UNIVERSITY OF ALBERTA
FACULTY OF ARTS
Department of Economics

Working Paper No. 2025-03

Is There a Happiness Crisis Among Young Canadians?

Haifang Huang
University of Alberta

John Helliwell
University of British Columbia

Max Norton
University of British Columbia

May 2025

Is There a Happiness Crisis Among Young Canadians?

Haifang Huang, John Helliwell and Max Norton*

May 5, 2025

Abstract

We find a large decline in the life satisfaction of younger Canadians - those below age 35 - since the mid-2010s in the Gallup World Poll (GWP), several different themes of the Canadian General Social Surveys (GSS), and the Canadian Community Health Survey (CCHS), often driven by 2-3-fold increases in misery (very low responses) and around 30% declines in very high responses. The declines appear in happiness levels and relative to older Canadians. The timing of the decline is consistent across surveys. In all cases the downward trend started before COVID-19 and continued during the pandemic. In terms of birth cohorts, the declines are the most dramatic for Gen Z. But Gen Y follows not far behind. Boomers, in contrast, stand out in their resilience. The decline in younger Canadians' subjective well-being has turned the "midlife crisis," captured by a U shape in the age-happiness relationship and frequently seen in earlier Canadian data, into a crisis for the young: most surveys now feature a monotonically rising age curve, with happiness starting low and rising until the retirement age.

JEL: E24,H23,J64,J68.

Keywords: subjective well-being, generation, demographics

*Huang: Department of Economics, University of Alberta. Helliwell and Norton: Vancouver School of Economics, University of British Columbia. Email: haifang.huang@ualberta.ca.

1 Introduction and literature review

According to Helliwell et al. (2024) (WHR), Canada's younger generations experienced a dramatic decline in their average self-reported happiness over the past 15 years. The finding is based on the Gallup World Polls, which since 2005 has been asking people across the world to evaluate their lives in general on a scale of 0 to 10. The average happiness score for younger Canadians (those aged below 30) fell from 7.6 in the 2006-2010 period to 6.4 to in the 2021-2023 period. The large decline places Canada just above Venezuela, Lebanon, and Afghanistan on the list of countries experiencing the greatest fall. The downward trend began in the mid-2010s, well before the health, economic, and social disruptions of the COVID-19 pandemic, which likely had further negative effects on the mental health of many young people (Mental Health Commission of Canada, 2022).

Older Canadians (aged 60 and above) have fared much better than those below 30. In the 2006-2010 period, the two age groups in Canada reported the same level of happiness at 7.6. Fifteen years later in the 2021-2023 period, the below-30 group is almost an entire point lower than those above 60 (6.4 vs 7.3). Canada used to have a U-shape age-happiness relationship featuring a "midlife crisis". Now, the crisis is with the young, who have displaced the middle-aged to become the least happy group.

Canada is not alone in this absolute and relative decline of younger generations' subjective well-being. In the United States, younger Americans lost 1.1 points from a 2006-2010 base of 7.3, compared to Canada's 1.2-point loss from a base of 7.6. Declines in a wide variety of mental health indicators corroborate the decline in well-being of U.S. youth during the 2010s (Twenge, 2020). The dramatic fall recorded in the Gallup World Poll warrants further verification and deeper analysis made possible using the much larger, more detailed surveys conducted by Statistics Canada, specifically the General Social Surveys (GSS) and the Canadian Community Health Surveys (CCHS). Together, the GSS and the CCHS have a sample of 80,000 respondents per year, compared to the Gallup World Poll samples of 1,000 per year. The Statistics Canada surveys offer a variety of themes and question orderings, thereby giving us a number of valuable robustness checks, as well as the chance to look in more detail at who has been most affected. If we find consistent evidence across different surveys, given their scale and variety, we can have more confidence in our findings.

Strikingly, we find in both GSS and CCHS a similar pattern of absolute and relative declines in younger Canadians' subjective well-being. Even the

magnitudes of the declines are comparable, in terms of standard deviations, to those found in the Gallup World Polls (GWP). The Canadian surveys also confirm the timing observation in Gallup: that the decline started well before COVID-19 and continued through the pandemic at the same rate, so that the pandemic cannot be the only or even the most important contributing factor. The three different surveys also show consistent patterns of happiness change by birth cohorts, with Gen Z Canadians leading the way downward, and Gen Y following closely behind.

A few Statistics Canada reports have also found declines in youth well-being. Garriguet (2021), for example, reports a decline in the self-reported mental health of youth between 2003 and 2020, particularly among females. More recently, Statistics Canada (2023) reports that "hopefulness declined among young Canadians" from 2016 to 2021/2022, and that fewer young adults reported high levels of life satisfaction in 2022 than in 2021. But there has been no systemic examination of younger Canadians' subjective well-being over a longer period based on many different surveys. In part this lack of literature reflects how recent the phenomenon is. As recently as 2022, Blanchflower and Graham (2022) described the well-being U-shape—which means a midlife crisis and thus a relatively happier youth—as "among the most striking, persistent patterns in social science". In light of more recent data, however, the U-shape pattern no longer holds in Canada. Helliwell et al. (2019) look at the age happiness relationship in general and confirm the U-shape relationship in multiple countries including Canada. That, again, is an outdated observation.

Beyond its intrinsic importance, the decline in subjective well-being among younger generations may also carry consequences for political behavior and social stability. Coming on the heels of the well-documented "deaths of despair" crisis ravaging the middle-aged white working class in the U.S. (Case and Deaton, 2015), the parallel declines in subjective well-being among U.S. and Canadian youth raise the chilling possibility that some forms of despair may be ravaging younger generations in the two countries. In the U.S., such unhappiness has become closely identified with declining trust and anti-establishment political upheaval. Disaffection has been shown to fuel support for anti-incumbent candidates as early as the 2012 election (Ward et al., 2020), and the 2024 presidential election shows a large swing of young voters away from the incumbent Democratic Party to the challenger Republican Party (Moore, 2024, November 8 at NPR). Similar dynamics have been observed in Europe, where youth support for populist parties predates the shift in U.S. politics (Ward, 2020; Algan

et al., 2025; Lindholm et al., 2025). These patterns coincide with declining support for democracy itself among younger cohorts in both the U.S. and Europe (Foa and Mounk, 2016). Is there a similar epidemic of discontent emerging among younger Canadians?

The rest of the paper is structured as follows. First we will describe the multiple surveys we use, their well-being measures, and challenges that we need to address in order to make valid comparisons over time. We then present the key findings, putting surveys side by side for a bird's eye comparison view whenever possible. The last section concludes.

2 Data and Methodology

2.1 Surveys and their measures of well-being

We use the GWP's Canadian surveys, six themes of the GSS, and the CCHS. Each of the six GSS surveys will be regarded as a separate survey due to their vastly different set of survey questions before the question on subjective well-being. Table 1 shows key information about the surveys including the exact well-being questions, sample size, and the years when the surveys were conducted. We start from the mid 2000s, until the latest GWP (in 2024) and GSS (in 2022). For the CCHS, we use data from 2015 to 2021 because the survey experienced substantial redesigns in 2015 and in 2022; we do use data in the 2009-2014 period to study the earlier trends. Both the GWP and GSS focus on population aged 15 and over. Although the CCHS has younger respondents (12 and over), we limit our attention to those 15 and over to increase comparability with the other surveys.

2.2 Survey contents, sampling differences, and other challenges that affect comparisons over time

We are interested in changes in younger Canadians' survey happiness (life evaluation or life satisfaction). Proper comparisons should take into account whatever might affect the validity of comparisons over time. We discuss several such factors here: survey contents, sampling variations and changes in Canadian demographics, changes in survey design, and changes in the response scales for the well-being questions.

