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Consuming user-generated videos and its impact on wellbeing

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Overview of the study

Canadians' engagement with the Internet is ever-changing and a major shift has occurred with the growing popularity of user-generated videos (UGVs). These videos have supplemented or sometimes entirely changed how people interact with others, consume news and information, and spend their leisure time. To better understand patterns in UGVs and their possible effects, the current study uses data from the 2022 Canadian Internet Use Survey to investigate the characteristics and predictors of Internet users who consume UGVs. It also looks at the relationship between consumption of UGVs and select quality of life indicators. It situates the activity of watching UGVs alongside other Internet activities, as well as the amount of time spent on the Internet. Finally, this study sheds light on the identified risks and benefits associated with going online to watch UGVs.

- In 2022, over 7 in 10 Canadians (72%) reported having watched UGVs in the previous 3 months. This percentage was higher among Canadians under the age of 35 (88%).
- Men were more likely than women to watch UGVs, but only after the age of 35.
- Racialized Canadians were more likely than non-racialized Canadians to stream UGVs (79% versus 69%), though most of this difference could be accounted for in socio-demographic differences, such as age, immigrant status, and education.
- Consumers of UGVs were among the most prolific Internet users, with greater levels of engagement in both online communication (e.g., online and video calls), as well as various other online activities (e.g., video games, banking). They were also online more frequently than other Canadians.
- Consumers of UGVs were more likely than other Canadians to say that their online activities interfered with their relationships, and to experience fair or poor mental health, even once controlling for socio-demographic characteristics and type of online activity.

Introduction

Canadians today are more digitally connected than ever before. They rely on the Internet for a broad range of activities from banking and taxes, to entertainment and social connection. While the Internet is undeniably intertwined with everyday life, Canadians' engagement with the Internet is ever-changing, with one of these major shifts being the growing popularity of user-generated videos (UGVs). In 2010, the Canadian Internet Use Survey (CIUS) began to measure the concept of watching video clips online. At that time, less than half (47%) of Canadians watched such content,[1] but by 2022, user-generated videos were consumed by nearly three-quarters (72%) of Canadians.[2] These videos, hosted on a range of platforms (e.g., YouTube, TikTok, Twitch), have supplemented or sometimes entirely changed how people interact with others, consume news and information, and spend their leisure time.

Since first appearing in the mid-2000s, UGVs have become widespread, owing to a number of concurrent developments, notably the evolution of video technologies, an increase in Internet speed and capacity, the advent and growth of smart phones, and rise in the number of video-sharing platforms. The consumption of UGVs can be innocuous and possibly helpful, such as learning new skills, obtaining gaming tips, and watching news reels; though at times, the consumption can produce other effects – namely, the formation of parasocial relationships.

Parasocial relationships are one-sided between a performer/content creator (e.g., news anchor, social media influencer, political commentator) and a spectator.[3,4] The evidence is mixed about the wellbeing effects of parasocial relationships. Some argue that marginalized groups, such as 2SLGBTQ+, benefit from these relationships (e.g., through reduced loneliness and depression),[5] while other studies have noted possible adverse effects on wellbeing, particularly among adolescents.[6]

Currently, nationally representative data sources have not measured the motivation behind watching UGVs (e.g., connecting with others, learning, entertainment) or confirm the presence of parasocial relationships, but data from the CIUS are able to shed light on who are most likely to watch UGVs, and whether there are any possible associations with well-being.

Given the widespread popularity of consuming user-generated videos, it would be useful for policy makers and Canadians to better understand any associations this form of Internet activity has with wellbeing. To this end, this study examines the characteristics of consumers of UGVs and identifies the predictors of this type of online engagement. The characteristics are contextualized by comparisons drawn from other forms of online communication and activities, including active communication and passive consumption. Finally, the study looks at the wellbeing of UGV consumers.

Consumers of user-generated videos tend to be younger

In Canada, nationally representative data on consumption patterns of UGVs started in 2018, with the Canadian Internet Use Survey. Results from this survey indicate that consumption of UGVs was greatest during the COVID-19 pandemic restrictions. In 2020, 79% of Canadians had watched some type of UGVs – whether to connect, to inform, or to entertain. Two years later, the rates of consumption returned to 2018 levels, with 72% of Canadians in 2022 watching UGVs in the previous three-month period.

