for vape adverts on websites or social media.

Response categories for each: Yes, No, Don't know, Prefer not to say.

QE3a. Have you ever seen any cigarette advertising on the following social media (list populated with positive responses from QC1)?

Response categories: Yes, No, Don't know, Prefer not to say.

QE3b. If any Q5a = yes then (if all no, don't know, prefer not to say go to QE6)

- Which, if any, of the following have you done in the last month?
- Liked a cigarette brand on social media
- Shared something related to a cigarette brand, such as a status, Tweet, or picture
- Followed an cigarette brand on social media
- Entered a competition run by a cigarette brand online or on social media
- Searched for cigarette adverts on websites or social media.

Response categories for each: Yes, No, Don't know, Prefer not to say.

QE4a. Have you ever seen any alcohol advertising on the following social media (list populated with positive responses from QC1)?

Response categories for each: Yes, No, Don't know, Prefer not to say.

QE4b. If any QE6a = yes then (if all no, don't know, prefer not to say go to QE7) Which, if any, of the following have you done in the last month?

- Liked an alcohol brand on social media
- Shared something related to an alcohol drinks brand, such as a status, Tweet, or picture
- Followed an alcohol brand on social media
- Entered a competition run by an alcoholic drinks brand online or on social media
- Searched for alcoholic drinks adverts on websites or social media.

Response categories for each: Yes, No, Don't know, Prefer not to say.

QE5   If QD1 = Yes (if no or don't know go to QE3).

Thinking about the social media posts of influencers that you follow, can you recall ever seeing any posts that included:

- alcohol products
- someone – or people - drinking alcohol
- alcohol marketing
- vape products
- someone – or people – vaping
- marketing of vape products
- tobacco products
- someone – or people – smoking cigarettes
- marketing of smokes/cigarettes

Responses categories: Yes, No, Don't know, Prefer not to say.

QE6   If QE1 = Yes for any posts related to any of the product categories then (if no, don't know, prefer not say go to QE3):

Can you tell us which, if any, of the following have you done in the last month?

- Liked, commented on or responded to an influencer post which included an alcohol brand,
- Liked, commented on or responded to an influencer post which included a vape brand on social media,
- Liked, commented on or responded to an influencer post which included a tobacco brand on social media.

Response categories for each: Yes, No, Don't know, Prefer not to say.

QE7   Have you uploaded pictures yourself or friends drinking an alcoholic drink, smoking or vaping in the past month on social media (either as a post, a story, or a highlight) ?

Response categories: Yes, No, Don't know, Prefer not to say.

QE8   For positive responses to QE7 then (If no survey ends):

On what social media sites do you upload pictures of yourself or your friends drinking, smoking or vaping? Select all that apply (indicated from list populated from positive answers to QC1).

QE10   Have other people uploaded pictures of you drinking an alcoholic drink, smoking, or vaping? *Response categories: Yes, No, Don't know, Prefer not to say.*

Appendix B: Recruitment poster for HRC project *Instagram influencers, unhealthy products, and covert marketing to young people*