First, the survey content effect. In our context, this relates to survey theme and the ordering of questions within the surveys. Changes in survey content is a

Table 1: Surveys and their measures of well-being

Survey	Sample size per year	Years used	Measure
GWP - Canada			
	≈1,000	2005 - 2024	Cantril ladder (0-10)
GSS - All Themes			
	≈20,000	2005 - 2022	life satisfaction (1-10, and 0-10)
	Time Use: 2005, 2010, 2015, 2022		
	Victimization: 2009, 2014, 2019		
	Social Networks/Identity (SN/I): 2008, 2013, 2020		
	Giving, Volunteering and Participating (GVP): 2013, 2018		
	Family: 2006, 2011, 2017		
	Caregiving and Care Receiving (Care): 2012, 2018		
CCHS	≈60,000	2009 - 2021	life satisfaction (0-10)

Note: (1) GWP stands for Gallup World Poll, GSS stands for the Canadian General Social Survey, CCHS stands for Canadian Community Health Survey. (2) The GSS surveys listed in the table cover all the GSS over the 2005-2022 period, except for GSS Canadians at Work and Home, which has only one round of surveys in 2016 and thus provides no data for changes.
(3) Question wording:
GWP's Cantril ladder (0-10): "Please imagine a ladder, with steps numbered from 0 at the bottom to 10 at the top. The top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible life for you. On which step of the ladder would you say you personally feel you stand at this time?"
GSS's life satisfaction from 2008-2010: Using a scale of 1 to 10 where 1 means "Very dissatisfied" and 10 means "Very satisfied", how do you feel about your life as a whole right now? From 2011 on, the scale changes from 0 to 10, and the words "right now" are removed.
CCHS's life satisfaction: "Using a scale of 0 to 10, where 0 means "Very dissatisfied" and 10 means "Very satisfied," how do you feel about your life as a whole right now?"

key feature of the GSS surveys, which follow rotating themes, and always place the life satisfaction question late in the survey. As a result, Bonikowska et al. (2014) found large theme effects in the GSS surveys, that "[a]sking time-use questions before the life satisfaction question tends to reduce the reported level of life satisfaction by 0.25 points. Asking victimization questions before the life satisfaction tends to increase the reported life satisfaction by 0.28 points". They attribute the differences to what they called the "time-crunch" effect and the "no-victim" effect. Specifically, the time-uses questions have negative effects by remind survey respondents of the various time pressure they face in life, while the victimization questions remind many of them that "nothing 'bad' happened to them during the reference period."

The large survey content effects in the GSS suggest that there is little point of comparing life satisfaction in GSS with different themes. Fortunately, the GSS themes follow a roughly 5-year cycle, meaning that a time-use survey is usually followed by another time-use survey in 5 years. This means that we can compare surveys that have the same theme and are roughly 5 years apart. This will be our approach. In effect, we will treat the GSS surveys not as one single survey, but as six distinct surveys. In our view, the theme change provides much valued robustness test. Finding a consistent pattern across vastly different themes is more robust than finding the pattern without any perturbations.

In contrast, the GWP always has the question on life evaluation (WP16, or Cantril ladder to be exact) as the first substantive question, preceded only by some initial screening questions, informed consent, and, in telephone interviews in some countries, a question on geographic regions. The CCHS between 2015 and 2021 also asks the life-satisfaction question early in the survey, after questions on basic demographic information, main activity (work, school, retirement, etc), and general health conditions. There are changes in 2105 and in 2022; we will focus primarily on CCHS between 2015 and 2021 in part to avoid those complications.

The 2015-2021 CCHS survey has its own survey content framing, by explicitly framing its life satisfaction question as part of a self report on health. After some demographic and main-activity questions, the survey questionnaire proceeds with a statement that "[t]he next questions are about your health. By health, we mean not only the absence of disease or injury but also physical, mental and social well-being." This is followed by a question on general health conditions, then by the life satisfaction question that we focus on. This framing

of life satisfaction as a health report likely inviting respondents to examine their life from an almost clinical perspective. As it turns out, the CCHS is the only survey, among all those we study in this paper, that shows younger Canadians to be much happier than retirement-age Canadians (see one of our later figures showing the age-happiness curve). We suspect that the health focus reminds the young of their good health, and the old of the opposite, which then colors their responses to the life satisfaction question.

The CCHS experienced a major redesign in 2015 that appears to have increased average satisfaction in 2015 compared to 2014 for all age groups. According to the Statistics Canada, the 2015 re-design covers sampling methodology, sample frame, health content, and target population.[1] Another major change occurred in 2022, when, among other changes, the CCHS added multiple questions before its life satisfaction question. These additions include queries on perceived mental health, stress in life and at work, and sense of belonging question. In this study we pay heed to the StatCan warning that "caution should be taken when comparing data from previous cycles to data released for the 2015 and 2021 and for data released 2022 and onwards" by primarily focusing on the 2015-2021 data.

Now the change in the scale of the happiness question. As seen in Table 1, the GSS had a change in the response scale to the life satisfaction question, from a 1-10 scale before 2011 to 0-10 in later surveys. Bonikowska et al. (2014) finds the effect to be "negligible', because a comparison of distributions before and after the change shows that adding 0 at the very bottom "affects primarily response patterns at the lowest point of the scale". Specifically, it appears to split the responses of 1's, which are about 0.7% of the total before the scale change, into 0's (0.5%) and 1's (0.2%) after the change. This leads to about 0.005-point decline, a negligible change.

Last but not least, there may be what we call the *composition effects*. This is an effect arising from sampling variations, or composition of survey respondents, that are not fully corrected in the weighting process. The composition variation can also reflect real changes in Canadian population due to cyclical conditions or secular forces, such as in the shares of employed/unemployed population, share of foreign born population, share of population speaking minority languages at home, and so on. Such differences can affect the comparison over time if those social-economic characteristics are correlates of subjective well-being. To remove the composition effects, we will compare raw statistics against adjusted

[1] https://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=3226

ones that take into account survey respondents' observed features. Specifically, we will regress individual level self-reported life evaluation/satisfaction on a set of commonly-used demographic and social-economic controls including sex, marital status, employment/unemployment status, educational enrollment and attainment, income, immigration status or home languages, and religious affiliation, regions of residents, etc. The exact set of controls differs across surveys depending on information availability. We then focus on the regression residuals that are free of the contributions from (or correlations with) those individual features. Statistics based on this residual may be better suited to answer the question whether Canadians have become less happy over time regardless of their social-economic background. The regression-based approach is widely used in the literature, including Bonikowska et al. (2014), which uses a regression approach to account for differences in observed individual characteristics "to net out sampling variability and actual aggregate changes", and Di Tella et al. (2001), which studies the preferences over inflation and unemployment using a country-year panel of "residual macroeconomic well-being measure," i.e., the "mean residual life satisfaction" not explained by individual personal characteristics.

3 Empirical findings

3.1 Full time series with finer age brackets

We use multiple surveys in this study, and will try to provide birds eye view by setting different surveys in a side-by-side context. To do that, however, we have to adopt some compromises for presentation reasons by collapsing age groups or years. Before we do all those, we would like to use this first sub-section to report the full time series with finer age breakdowns. Figures 1-3 present age-specific trajectories of life evaluation/satisfaction, respectively, from the GWP, GSS and the CCHS, with Table 2 showing the relevant summary statistics. All three figures have five age groups: age 15-24, 25-34, 35-54, 55-64, and 65 and above. With five lines in the figures, some of which closely bunch together, we choose not to show confidence intervals. We report instead the range of standard errors in Table 2, making clear that in all cases the younger age groups' changes over time are well beyond what can be expected within statistical margins of error. In later figures when we have fewer lines to plot, we will show those confidence intervals to drive home this point.

Figure 1, from the GWP, shows that in the earlier years up to the mid-2010s, the two youngest age groups (15-24 and 25-34) and the oldest age group (65 and over) reported the highest average satisfaction. But a clear divergence emerges in later time period, with the two youngest groups beginning to report a steadily decline satisfaction, while the oldest group maintain a largely stable trajectory. By 2024, there is a large gap between the youngest and the oldest groups. We also observe that the declines in happiness extend beyond the youngest. All young and middle-aged groups suffer substantial declines. It is only the oldest group that clearly stands out with its resilience over the period.

Table 2: Summary Statistics

	GWP (N=19)			GSS (N=18)			CCHS (N=13)		
Age group	Mean	SD	Stder Range	Mean	SD	Stder Range	Mean	SD	Stder Range
Age 15-24	7.20	0.51	0.12-0.26	7.77	0.43	0.03-0.14	8.13	0.09	0.02-0.05
Age 25-34	7.08	0.43	0.13-0.20	7.75	0.39	0.03-0.08	8.09	0.08	0.03-0.04
Age 35-54	7.18	0.36	0.08-0.16	7.72	0.34	0.02-0.05	7.95	0.08	0.02-0.03
Age 55-64	7.29	0.25	0.12-0.22	7.85	0.33	0.03-0.07	7.97	0.06	0.03-0.04
Age 65 and over	7.57	0.17	0.10-0.24	8.14	0.26	0.02-0.05	8.04	0.06	0.02-0.03

Notes: (1) The standard deviations are standard deviation of yearly averages. Not standard deviations from the micro sample. The column "Stder Range" reports the range of the standard errors of the estimated yearly averages.

Figure 2 has six panels, one for each of the six different themes. We will leave detailed discussion for later sub-sections. Here we note that five of the six different themes show a clear pattern of downward trajectories starting in the middle of the 2010s. This suggests that most of the decline happened quite recently. The decline is not a result of the COVID-19 pandemic, since the two 2018 surveys (namely the Caregiving and Care Receiving survey, and the Giving, Volunteering and Participating survey) and the 2019 survey (Victimization) all show declines, and they happened before 2020. In all of the GSS themes, one or both of the two below-35 age groups show the largest declines.