While watching UGVs crosses all socio-demographic boundaries, this activity is most popular among young people. Internet users under the age of 35 were the top consumers of UGVs, with nearly 9 in 10 (88%) young people watching these videos – nearly double the rate of seniors (65 years and older) (45%) (Table 1). This finding may not be surprising, however, as young people were also the most prolific users of most forms of Internet activities, particularly those related to online communication.[7]

Table 1
Percentage and predicted probability of watching user-generated videos in the past three months, by socioeconomic and geographic characteristics, 2022

	Watched user-generated videos in the past three months			
		95% confidence interval		Predicted probability
Characteristics	Proportion	Lower bound	Upper bound	
	percent			
Gender				
Male	73.2	72.2	74.2	72.9*
Female (ref.)	69.9	68.9	70.9	70.5
Age group				
15 to 34 years old (ref.)	87.6	86.2	89.0	88.4
35 to 44 years old	81.2	79.7	82.6	80.0*
45 to 54 years old	73.4	71.7	75.1	72.0*
55 to 64 years old	61.2	59.6	62.9	61.7*
65 years and older	45.3	43.9	46.7	48.7*
Racial group				
Total racialized	**79.1**	**77.6**	**80.5**	**71.6**
South Asian	75.7	72.1	79.3	65.2*
Chinese	80.2	77.6	82.9	73.1
Black	77.7	73.6	81.8	71.7
Filipino	84.1	80.2	87.9	78.4*
Latin American	81.7	76.0	87.4	74.8
Other	78.3	75.3	81.4	71.0
Non-racialized, non-Indigenous (ref.)	69.0	68.1	69.9	71.7

Table 1
Percentage and predicted probability of watching user-generated videos in the past three months, by socioeconomic and geographic characteristics, 2022

Characteristics	Watched user-generated videos in the past three months			
		95% confidence interval		Predicted probability
	Proportion	Lower bound	Upper bound	
	percent			
Immigrant status				
Recent immigrant	80.8	78.2	83.3	67.9
Established immigrant	69.6	67.7	71.4	72.5
Non-immigrant (ref.)	71.2	70.4	72	71.7
Disability status				
Disability	68.0	65.4	70.5	72.3
No disability (ref.)	71.9	71.2	72.7	71.6
Indigenous group				
Total - Indigenous peoples	**70.3**	**65.0**	**75.6**	**70.0**
First Nations	70.3	62.3	78.3	67.7
Métis	71.5	64.7	78.2	73.2
Inuk (Inuit)	F	F	F	F
Non-Indigenous people (ref.)	71.5	70.8	72.2	71.7
Province				
Newfoundland and Labrador	64.1	61.1	67.1	68.6*
Prince Edward Island	70.8	67.1	74.5	70.9
Nova Scotia	69.8	66.7	72.9	71.6
New Brunswick	67.1	63.5	70.6	69.6
Quebec	69.8	68.5	71.1	70.8
Ontario (ref.)	72.4	71.2	73.7	72.2
Manitoba	73.3	70.5	76.0	72.1
Saskatchewan	67.8	65.0	70.6	68.3*
Alberta	72.5	70.2	74.7	70.9
British Columbia	72.9	71.1	74.7	73.4
Census metropolitan influenced zone				
Census metropolitan areas/census agglomerations (ref.)	72.9	72.1	73.7	71.9
Strong	65.9	62.8	69.0	70.8
Moderate	62.0	59.2	64.7	70.6
Weak	63.5	60.5	66.5	70.3
None	58.2	46.7	69.7	70.5
Income quintile				
Less than or equal to $42,256	65.7	63.7	67.7	71.4
$42,257 to $72,366	67.3	65.6	69.0	71.7
$72,367 to $107,480	70.2	68.5	71.8	70.2
$107,481 to $163,750 (ref.)	74.7	73.2	76.1	71.7
Greater than $163,750	78.7	77.3	80.2	73.5
Education				
High school or less	66.0	64.5	67.6	66.9*
Some post-secondary	67.8	66.5	69.1	70.3*
University (ref.)	79.2	78.2	80.3	77.1
Employment				
Employed (ref.)	78.1	77.2	78.9	72.8
Not employed	60.2	58.9	61.6	70.1*

F too unreliable to be published
* significantly different from reference category (ref.) ($p < 0.05$)
Notes: Predicted probabilities are adjusted for gender, age, racial group, immigration status, disability status, Indigenous group, province, census metropolitan influenced zone, census family income quintile, education, and employment status.
Total Indigenous peoples includes First Nations, Métis, and Inuk (Inuit).
Source: Statistics Canada, Canadian Internet Use Survey, 2022.