Before describing CCHS in Figure 3, we note two features of the survey. First, the CCHS's yearly time series have a much narrower range than those of the GWP and GSS. The GWP plot has a y-axis that range from 6 to 8. The GSS range is 6.5 to 8.5. Thus the GWP and GSS surveys both have a range of 2 points. The CCHS range, on the other hand, is merely half a point, ranging from 7.8 to 8.3. This difference will become obvious later when we place CCHS

and other surveys on a common scale for presentation. A second feature of the CCHS results is a sudden jump in life satisfaction that coincides with the 2015 survey redesign. All age groups experienced an increase from 2014 to 2015 that is about two standard deviations of the overall time series. This sudden and large change justifies the need to heed Statistics Canada's warning to be cautious when comparing data from before and after the 2015 survey changes.

Despite the scale differences, Figure 3 shows an unmistakable picture of steady decline between 2015 to 2021. In comparison, the happiness trajectory within the 2009-2014 period is largely flat, consistent with GWP and GSS observations. Also consistent is the observation that the two youngest age group (15-24 and 25-34) suffer the greatest declines in their life satisfaction after 2015.

3.2 Age-happiness relationship: disappearance of U shape

Figure 4 summarizes the relative decline in younger Canadian's happiness, with the help of age-happiness curves that plot average happiness on the y axis against age brackets on the x axis. A well established finding in the existing literature is a U-shape pattern. Specifically, subjective well-being starts at a high level at young age, falls into a low of "midlife crisis," before picking up again at or near the retirement age (see Blanchflower and Graham (2022), Helliwell et al. (2019), and most recently Oparina et al. (2025)). The U-shape however, might have changed or disappeared in Canada. To show that, Figure 4 plots and compares the age-happiness curves at different points in time, pitting the mid 2010s against the most recent years, the late 2010s and early 2020s depending on surveys. Figure 4 has many panels, one for the GWP, six for the GSS, and one for the CCHS, plus one more that is for the averages taken across all the six GSS themes. All of them are plotted on a common scale. With only one average in each panel, we can show the confidence intervals as well.

First the GWP panel. In the 2012-2014 period, the youngest (15-24) and the oldest (65 and over) age groups reported higher life evaluations than the middle-aged groups, i.e., there was a clear U shape. In the most recent period (2022-2024), however, the U shape disappears, completely driven by a large fall among younger age groups. Instead of a midlife crisis, we now have a crisis of the young. The two below-35 age groups have replaced the middle-aged groups to become the least happy. The 65-and-over age group, on the other hand, stays on top. Instead of a U, we now have a steep mountain to climb, with life beginning at the valley, rising gradually until peaking at the retirement age.

Because the U shape had already been shown to depend on the social contexts at home, at work, and in the community (Helliwell et al., 2019), it is likely that some of these aspects of life have become relatively less favourable for the young.

Moving on to the GSS themes, we observe that the six different themes do not always have the same age-happiness relationships, let alone a U shape, in the earlier period. To illustrate, Time Use and Social Networks/Identify themes tend to show higher life satisfaction for the old and lower satisfaction for the young, while Caregiving and Care Receiving, as well as the Giving, Volunteering, and Participating tend to have happier younger age groups. Perhaps different survey contents remind people of their advantages and concerns. The younger age groups may be facing a greater time pressure, more socially anxious but are also more socially engaged at the same time, and less likely to worry about healthcare. For older age groups, the opposite is true, thus leading to the different age-happiness relationship across themes. Yet even among the noises, there is evidence of relative decline of the young, especially in the Victimization surveys (2019 vs 2014), Social Networks/Identity surveys (2020 vs 2013) and Time Use surveys (2022 vs 2015).

To provide a summary measure for the GSS surveys, we took the average of the six themes over the years from 2017 to 2022, and compared the resulted age-happiness curve again a curve that is derived from exactly the same 6 themes over the years from 2011-2015. This is the panel with the sub-title "GSS - All themes". Here a clear pattern emerges. On average, the GSS does show a U-shape age-happiness relationship in the 2011-2015 period, in the sense that the 35-54 age groups reported the lowest life satisfaction. In the 2017-2022 period, however, the U shape disappears completely just like in the GWP. Now it is the 15-24 age group that reports the lowest satisfaction, followed by the 25-34 group. The U is replaced with a mountain for the young to climb.

The last panel of Figure 4 is for the CCHS, showing the 2015 survey against the 2021 survey. In 2015, the two below-35 age groups were substantially happier than the older age groups. There is no U though, because there is no up-pick after the middle life stage. The oldest groups is as unhappy as the middle group. We attribute this to the explicit health focus of the CCHS, which asks respondents to consider the life satisfaction as part of a report on their "health".[2] From 2015 to 2021, however, the age-happiness curve tilts to the

[2]Recall that the CCHS instructs its respondents that "[t]he next questions are about your health. By health, we mean not only the absence of disease or injury but also physical,

disadvantage of the young. As a result, the young are as unhappy as the old.

As a side note about the CCHS, we note that Figure 4's common scale also demonstrates that the variations in the CCHS, both in terms of changes over time and in differences between age groups, are much smaller than those observed in the GWP and the GSS. This is not a result of the CCHS having a bigger sample size, because the GSS has large samples as well, especially after we combine the GSS themes together in the "GSS average of all themes" panel. In any case, the sample sizes in most of our surveys are big enough to draw strong statistical conclusions, as indicated by the narrowness of the confidence intervals relative to the changes over time. More likely, it is the CCHS's health focus that causes the difference, which may have reduced people's urge to complain or to enthuse as some might if they were told it was a social or opinion survey.

3.3 Combing the two youngest age groups together

The two youngest age groups (namely the 15-24 and the 25-34 groups), though exhibiting some differences, by and large follow similar trajectories as demonstrated in the movements of the age-happiness curves in the various panels of Figure 4. In almost all cases, the two age groups move in the same direction by comparable amounts. Collapsing them into one single group does not lose too much information, while simplifying the presentation substantially across 8 different surveys. This is what Figure 5 does. It plots the combined group's average life evaluation/satisfaction from the GWP, GSS and CCHS in three side-by-side panels. One benefit of having only one line to plot is that we can now show all the six GSS themes in the same panel, using theme lines to connect comparable pairs.

Figure 5 shows a clear decline of the below-35 group's average life satisfaction. In terms of magnitudes, the GWP and some themes of GSS are largely comparable (1.2 for GWP, 1 for Time Use, 0.8 for Social Networks/Identity, 0.6 for Victimization). The CCHS decline is much smaller at 0.33. We note however that the CCHS time series also have much smaller standard deviations. If we measure the change in terms of standard deviations, so that large changes in volatile time series are scaled down while small changes in smoother time series are scaled up, the declines have consistent magnitude: a 3 standard-deviation drop in GWP compared to a drop of 4 standard deviations in the CCHS (see

mental and social well-being" before asking a general health question, then the life satisfaction question.

left-hand panel of Figure 6). The timing is also consistent. In both the GWP and the GSS, no substantial decline occurred until the mid 2010s. The same is true for the CCHS results (see earlier Figure 3 for the full time series).

The lower three panels of Figure 5 re-plot the trajectories using adjusted levels of happiness that are free of the possible composition effects described in the methodology section. We first regress individual respondents' happiness on a set of commonly used demographic and social-economic controls, using only the below-35 respondents and without age itself on the right-hand side. We then remove the control variables' contributions by focusing on the regression residuals. The lower panels in Figure 5 show yearly averages of these residuals. We report the underlying regression results in Table 5. As commonly found in the literature, higher income is a positive factor, as is having a job, being married or living with a partner, living in dwelling owned by household members, being a student, and having a religious affiliation. The negative factors include being unemployed, and not speaking one of the official languages at home.[3]

The removal of composition effects does not have any major impact, as the happiness trajectories without and with adjustment are largely identical. We can thus conclude that the happiness decline of the young is not due to some statistical sampling variations or because of secular demographic changes in Canada such as in the share of foreign-born individuals and the share of Canadians with religious affiliation. Instead it reflects a general decline in happiness regardless of the social-economic background of younger Canadians.

Finally, we note that Figure 6, where we present all the survey statistics on a standardized scale (units of time-series standard deviation), has a right hand panel. Its intention is to capture the relative decline of the below-35 age group. We do so by first calculating the well-being gap, defined as the average satisfaction of the below-35 group minus that of the above-35 group. We then plot the well-being gap again on a standardized scale in units of time-series standard deviation with initial means removed. The resultant trajectories show an unmistakable relative decline of the below-35 group. The data thus show that the happiness crisis occurred to younger Canadians both in absolute terms and in relative terms.

[3]In the few GSS surveys where employment, unemployment and homeowner status cannot be determined based on survey questions, we use an imputation process, using all the demographic and social economic information to predict the values used in the regressions.

3.4 Distributions and extremes

Next we look beyond changes in average levels to examine changes in the distributions of happiness responses from Canadians below the age of 35. Figure 7 plots the distributions along the 0-to-10 point scale to show how the (weighted) share of responses have changed, comparing the most recent surveys against those in the mid 2010s. All the surveys, except the Family survey (2017 vs 2011), show a decline in the share of responses between 8 and 10, and an increase in the share of responses that are between 0 and 5.

Table 3 shows the shares of responses that we consider as extremes: those indicating misery (0-4) at one end and those indicating jubilance (9-10) at the other. The choice of 0-4 as misery is justified by the very small shares that these responses commanded together in the earlier period, which ranges from 1.3% to 4.9% depending on surveys. The share almost triples over time in the GWP from 4.7% to 14.4%. The 10 percentage-point increase is followed by the 6.5 percentage point increase in the Time Use survey, and a 6.4 percentage point increase in the Social Network/Identity. In the Victimization survey, the misery share increases by 4.5 percentage points, which appears small until we realize that the initial level was only 1.8%. So the rise to 6.3% in fact represents a greater than 3-fold increase.

On the opposite end of the distribution is jubilance (9 and 10). In GWP, the initial share in the mid-2010s was only 22%. But in some themes of the GSS, the share is much higher, up to 46% in the Victimization survey, which likely is due to the "no-victim" effect described in Bonikowska et al. (2014). The GSS theme with the lowest initial jubilance share is the Time Use survey, likely the result of the "time-crunch" effect described in (Bonikowska et al., 2014). Regardless the initial level, the shares of these very high responses fall across the board over time, by about 9 percentages points in Time Use survey (2015 to 2022) and in CCHS survey (2015 to 2021), by 10 percentage points in the GWP (2012-14 to 2022-24) and Giving, Volunteering and Participating (2013 to 2018), 13 points in Social Network/Identity Surveys (2013 to 2020) and Victimization surveys (2014 to 2019). Taking simple averages across all the 8 surveys, we can report an average of 2.5-fold increase in misery, and an average of 26% decline in jubilance.

Table 3: Changes in shares of misery (0-4) and jubilance (9-10)

Survey	Periods	Misery		Jubilance	
		Earlier	Recent	Earlier	Recent
GWP	2012-14 vs 2022-24	4.7	14.4	21.6	11.0
Family	2011 vs 2017	2.0	2.4	40.8	38.6
Caregiving and Care Receiving	2012 vs 2018	2.4	6.4	35.8	28.5
Giving, Volunteering and Participating	2013 vs 2018	2.4	5.0	38.5	28.4
Victimization	2014 vs 2019	1.8	6.3	46.3	33.4
Social Networks/Identity	2013 vs 2020	4.6	11.0	32.3	19.7
Time Use	2015 vs 2022	4.9	11.4	24.4	15.8
CCHS	2015 vs 2021	1.3	2.3	42.6	34.0

3.5 Cohorts and genders

Next we explore changes in happiness by birth cohort, breaking down the population into four broad cohorts: Gen Z (those born between 1997 and 2012), Gen Y (born between 1981 and 1996, also known as Millennials), Gen X (born between 1965 and 1980), and Boomers and older (those born before 1965). By doing so, we hope to understand whether the fall in younger Canadians' happiness is mostly a Gen Z story. The mental health of Gen Z has been the focus of intense media and public-health discussion. For example, Haidt (2024) argues that the rise of smartphones and social media, which replaced a "play-based childhood" with a "phone-based childhood", has caused substantial damage to youth mental health, particularly among Gen Z. Here our cohort analysis allows us to follow Gen Z in our surveys over time, and equally important, other generations as well, especially Gen Y. If Gen Y also experience large decline in happiness, then the problem is perhaps more than just the use of phone and social media in formative years.

Figure 8 collects the cohort plots from all the surveys. The sample size for Gen Z was particularly small in early years in the GWP; we use three-year averaging so that each point represents the average of current and last 2 years in the GWP time series. Smoothing is used only for GWP, because sample size is not a problem for other surveys. But three GSS themes are missing Gen Z in their earlier rounds due to the cohort's young age at the time.[4] Finally,

[4]GSS targets population 15 and older. In the early 2010s, most Gen Z are below that age. The GSS Family theme, for example, has its earlier round in 2011. So even though it has Gen Z respondents in its 2017 survey, it is missing the 2011 information to make a comparison

we note that due to the many lines that sometimes bunch closely together, we avoid showing confidence intervals but instead report the declines and standard errors of the estimated declines in Table 8.

Table 4: Changes in happiness by birth cohort

Survey	Period	Cohort	Change	Stderr
GWP	2012-14 to 2022-24	Boomers	-0.28	0.08
GWP	2012-14 to 2022-24	Gen X	-0.51	0.11
GWP	2012-14 to 2022-24	Gen Y	-0.90	0.11
GWP	2012-14 to 2022-24	Gen Z	-1.37	0.21
Family	2011 to 2017	Boomers	0.04	0.03
Family	2011 to 2017	Gen X	0.02	0.04
Family	2011 to 2017	Gen Y	-0.14	0.05
Caregiving and Care Receiving	2012 to 2018	Boomers	-0.32	0.03
Caregiving and Care Receiving	2012 to 2018	Gen X	-0.54	0.05
Caregiving and Care Receiving	2012 to 2018	Gen Y	-0.54	0.06
Giving, Volunteering and Participating	2013 to 2018	Boomers	-0.27	0.04
Giving, Volunteering and Participating	2013 to 2018	Gen X	-0.52	0.06
Giving, Volunteering and Participating	2013 to 2018	Gen Y	-0.35	0.08
Victimization	2014 to 2019	Boomers	-0.22	0.03
Victimization	2014 to 2019	Gen X	-0.48	0.05
Victimization	2014 to 2019	Gen Y	-0.57	0.05
Victimization	2014 to 2019	Gen Z	-0.87	0.13
Social Networks/Identity	2013 to 2020	Boomers	-0.32	0.03
Social Networks/Identity	2013 to 2020	Gen X	-0.41	0.05
Social Networks/Identity	2013 to 2020	Gen Y	-0.55	0.06
Social Networks/Identity	2013 to 2020	Gen Z	-1.14	0.14
Time Use	2015 to 2022	Boomers	-0.32	0.05
Time Use	2015 to 2022	Gen X	-0.46	0.06
Time Use	2015 to 2022	Gen Y	-0.62	0.08
Time Use	2015 to 2022	Gen Z	-0.71	0.16
CCHS	2015 to 2021	Boomers	-0.06	0.03
CCHS	2015 to 2021	Gen X	-0.21	0.04
CCHS	2015 to 2021	Gen Y	-0.31	0.04
CCHS	2015 to 2021	Gen Z	-0.52	0.05

Notes: The "Stderr" reports the standard errors of the estimated change.

A consistent message emerges across the many surveys: the Gen Z cohort,

over time. The Giving, Volunteering and Participating and Caregiving and Care Receiving themes are missing Gen Z comparisons as well, because we maintain a minimum cell size threshold when requesting data from the Research Data Centre (RDC) for confidentiality reasons, which means we have to drop Gen Z observations in these surveys' earlier years.

whenever meaningful comparisons exist, always has the greatest decline over time. Their average life evaluation falls by 1.37 points in the GWP, 1.14 points in the Social Networks/Identity survey, 0.87 points in the Victimization survey, and 0.52 points in the CCHS. In all cases, the declines are greater than for other cohorts. At the other end are Boomers and older, who show the least decline across all surveys. Could the decline in Gen Z happiness may be at least partly a result of their becoming young adults? In 2014, the age range of Gen Z is 15-17. In 2024 the range becomes 15-27. Thus the average age increases. Can this "aging" explain the 1.37 point decline in the GWP? No. The estimated age curve over that phase of life is simply not that steep. In the GWP the differences in average life evaluation between those of ages 15-17 and those of age 15-27 is about 0.15 in the pre-2015 surveys. So assuming that Gen Z follows the age-happiness relationship commonly seen before the mid 2010s, the process of getting several years older explains less than one-sixth of the actual decline.