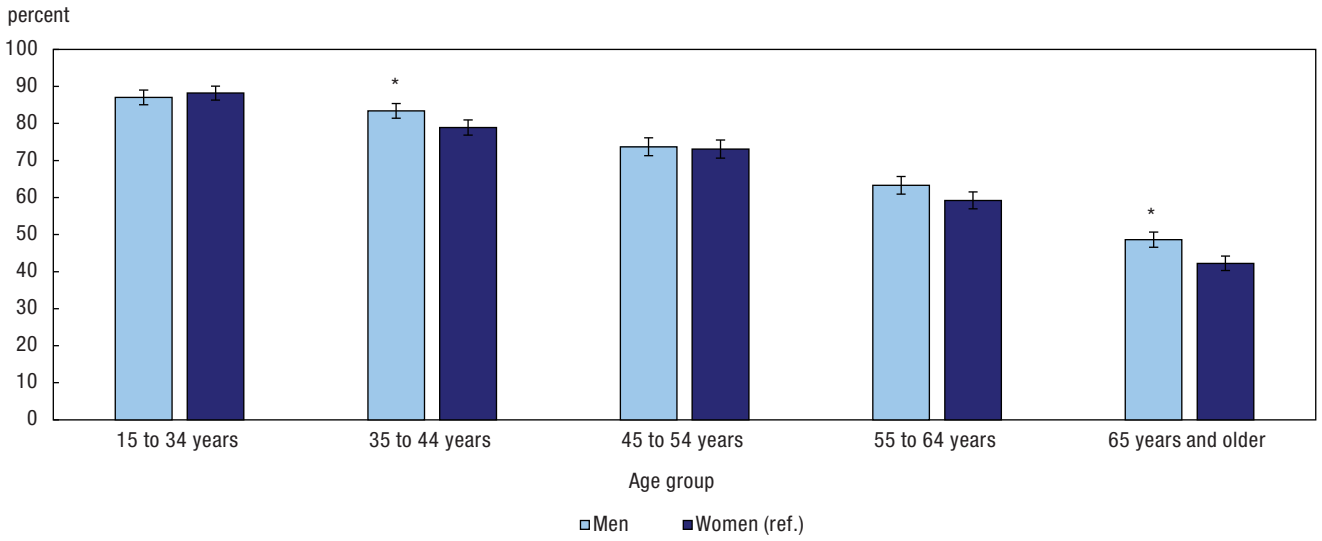
The higher tendency for people under 35 to consume UGVs was seen for both men and women, with rates being nearly identical for young women (87%) and men (88%). After the age of 35, rates dropped consistently for both genders, though differences started to emerge. At mid-life (35 to 44 years of age), men were more likely than women to stream UGVs (83% versus 79%) (Chart 1).

Men's higher likelihood of streaming was also seen in the senior years (65 years and older), where 49% of senior men watched UGVs, compared to 42% of senior women. The role of age and gender on the likelihood of streaming UGVs was observed after adjusting for a range of other socio-demographic characteristics in logistic regressions.[8]

Differences in consuming user-generated videos by race and immigration status largely explained by other factors

Besides age and gender, there were few other demographic differences. For instance, while racialized Canadians were more likely than non-racialized Canadians to consume UGVs (79% versus 69%),

Chart 1
Percentage who viewed user-generated videos in the past three months, by age and gender, 2022



* significantly different from reference category (ref.) ($p < 0.05$)
Note: Error bars represent the 95% confidence intervals.
Source: Statistics Canada, Canadian Internet Use Survey, 2022.

logistic regression showed these differences were mostly attributable to differences in socio-economic characteristics, as demonstrated by the predicted probabilities in Table 1. There were, however, a few exceptions. Filipino Canadians remained more likely than non-racialized, non-Indigenous people to be consumers of UGVs even after controlling for socio-demographic characteristics, while South Asian Canadians were less likely to consume UGVs.

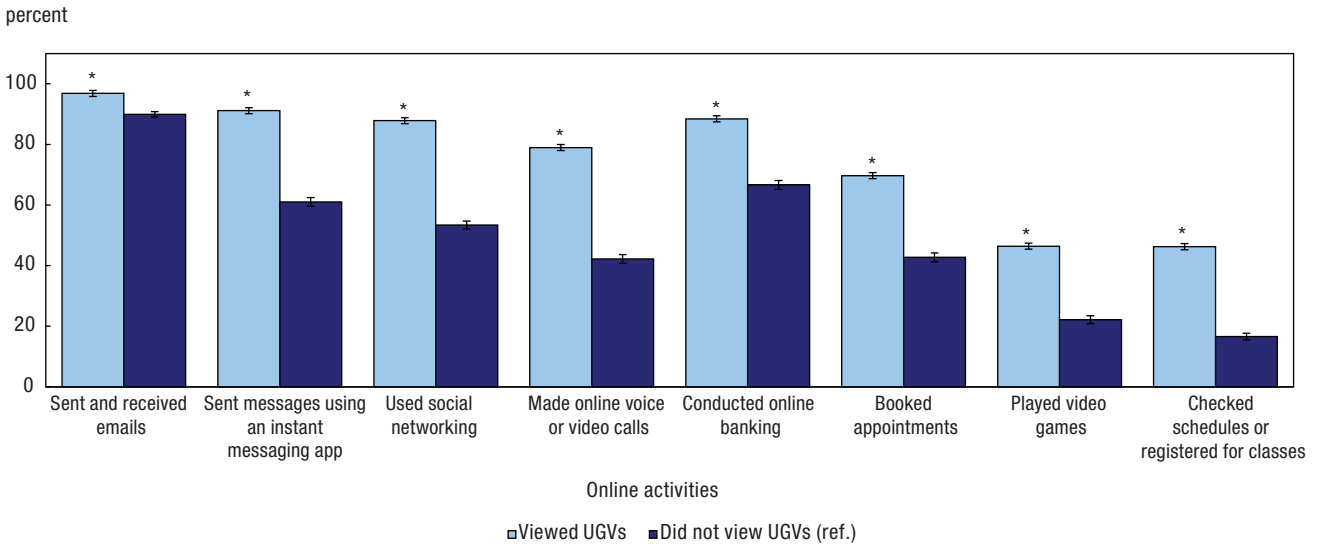
In addition, data from the CIUS 2022 showed there was no difference in patterns of consumption among immigrants. While recent immigrants were more likely to consume UGVs (81%) compared to non-immigrants (71%), this reflected differences in the socio-demographic composition of the two groups. In other words, there was no difference in the predicted probability of consuming UGVs by immigrant status.