Given the intense interest in Gen Z mental health that emphasizes the role of social media and the potential differential impacts of social media on male and female youths (Twenge et al., 2018; Twenge, 2020; Haidt, 2024). Figure 9 splits male and female Gen Z and plots their happiness trajectories separately. By and large, the figure does not show substantial gender differences. The GWP has a greater fall for female Gen Z than for male Gen Z, but that is largely a result of the survey reporting a relatively level of happiness for male Gen Z in the earlier years. Those earlier years, in turn, have small Gen Z sample sizes and large standard errors. Starting from the mid-2010s, there is little difference between the genders in the GWP. The GSS Time Use survey, in contrast, suggest a greater fall for Gen Z males, though it too suffers from large standard errors especially in the most recent year. In other surveys, the gender differences are minimal or non-existent. The evidence as a whole thus shows no major differences between Gen Z males and females. This may suggest that social media impact is not as gender biased as sometimes thought, and that males in Gen Z face their own challenges in life over recent decades, including a greater risk of being "left-behind" in schools (Fortin et al., 2015), the influence of online "manosphere" that amplifies the sense of "betas" and "incels" insecurity (Ging, 2019), as well as economic challenges, as they grow into young men, including the decline of some traditionally male-dominated industries that overturn young men's "relative economic stature *[...]* versus young women" (Autor et al., 2019).

We would also like to emphasize that happiness crisis is not just a Gen Z phenomenon. Gen Y suffers substantial decline as well, roughly 60% of what is found for Gen Z, by 0.9 point in GWP, 0.71 in Time Use surveys, 0.55 point in Victimization surveys, 0.54 point in Social Networks/Identity surveys, and 0.31 in the CCHS. Again, the aging process, ie the fact that Gen Y have grown older over the past decade, explains only a tiny part of the decline, because the age-happiness relationship does not feature such a steep drop between those of age of 18-33 (how old Gen Y were in 2014) and those between 28 and 43 (how old they are in 2024).[5]

We can now address the question whether the decline in happiness among younger Canadians is purely a result of declines among the Gen Z. The answer is no. In the 2012-2014 period, Gen Z account for 10% of Canadians below 35 in the GWP. Their share increases to 54% in 2024. If we take the midpoint, 32%, and multiply it by Gen Z's decline in happiness, which is 1.37, we get 0.44, the approximate contribution from Gen Z alone. We do the same for Gen Y. Its population share among the below-35 was 8% in 2012-2014 period, and 45% in 2024. Taking the midpoint 60%, and multiplying it by 0.87, Gen Y's decline, we have 0.52. So the Gen Y decline makes at least as large a contribution as does that of Gen Z. The calculation is similar using other surveys.[6] The data thus suggest that the happiness crisis among younger Canadians is more than just a Gen Z phenomenon. We have to try to understand the challenges facing older cohorts of the younger Canadians as well, such as Gen Y who bore the brunt of the Great Recession and the subsequent slow-down in Canadian economies. All working cohorts have faced changing job prospects, large increases in housing costs, COVID-19 pandemic disruptions to school and work, and the subsequent cost-of-living squeeze. The decline in their happiness is perhaps more than just from the rise of social media, and reasons may vary for different age cohorts. The recession and economic slowdowns are known to have disproportionate impacts on young people's employment opportunities (Bell and Blanchflower, 2011), which have a direct bearing on mental health outcomes (Ganson et al., 2021). There is also an extensive literature on the rising cost of housing in big cities, including evidence that struggling with housing

[5]The difference along the age-happiness curve is about 0.1 in the GWP, explaining one-ninth of the observed decline.

[6]In the three GSS themes that have Gen Z respondents in their mid-2010 round, the average of Gen Z decline is about 1, Gen Y decline is about 0.6. The relative ratio is exactly the same as in the GWP. The CCHS has exactly the same ratio of declines as well, 0.52 for Gen Z, and 0.31 for Gen Y.

costs in early adulthood can negatively impact financial and mental wellbeing over a decade later (Roberts et al., 2025).

4 Conclusions and call for further research

In this paper we pull together eight distinct surveys conducted in Canada over the two decades to see how younger Canadians' subjective well-being has changed over time, focusing on those aged 35 and below. A consistent picture emerges. Starting from the mid-2010s, these younger Canadians have increasingly reported lower levels of satisfaction with their lives. In the GSS Victimization survey, for example, the share of misery (reporting life satisfaction at 4 or less) rose 1.8% to 6.3% from 2014 to 2019, while in the Gallup World Poll, the highest scores (9 and 10) fell from 22% to 11% between 2012-14 and 2022-24.

Our findings are remarkably robust across multiple surveys. The surveys used in this study vary substantially in survey themes and question ordering. The Gallup World Poll starts with the life-evaluation question right away. In contrast, each of the six distinct themes of the General Social Survey asks vastly different sets of questions before getting to the life satisfaction question. The Community Health Survey places its life satisfaction question in a group of self reports on health status. The survey content and question-ordering effects are substantial. We separate surveys by theme and structure to enable valid comparisons to be made, and almost universally find declining life satisfaction among younger Canadians. The absolute and relative declines are comparable between the Gallup survey and the GSS surveys. The Community Health Survey, perhaps due to its health framing, tends to show the highest satisfaction level for young Canadians and the smallest decline over time, but the smoothness of its times series means that it has the biggest decline in terms of standard deviations. In other words, its decline over time stands out more sharply against its lesser year-to-year fluctuations.

Our second conclusion is about the timing of the decline. All surveys indicate a downward trend that starts around the mid 2010s, well before the COVID-19 pandemic. The data thus suggest that the pandemic led to a continuation, but not to any increase, in the rate of decline. We should therefore not expect a fast recovery after the pandemic. The Gallup surveys in 2023 and 2024 show no evidence of recovery.

The third conclusion we draw is that the decline in younger Canadians'

subjective well-being is not just driven by worsening mental health of Gen Z Canadians. Yes, Gen Z experience the greatest decline in their life evaluations, beyond what can be expected from the growing-up process of becoming young adults. But we observed substantial Gen-Y declines, too, that are often not far behind. The observation of Gen Y malaise does not over-turn the hypothesis that social media and smartphone use contributed to a youth mental health crisis. But it does suggest the need to look beyond that. Young Canadians over the past decade have faced a myriad of life challenges, include the labour-market challenges after the 2008-09 crisis, the slowing down of the Canadian economic over the past decade, the high cost of housing in big cities, rising inequality among the young exacerbated by inheritance and parental supports, and other potential causes. There is no lack of suspects and the culprits may be multiple.

Our last observation is that there is little difference in the declines of Gen Z female vs Gen Z male. Both genders suffer, and suffer to a remarkably similar degree, a finding that is robust across most of the surveys. The absence of substantial differences by genders confirms the widespread nature of the happiness crisis, and again points to the multi-faceted nature of the phenomenon. Social media may have been more damaging to girls' anxiety and depression, but the virtual world's attraction might have withdrawn more boys from the real world (Haidt, 2024). Boys are also more likely to struggle at school (Fortin et al., 2015) and are more influenced by the "aggrieved manhood" culture online (Ging, 2019). The loss of manufacturing jobs may be more devastating for young men than for young women (Autor et al., 2019).

Regardless of the causes, the declines in the subjective well-being of young Canadians are generally greater than those of older generations, especially those of retirement ages. As a result we no longer observe, in most of the recent surveys, a U shape in age-happiness relationship that features a midlife crisis and higher happiness at both the younger and the older ends of the age curve. The current data show an almost monotonically rising age curve, with happiness starting at or near the lowest point, and rise gradually until the retirement age. To answer the question asked in this paper's title: Yes, there is indeed a happiness crisis among younger Canadians that have affected the youth as well as younger adults, females as well as males.

One important question requiring future study is the extent to which changes in life satisfaction have been matched by changes in political behaviour, as reflected by political views and voting intentions. In many countries, there has

been a large gender gap in the attraction of far-right political ideas and party voting, with young and middle-aged males being twice as likely as females to vote for extreme-right parties (Finnsdottir, 2022). In Canada, this is echoed in a gender gap in voting intentions for the 2025 federal election, with younger females twice as likely as males to vote for Carney rather than Poilievre (Angus Reid Poll, April 21, 2025). How does this square with the drops in the life satisfaction of younger Canadians, which have been equally large for males and females? Perhaps the extent and direction to which lower happiness is matched by changes in voting behaviour and behaviour depends on the particular sources of the declines in happiness, since these are arguably different for males and females. This seems quite plausible, and also amenable to more detailed analysis of the social and economic circumstances of Canadians of different ages, gender, education, and employment prospects.

Preliminary evidence from the U.S. suggests that even within Gen Z, patterns of political disaffection may be diverging. Younger members of the cohort, who were in high school during the peak of the COVID-19 pandemic, appear more receptive to populist or right-leaning political messages, while older Gen Z voters tend to resemble Gen Y in their political behavior (Yale Institute of Politics, 2025). If confirmed, such divergence would point to lasting effects of pandemic-era social disruption, and underscore the importance of accounting for within-cohort heterogeneity in age and formative life experiences when analyzing declines in subjective well-being.