User-generated video watchers are among the most prolific Internet users

Consumers of UGVs were twice as likely as non-consumers to make general use of the Internet[9] for 20 hours or more per week (32% versus 15%) and were twice as likely to spend 20 hours or more watching streamed content[10] compared to non-consumers (22% versus 11%).

Compared to non-consumers,[11] UGV viewers were more likely to use multiple forms of Internet-based communication, as well as engage in other online activities. For instance, consumers of UGVs were almost twice as likely as other Internet users to make online voice and video calls (Chart 2).[12] They were also more likely to engage in other types of online activities, such as the case of online gaming, where 46% of UGV viewers played video games online, compared to 22% of non-watchers of UGVs. This increased online engagement did not solely encompass leisurely activities, but watchers of UGVs were also more likely than other Internet users to perform other types of online activities, from transactional interactions like booking appointments and banking. Watching UGVs was predictive of all these online activities even when adjusting for socio-demographic characteristics.

Chart 2
Percentage engaged in online activities, by consumption of user-generated videos in the past three months, 2022



* significantly different from reference category (ref.) ($p < 0.05$)
Note: Error bars represent the 95% confidence intervals.
Source: Statistics Canada, Canadian Internet Use Survey, 2022.

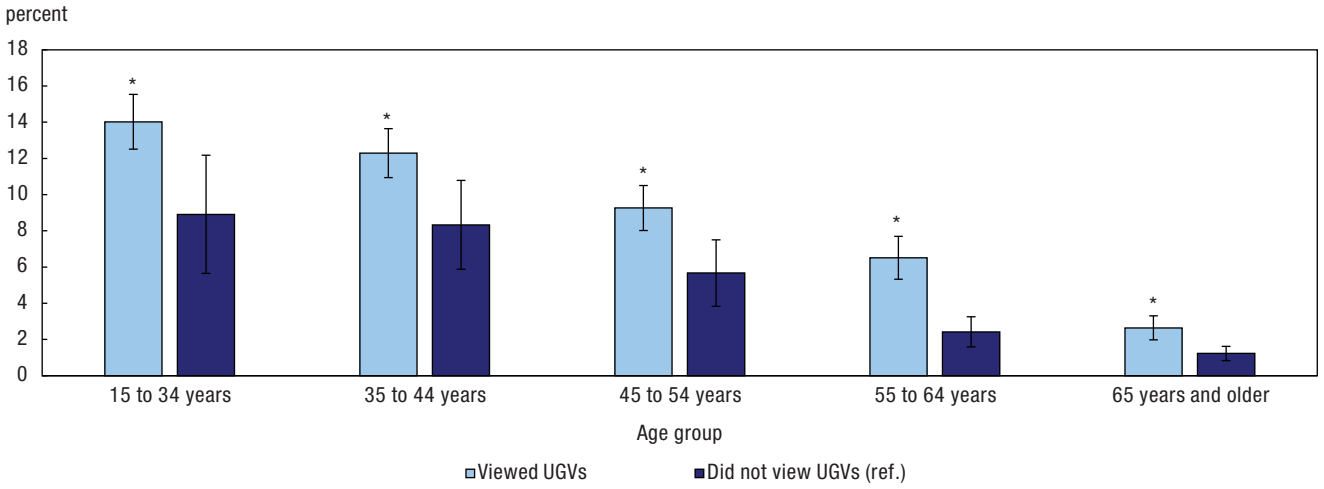
Consumers of user-generated videos are more likely to say their online activities interfered with their relationships

The online behaviour pattern of watchers of UGVs suggests that they were avid users of the Internet, both in terms of the number of online activities and the time spent on the Internet. While it is not possible to identify whether this overall behaviour is problematic (e.g., reaching the threshold of Internet addiction[13]), there were some signs that consumers of UGVs were more likely to score lower on some indicators of wellbeing.

Consumers of UGVs were 2.6 times as likely as non-UGV consumers to say that online activities interfered with their relationships (10% versus 4%), and 3.6 times more likely to report that online activities interfered with other aspects of their life (32% versus 9%). The correlation between watching UGVs and interference with personal relationships was seen across all age groups, from young watchers (under 35) of UGVs to senior watchers (aged 65 years and older) (Chart 3). This greater tendency for UGV consumers to report that the Internet interfered with relationships remained after adjusting for differences in socio-demographic characteristics,[14] online activities, and time spent online.