Previous research using Canadian data (Helliwell et al., 2019) has shown that the shape of the curve relating happiness and age depends on the quality of social contexts such as workplaces, neighbourhoods, and family life. The relative decline in life satisfaction among younger Canadians very possibly reflects that, since the mid-2010s, these circumstances have worsened more for school-age and young adult Canadians than for older Canadians. Gender differences in political preferences may similarly reflect different social and economic realities for young men and women. These are research questions of policy urgency and importance. The breadth and depth of Statistics Canada surveys, including repeated life satisfaction measures, should enable us and others to dig much deeper. With the passage of time, the large sample sizes in these surveys will allow for clearer distinctions between Gen Z and the emerging Gen Alpha, offering further insight into how these patterns evolve.

References

Algan, Y., C. Blanc, and C. Senik (2025). Trusting others: How unhappiness and social distrust explain populism. In J. Helliwell, R. Layard, J. D. Sachs, J.-E. D. Neve, L. Aknin, and S. Wang (Eds.), *World Happiness Report, 2025*, pp. 193–226. Wellbeing Research Centre, University of Oxford.

Angus Reid Poll, April 21 (2025). Election 45. *Angus Reid Institute*.

Autor, D., D. Dorn, and G. Hanson (2019, September). When work disappears: Manufacturing decline and the falling marriage market value of young men. *American Economic Review: Insights 1*(2), 161–78.

Blanchflower, D. G. and C. L. Graham (2022, May). The Mid-Life Dip in Well-Being: a Critique. *Social Indicators Research: An International and Interdisciplinary Journal for Quality-of-Life Measurement 161*(1), 287–344.

Bonikowska, A., J. Helliwell, F. Hou, and G. Schellenberg (2014, September). An Assessment of Life Satisfaction Responses on Recent Statistics Canada Surveys. *Social Indicators Research: An International and Interdisciplinary Journal for Quality-of-Life Measurement 118*(2), 617–643.

Case, A. and A. Deaton (2015). Rising morbidity and mortality in midlife among white non-hispanic americans in the 21st century. *Proceedings of the National Academy of Sciences 112*(49), 15078–15083.

Di Tella, R., R. J. MacCulloch, and A. J. Oswald (2001, March). Preferences over inflation and unemployment: Evidence from surveys of happiness. *American Economic Review 91*(1), 335–341.

Finnsdottir, M. S. (2022). Radical women? explaining the gender gap in radical right voting in the nordic countries. *European Journal of Politics and Gender 5*(3), 341–360.

Foa, R. S. and Y. Mounk (2016). The democratic disconnect. *Journal of Democracy 27*(3), 5–17.

Fortin, N. M., P. Oreopoulos, and S. Phipps (2015). Leaving boys behind. *Journal of Human Resources 50*(3), 549–579.

Ganson, K. T., A. C. Tsai, S. D. Weiser, S. E. Benabou, and J. M. Nagata (2021). Job insecurity and symptoms of anxiety and depression among u.s. young adults during covid-19. *Journal of Adolescent Health 68*(1), 53–56.

Garriguet, D. (2021). Portrait of youth in canada: Data report chapter 1: Health of youth in canada. Technical report.

Ging, D. (2019). Alphas, betas, and incels: Theorizing the masculinities of the manosphere. *Men and Masculinities 22*(4), 638–657.

Haidt, J. (2024). *The anxious generation: how the great rewiring of childhood is causing an epidemic of mental illness*. Penguin Press.

Helliwell, J., H. Huang, M. Norton, and S. Wang (2019). Happiness at different ages: The social context matters. In M. Rojas (Ed.), *The Economics of Happiness: How the Easterlin Paradox Transformed Our Understanding of Well-Being and Progress*, pp. 455–481. Springer Nature.

Helliwell, J. F., R. Layard, J. D. Sachs, J.-E. De Neve, L. B. Aknin, and S. Wang (2024). *World Happiness Report 2024*. UK: University of Oxford: Wellbeing Research Centre.

Lindholm, A., G. Lutz, and E. G. T. Green (2025). Life dissatisfaction and the right-wing populist vote: Evidence from the european social survey. *American Behavioral Scientist 69*(5), 604–624.

Mental Health Commission of Canada (2022). Lockdown life: Mental health impacts of covid-19 on youth in canada. Technical report.

Moore, E. (2024). Biden won big with young voters. this year, they swung toward trump in a big way. *NPR*.

Oparina, E., C. Kaiser, N. Gentile, A. Tkatchenko, A. E. Clark, J.-E. De Neve, and C. D'Ambrosio (2025). Machine learning in the prediction of human wellbeing. *Scientific Reports 15*(1632).

Roberts, M. K., A. C. Bhat, and A. Fenelon (2025). The long-term effects of housing insecurity in young adulthood on subsequent material hardship, physiological and mental health. *Social Science and Medicine 367*, 117761.

Statistics Canada (2023). Navigating socioeconomic obstacles: Impact on the well-being of canadian youth. Technical report, The Daily.

Twenge, J. M. (2020). Increases in depression, self-harm, and suicide among u.s. adolescents after 2012 and links to technology use. *Psychiatric Research and Clinical Practice 2*(1).

Twenge, J. M., T. E. Joiner, M. L. Rogers, and G. N. Martin (2018). Increases in depressive symptoms, suicide-related outcomes, and suicide rates among u.s. adolescents after 2010 and links to increased new media screen time. *Clinical Psychological Science 6*(1), 3–17.

Ward, G. (2020). Happiness and voting: Evidence from four decades of elections in europe. *American Journal of Political Science 64*(3), 504–518.

Ward, G., J.-E. D. Neve, L. H. Ungar, and J. C. Eichstaedt (2020). (un)happiness and voting in u.s. presidential elections. *Journal of personality and social psychology*.

Yale Institute of Politics (2025). Spring 2025 national youth poll results. *Yale Institute of Politics*.

Table 5: Estimated models behind the regression adjustment of life ladder (GWP) and life satisfaction (GSS and CCHS) - respondents aged between 15 and 34

	GWP	GSS	CCHS
Female	0.103	-0.015	-0.025 **
	(0.066)	(0.021)	(0.010)
Married or domestic partner	0.136	0.541***	0.445***
	(0.071)	(0.024)	(0.012)
Separated, divorced or widowed	-0.553*	-0.273***	-0.157***
	(0.220)	(0.078)	(0.044)
University degree	0.044	-0.001	-0.021
	(0.064)	(0.023)	(0.012)
Logarithm of income	0.267***		0.086 ***
	(0.042)		(0.007)
Personal income bottom 30%		-0.037	
		(0.033)	
Personal income 30%-60%		-0.133***	
		(0.031)	
Personal income 80%-90%		0.100**	
		(0.034)	
Personal income top 10%		0.035	
		(0.053)	
Employed		0.147***	0.100***
		(0.029)	(0.014)
Unemployed	-0.496***	-0.273***	-0.506***
	(0.134)	(0.043)	(0.026)
Not in labour force	-0.060		
	(0.096)		

Continued on next page

Table 5 – continued from previous page

	GWP	GSS	CCHS
Student		0.411***	0.276***
		(0.029)	(0.014)
Homeowner		0.294***	0.242***
		(0.022)	(0.012)
Has religious affiliation		0.332***	
		(0.022)	
Home language is English		0.058	
		(0.037)	
Home language is French		0.281***	
		(0.052)	
Foreign born		-0.117**	0.156***
		(0.035)	(0.012)
Atlantic		0.109***	0.128***
		(0.030)	(0.023)
Quebec		0.070	0.206***
		(0.048)	(0.014)
Prairies		0.100***	0.031**
		(0.028)	(0.014)
British Columbia		0.068**	-0.031*
		(0.032)	(0.016)
Constant	4.195***	6.858***	6.615***
	(0.446)	(0.060)	(0.074)
Observations	3629	73,213	75600
R2	0.044	0.054	0.049

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Figure 1: Gallup World Poll: average Cantril life ladder by 5 age groups

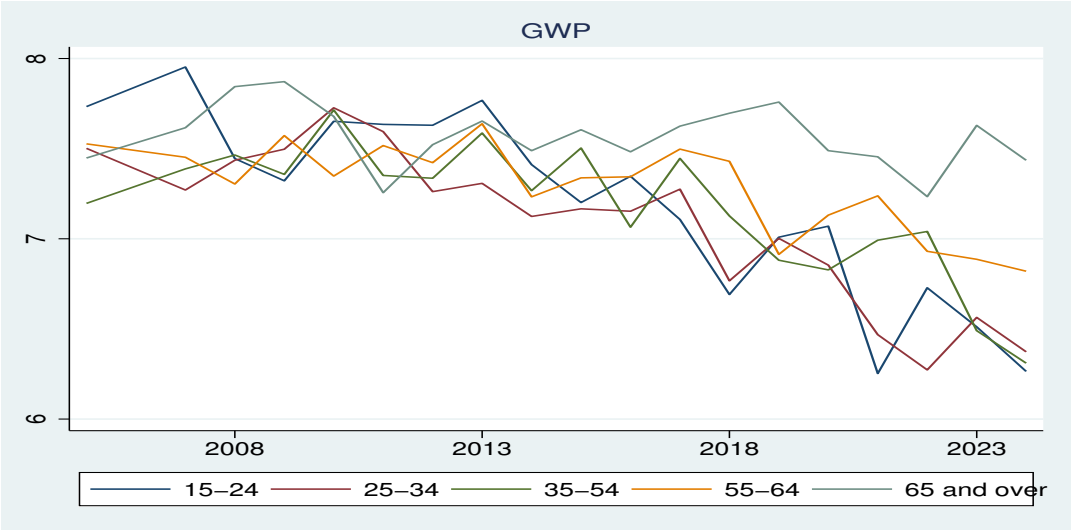


Figure 2: General Social Surveys: average life satisfaction by 5 age groups

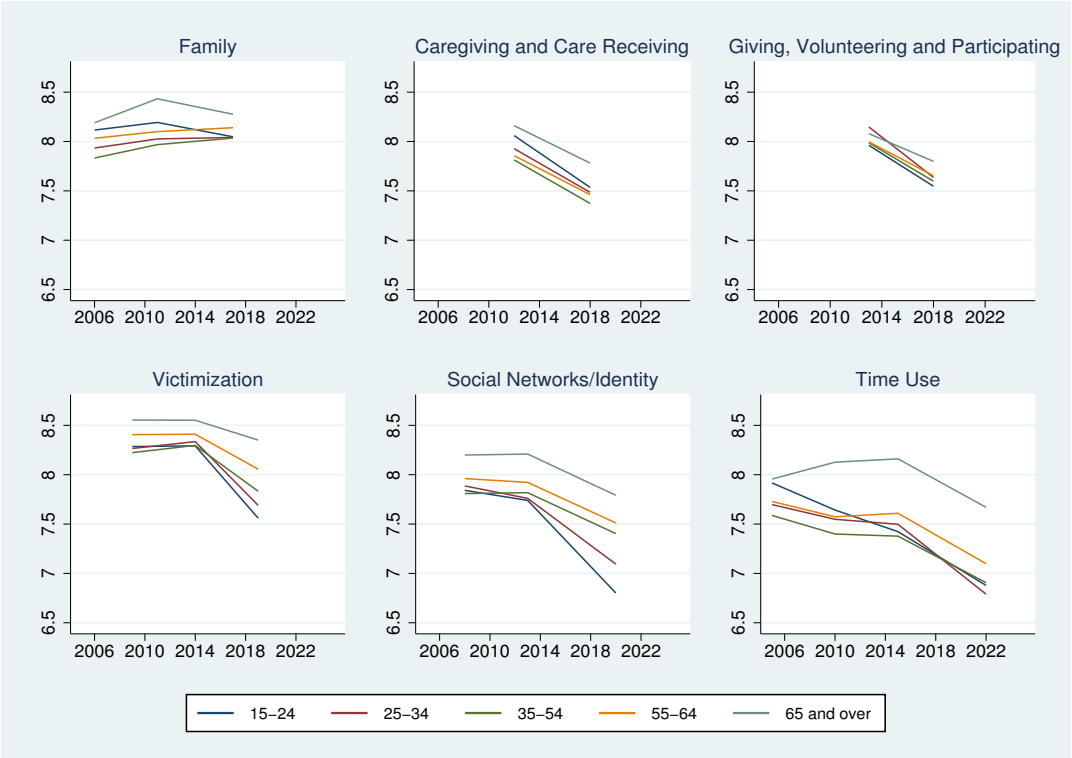


Figure 3: Community Health Surveys: average life satisfaction by 5 age groups

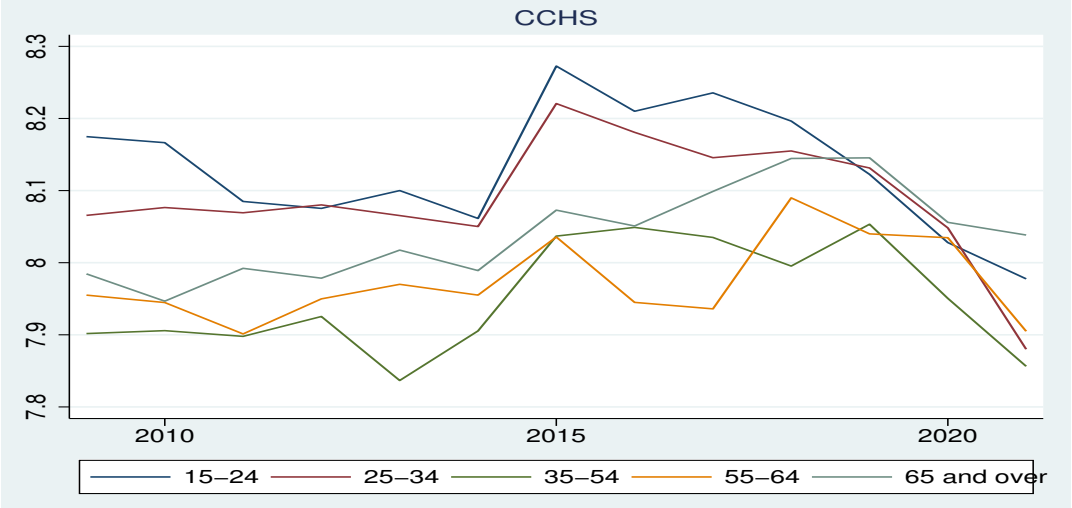


Figure 4: Age-happiness relationship: changes over time

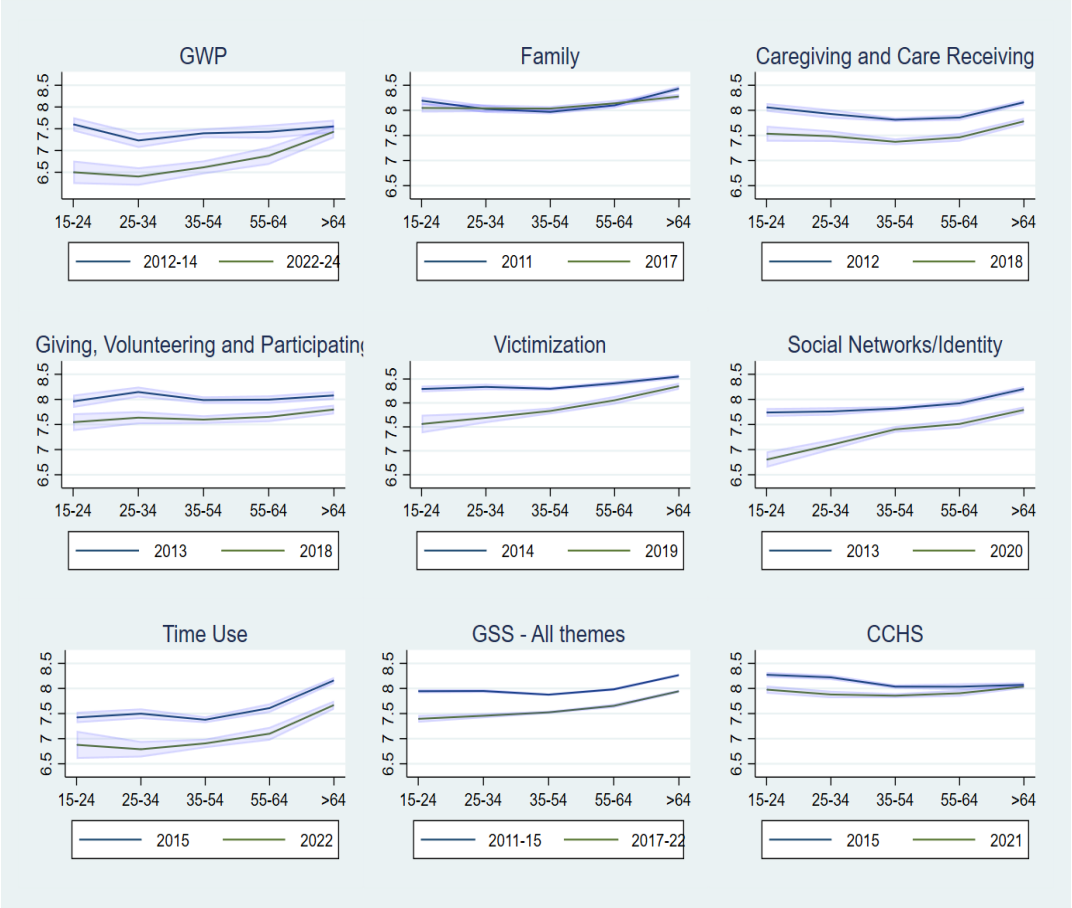
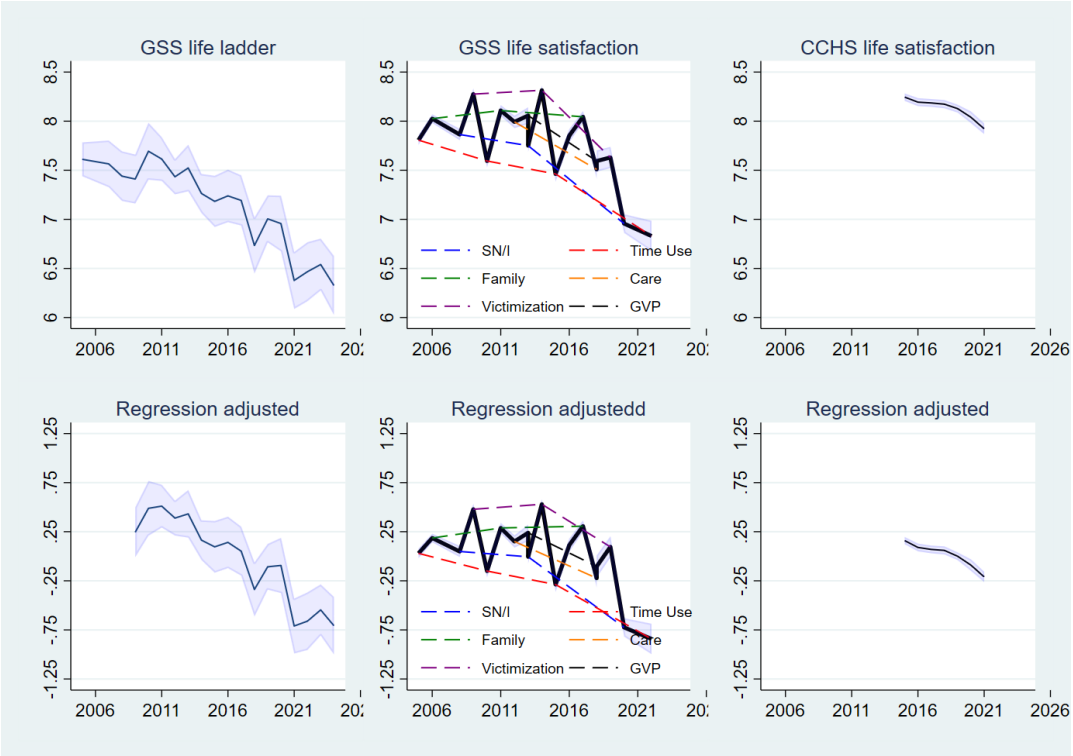
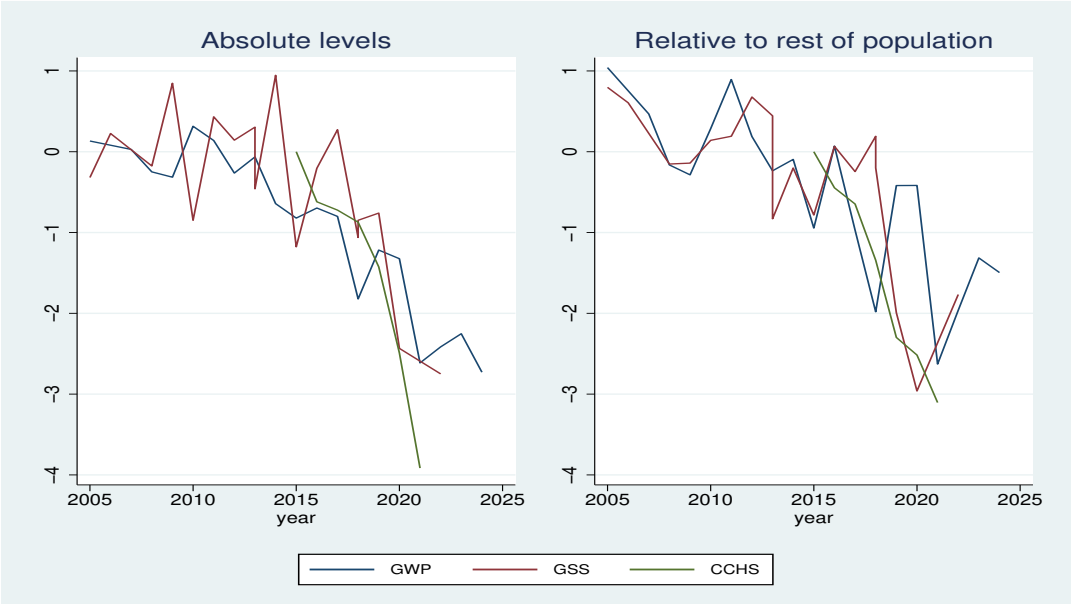


Figure 5: Average life ladder/satisfaction of the below-35 age group (combining 15-24 and 25-34)



Notes: GWP's time series of regression-adjusted life ladder begins from 2009 because its 2005-2008 indicators of income and labour-force status are not strictly comparable with years from 2009 on.