Perhaps as a reflection of this interference, consumers of UGVs were also less likely to be very satisfied with their relationships with family and friends. Specifically, 41% of people who streamed UGVs were very satisfied with their connections with family, lower than the 54% of non-UGV consumers. Similarly, fewer consumers of UGVs were very satisfied with their friendships, compared to non-UGV consumers (40% versus 52%).

Chart 3
Percentage who reported online activities interfered with relationships, by consumption of user-generated videos in the past three months and age group, 2022



* significantly different from reference category (ref.) ($p < 0.05$)
Note: Error bars represent the 95% confidence intervals.
Source: Statistics Canada, Canadian Internet Use Survey, 2022.

That being said, dissatisfaction with family and friend connections was fairly rare (5-6%) for both consumers and non-consumers of UGVs, with no significant difference between the two groups of Internet users. This was true after controlling for socio-demographic characteristics. Consumers of UGVs were simply more likely to report that they were somewhat satisfied, rather than completely satisfied or dissatisfied with their relationships.

Fair or poor mental health is more prevalent among consumers of user-generated videos

In line with previous findings that have shown a link between the frequency of online activities and mental health,[15] consumers of UGVs were also more likely to indicate they had fair or poor mental health. In 2022, 19% of Canadians who streamed these videos reported fair or poor mental health, significantly higher than Internet users who did not consume these videos (12%). In a logistic regression model that co-adjusted for other online activities (i.e., email, instant messaging, social networking, and voice or video calls) and various socio-demographic characteristics, viewing UGVs was the only online activity of the five that was associated with fair or poor mental health (Table 2).

Table 2
Prevalence of fair or poor mental health, by selected online activities in the past 3 months, 2022

	Participated in online activity (ref.)				Did not participate in online activity			
		95% confidence interval				95% confidence interval		
Type of online activity	Proportion	Lower bound	Upper bound	Predicted probability	Proportion	Lower bound	Upper bound	Predicted probability
	percent							
Viewed user-generated videos	19.1	18.2	20.0	17.7	12.0	10.9	13.1	15.0*
Sent emails	17.0	16.2	17.7	17.0	18.8	15.1	22.5	17.9
Sent instant messages	18.1	17.3	18.9	17.4	12.1	10.7	13.4	15.2
Social networking	18.3	17.4	19.1	17.0	12.7	11.4	14.1	17.5
Made voice or video calls	18.0	17.0	18.9	16.8	15.1	13.9	16.3	17.8

* significantly different from reference category (ref.) ($p < 0.05$).
Note: Predicted probabilities are adjusted for select online activities, gender, age, racial group, immigration status, disability status, Indigenous identity, province, census, metropolitan influenced zone, census family income quintile, education, and employment status.
Source: Statistics Canada Canadian Internet Use Survey, 2022.

While the regression analysis suggests that watching UGVs is predictive of reporting fair or poor mental health, it cannot demonstrate causality. Furthermore, it is possible that those with lower well-being may naturally gravitate towards parasocial relationships, which can be fostered through UGVs.[16] Indeed, the current study confirmed that people who reported fair or poor mental health were more likely to watch UGVs. This means that while consuming UGVs was predictive of reporting fair or poor mental health, reporting fair or poor mental health was also predictive of consuming UGVs.

This association with negative mental wellbeing becomes even more pronounced when considering time spent online. Among consumers of UGVs who spent 20 or more hours per week online, a quarter (24%) reported fair or poor mental health, compared to 15% of watchers who spent less than 10 hours per week online.

In addition, people who watched UGVs were over three times as likely (29%) as non-consumers (8%) to report that their online activities made them feel anxious, depressed, or envious of the lives of others – a relationship that held after adjusting for other online activities and socio-demographic characteristics in a logistic regression model.[17] Again, the likelihood of developing these feelings was highest among watchers who spent 20 or more hours online per week (35%), though even among lighter UGV watchers (spending less than 20 hours online), the prevalence of anxiety (27%) was 1.9 times greater than heavy Internet users who did not stream UGVs (14%).

People who watched UGVs were also more likely than other Internet users to report having tried to take a break from the Internet (25% versus 19%). Specifically, the reason reported for taking the break was because they felt they used the Internet too often or for too long. Counterintuitively, among UGV watchers, it was those who spent fewer than 20 hours per week watching streamed content online who were slightly more likely to try to take a break from the Internet, compared to those spending 20 or more hours online (26% versus 22%).

Exposure to harmful content is more prevalent among consumers of user-generated videos

One risk to the wellbeing of viewers of UGVs could be their greater exposure to harmful content, which included exposure to misinformation and to hate-based content. Based on the 2022 CIUS, 85% of consumers of UGVs were exposed to harmful content online, while the same was true for 61% of non-consumers. The association between increased exposure to harmful content and viewing UGVs was still observed after controlling for time spent online.

About one-third (32%) of people who watched UGVs reported they were exposed to information they suspected to be false or inaccurate on a daily basis, compared to 19% of non-watchers. Watchers of UGVs (13%) were also more likely to report having been exposed daily to content that may incite hate or violence, compared to non-watchers (8%). There was no significant difference in seeing intimate images or videos that may have been shared without the person's consent on a daily basis between watchers and non-watchers of UGVs.

Consumers of user-generated videos feel that the Internet helped them save time and make more informed decisions

Although this study suggests that UGV consumption is associated with relationship interference and reporting fair or poor mental health, other research suggests possible benefits to consuming such media. There is some research to support that parasocial relationships formed with such media figures can offer benefits such as better well-being outcomes for LGBQ populations,[18] increased political participation in women,[19] and greater empathy for and decreased prejudice towards marginalized groups.[20,21]

The current study based on the 2022 CIUS shows that consumers of UGVs also reported some positive interactions with the Internet. One of these benefits was feeling more informed. Consumers were twice as likely as non-consumers to indicate that their online activities helped them make informed decisions (63% versus 30%). Another reported benefit was efficiency, with consumers of UGVs (57%) being nearly twice as likely as non-consumers (31%) to report that their online activities saved them time.

Currently, there is no nationally representative data on the motivations behind watching user-generated videos or the type of content being watched, which could differentiate between the possible benefits or risk of harm of watching these videos. Further research is warranted to better understand this growing Internet activity.

Conclusion

Watching UGVs is a common pastime in Canada, with nearly three-quarters (72%) of Canadians spending at least some time streaming these videos. Canadians under the age of 35 were most likely to consume these types of online videos, reflecting their higher rates of online engagement, both in terms of number of online activities and time spent online.

While age was the stand-out demographic characteristic associated with consuming UGVs, socio-economic status also played a role. Those with higher levels of education were more likely to report watching these videos, even after other socio-demographic factors were considered.

In general, people who stream UGVs were more connected online – they were more likely than other Internet users to engage in other Internet activity and to spend more time online. At the same time, there were some indications that consumers of UGVs may be less connected with people in the real world. For instance, they were more likely to say that the Internet has interfered with their relationships with family and friends, and they were less inclined to say that they were very satisfied with these relationships compared to those who do not watch UGVs.

When asked to consider the role of the Internet in their lives, consumers of UGVs seem to recognize both the good and bad. They feel that the Internet helps them save time and keeps them informed, but they also see that the Internet can consume too much of their time and in turn, they take action to curb their level of engagement (i.e., taking a break from going online).

One important limitation of this study was that the data did not consider the possible formation of parasocial relationships, where impacts on well-being, particularly among adolescents, remain poorly understood.[22] Studies have noted that public figures can exert undue influence over their audience and can affect purchasing behaviour, attitudes towards gender, and even voting decisions.[23] Research has shown not only that information from a favourite video streamer on YouTube was considered just as reliable as that from a journalist, but that the strength of viewers' parasocial relationships with the media figure was positively and significantly related to the degree of trust they had in them.[24] Dissolution of a parasocial relationship can also cause powerful, emotional reactions, comparable to grief.[25]

Future research would benefit from including additional behavioural-related measures such as watching UGVs on social and quality of life surveys, as well as through formation of parasocial relationships to analyze other potential associations with wellbeing.

Cait Brunton *is an analyst and* ***Maire Sinha*** *is a senior analyst with the Centre for Social Data Insights and Innovation at Statistics Canada*

Data sources, methods and definitions

This study used data from the 2022 Canadian Internet Use Survey (CIUS), which was administered from December 2, 2022, to April 05, 2023. The CIUS is a cross-sectional survey that examines measuring individuals' use of digital technologies, the Internet, and online behaviours including those related to social media, e-commerce, online government services, online work, digital skills, streaming content and security privacy and trust as it relates to the Internet. The survey also measures the access to internet as well as the type and speed of the connection at home. The target population for the 2022 CIUS included all persons 15 years of age and older in Canada, excluding First Nations reserves and settlements, residents of the Yukon, Northwest Territories, and Nunavut, and full-time residents of institutions.

More information on the CIUS is available on the Statistics Canada website:

https://www23.statcan.gc.ca/imdb/p2SVpl?Function=getSurvey&SDDS=4432

Statistical analysis

This study examined those who responded "Yes" to question UI_Q040C on the CIUS 2022: "During the past three months, which of the following activities, related to watching content, have you done over the Internet? Have you: Watched user-generated content on video-sharing websites or platforms"?

Of the 25,118 total respondents, 15,177 identified as having watched UGVs in the three months prior to responding to the survey.

To describe the socio-economic and geographic characteristics of those who watched UGVs, the statistical software SAS 9.4 was used. Representative population mean estimates and upper and lower 95% confidence levels of the mean were produced using CIUS bootstrap survey weights and the Balanced Repeated Replication (BRR) variance estimation method. Additionally, the Bonferroni method was used to adjust for the multiple comparisons done.

Logistic regression was used to investigate associations between the odds of saying yes to watching UGVs and socio-economic and geographic characteristics, satisfaction with friends, satisfaction with family, mental health, and overall life satisfaction. The analyses were stratified by gender and age where relevant.

Limitations

The CIUS 2022 did not have a question to identify 2SLGBTQ+ people, so this characteristic was left out of the logistic regression model of socio-demographic characteristics.

It should be noted that the CIUS 2022 is a self-report survey, therefore responses are subject to recall issues (e.g., number of hours spent online).

Definitions

Note that disability status was determined based on self-identification questions: "Are you a person with a disability?" in the CIUS 2022.

The census metropolitan influenced zone (MIZ) is a concept that geographically differentiates the area of Canada outside census metropolitan areas (CMAs) and census agglomerations (CAs). Census subdivisions (CSDs) within provinces that are outside CMAs and CAs are assigned to one of four categories according to the degree of influence (strong, moderate, weak or no influence) that the CMAs or CAs have on them. CSDs within the territories that are outside CAs are assigned to a separate category.

A municipality within a province is assigned to a census metropolitan influenced zone (MIZ) category depending on the percentage of its resident employed labour force that commute to work in one or more of the municipalities (census subdivisions) that are part of the delineation core of a CMA or CA. The calculation of the resident employed labour force excludes the category of no fixed workplace address. CSDs with the same degree of influence tend to be clustered. They form zones around CMAs and CAs that progress through the categories from 'strong' to 'no' influence as distance from the CMAs and CAs increases. As many CSDs in the territories are very large and sparsely populated, the commuting flow of the resident employed labour force is unstable. For this reason, CSDs in the territories that are outside CAs are assigned to a separate category that is not based on their commuting flows.

The data on place of work are taken from the Census Program. Commuting, i.e., the journey to work, comprises four categories: at home; outside Canada; no fixed workplace address; and usual place of work. The calculation of the resident employed labour force excludes the category of no fixed workplace address.

CSDs outside CMAs and CAs are assigned to the following MIZ categories:

1. Strong metropolitan influenced zone: This category includes CSDs in provinces where at least 30% of the CSD's resident employed labour force (excluding the category of no fixed workplace address) commutes to work in any delineation core of a CMA or CA. It excludes CSDs with fewer than 40 persons in their resident employed labour force from the previous census.
2. Moderate metropolitan influenced zone: This category includes CSDs in provinces where at least 5% but less than 30% of the CSD's resident employed labour force (excluding the category of no fixed workplace address) commute to work in any delineation core of a CMA or CA. It excludes CSDs with fewer than 40 persons in their resident employed labour force from the previous census.
3. Weak metropolitan influenced zone: This category includes CSDs in provinces where more than 0% but less than 5% of the CSD's resident employed labour force (excluding the category of no fixed workplace address) commute to work in any delineation core of a CMA or CA. It excludes CSDs with fewer than 40 persons in their resident employed labour force from the previous census.
4. No metropolitan influenced zone: This category includes CSDs in provinces where none of the CSD's resident employed labour force (excluding the category of no fixed workplace address) commute to work in any delineation core of a CMA or CA. It also includes CSDs in provinces with fewer than 40 persons in their resident employed labour force from the previous census.

Notes

1. Based on the 2010 Canadian Internet Use Survey (CIUS) question: (During the past 12 months, have you used the Internet ...?) ... to download or watch movies or video clips online.
2. Based on the 2022 Canadian Internet Use Survey (CIUS).
3. Horton & Wohl, 1956
4. Research to date has shown that social media, in particular video streaming platforms, are conducive environments for forming parasocial relationships (Stever & Lawson, 2013). This is likely due to passive viewing being the more common form of engagement on such sites, as opposed to reciprocal communication (de Bérail, 2022). While it is possible to post comments on video streaming platforms and have media figures respond, this hardly constitutes a symmetrical social relationship and, in fact, the possibility of being noticed by the media figure has been found to be associated with stronger parasocial feelings (Bond, 2016). This concept is one of interest to social statistics given its recent uptick in prevalence during the early stages of the COVID-19 pandemic (Bond, 2021).
5. Woznicki et al., 2021
6. Aroesti, 2021, See meta-analysis by Liebers & Schramm (2019).
7. Young people aged 15 to 34 were the most active users of online communication activities: instant messaging (93%) and voice/video calls (83%), and social media apps and websites (92%).
8. To determine the predictive probabilities of different characteristics, multiple logistic regressions were ran and included the following factors: gender, age, racial group, immigration status, disability status, Indigenous identity, province, census metropolitan influenced zone, census family income quintile, education, and employment status.
9. General Internet use includes, but is not limited to, browsing the web, using social media, communicating online, emailing, shopping online, accessing the news and banking online and excludes using the Internet for business or school, streaming video content, and using video gaming services.
10. Streamed content includes, but is not limited to, UGVs.
11. Non-consumers or non-watchers of UGVs excluded those who had not used the Internet in the previous three months.
12. The pattern of increased online activities among watchers of UGVs was seen across all age groups.
13. Bhargava & Velasquez, 2021
14. Characteristics included gender, age, racial group, immigration status, disability status, Indigenous identity, province, census metropolitan influenced zone, census family income quintile, education, and employment status.
15. Asselin et al., 2024
16. Erickson, 2023; Hartmann, 2016
17. Adjusted for gender, age, racial group, immigration status, disability status, Indigenous identity, province, census metropolitan influenced zone, census family income quintile, education, and employment status.
18. Woznicki et al., 2021
19. Hoewe et al., 2020
20. Schiappa et al., 2005
21. To read more on the parasocial contact hypothesis, see work developed by Schiappa and colleagues (2005) extending from work by Allport (1954).
22. Aroesti, 2021
23. See meta-analysis by Liebers & Schramm (2019).
24. de Bérail & Bungener, 2022
25. Kretz, 2020

References

Allport, Gordon W. 1954. *The nature of prejudice*. Addison-Wesley Pub. Co.

Aroesti, Rachel. 2021. "Tragic but true: how podcasters replaced our real friends." *The Guardian*.

Asselin, Gabrielle, Bilodeau, Howard and Aisha Khalid. 2024. "Digital well-being: the relationship between technology use, mental health and interpersonal relationships." Digital Insights.

Bhargava, Vikram R. and Manuel Velasquez. 2021. "Ethics of the Attention Economy: The Problem of Social Media Addiction." *Business Ethics Quarterly*. Vol. 31, no. 3, pp. 321–359.

Bond, Bradley J. 2016. "Following Your "Friend": Social Media and the Strength of Adolescents' Parasocial Relationships with Media Personae." *Cyberpsychology Behavior and Social Networking*. Vol.19 no. 11, pp.656–660.

Bond, Bradley J. 2021. "Social and parasocial relationships during COVID-19 social distancing." *Journal of Social and Personal Relationships*. Vol. 38, no. 8, pp. 2308-2329.

de Bérail, Pierre. 2022. "Étude des relations parasociales entre viewers et YouTubers." Université Paris Cité.

de Bérail, Pierre and Catherine Bungener. 2022. "Favorite YouTubers as a source of health information during quarantine: viewers trust their favorite YouTubers with health information." *Social Network Analysis and Mining*. Vol. 12, no. 1, pp. 1-16.

Erickson, Sarah E. 2023. "PSRs in adolescence." In *Oxford University Press eBooks*. pp. 190–209.

Hartmann, Tilo. 2016. "Parasocial interaction, parasocial relationships, and well-being." *The Routledge Handbook of Media Use and Well-Being.* pp. 131–144.

Hoewe, Jennifer, Eric C. Wiemer, Tiwaladeolua Adekunle, Rachel Barton, Janel Jett, and Alexander Pijanowski. 2020. "Linking political TV shows with female lead characters to political engagement: The roles of parasocial processes and gender identity." *Journal of Broadcasting & Electronic Media*. Vol. 64, no. 5, pp. 672-692.

Horton, Donald, and R. Richard Wohl. 1956. "Mass Communication and Para-Social Interaction." *Psychiatry MMC*. Vol. 19 3, pp. 215–229.

Kretz, Valerie Ellen. 2020. "McDreamy is McDead: Fan responses to a parasocial break-up." *The Journal of Fandom Studies*. Vol. 8, no. 2, pp.147-163.

Liebers, Nicole and Holger Schramm. 2019. "Parasocial Interactions and Relationships with Media Characters – An Inventory of 60 Years of Research." *Communication Research Trends*. Vol. 38, no. 2, no. 4–31.

Moyer-Gusé, Emily. 2008. "Toward a Theory of entertainment persuasion: explaining the persuasive effects of Entertainment-Education messages." *Communication Theory*. Vol. 18, no. 3, pp. 407–425.

Schiappa, Edward, Peter B. Gregg and Dean E. Hewes. 2005. "The Parasocial Contact Hypothesis." *Communication Monographs*. Vol. 72, no. 1, pp.92–115.

Statistics Canada. 2019. *Table 22-10-0113-01 Use of Internet services and technologies by age group and household income quartile*, occasional [Data table].

Stever, Gayle S. and Kevin Lawson. 2013 "Twitter as a way for celebrities to communicate with fans: Implications for the study of parasocial interaction." *North American Journal of Psychology. Vol. 15, no. 2.*

Woznicki, Nathaniel, Andrew S. Arriaga, Norian A. Caporale-Berkowitz and Mike C. Parent. 2021. "Parasocial relationships and depression among LGBQ emerging adults living with their parents during COVID-19: The potential for online support." *Psychology of Sexual Orientation and Gender Diversity*. Vol. 8, no. 2, pp. 228–237.