Figure 6: The below-35 age group's absolute and relative decline in unit of time-series standard deviations



Notes: In this figure, we scale the original times series by dividing them with their own standard deviations, so that large fluctuations are tuned down in volatile time series, while smaller fluctuations in smoother time series are amplified. We further remove the level differences by subtracting from the GWP and GSS time series their respective 2009-2010 averages, and, from the CCHS time series, the 2015 value.

Figure 7: Distributions of life ladder/satisfaction of the below-35 age group

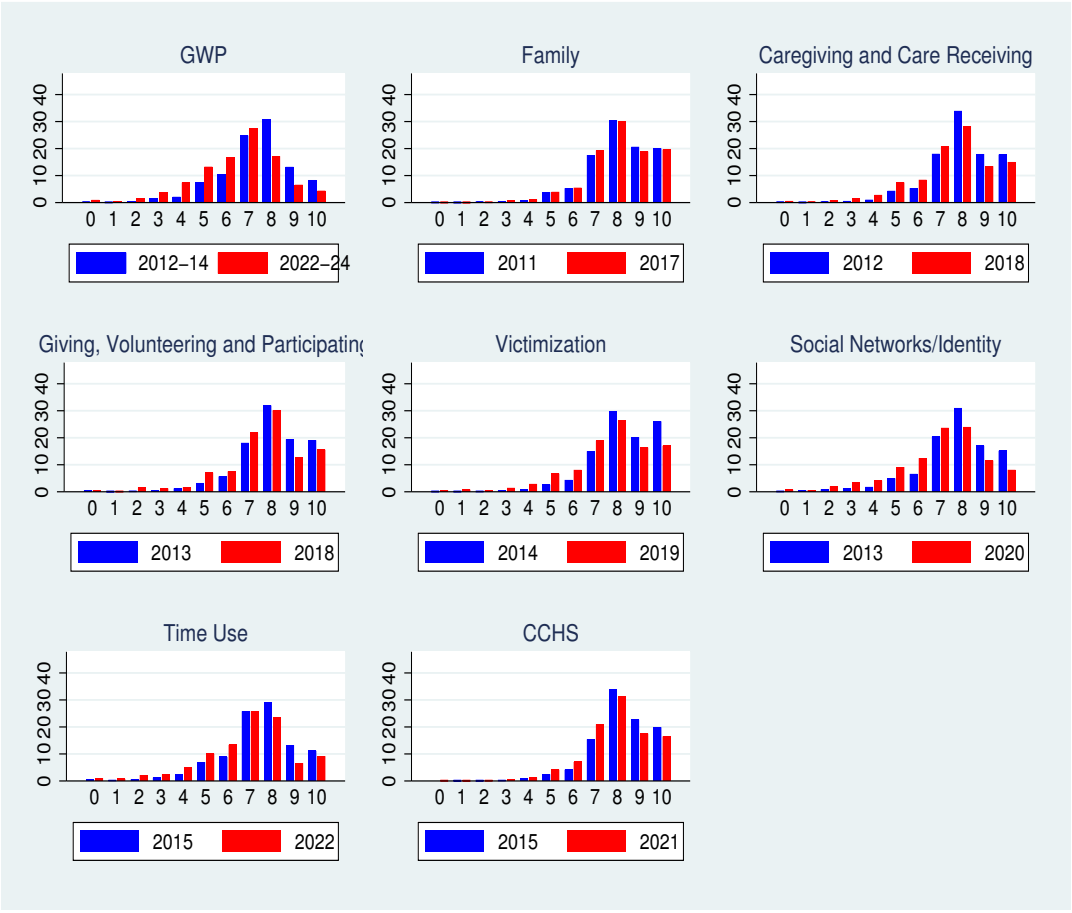
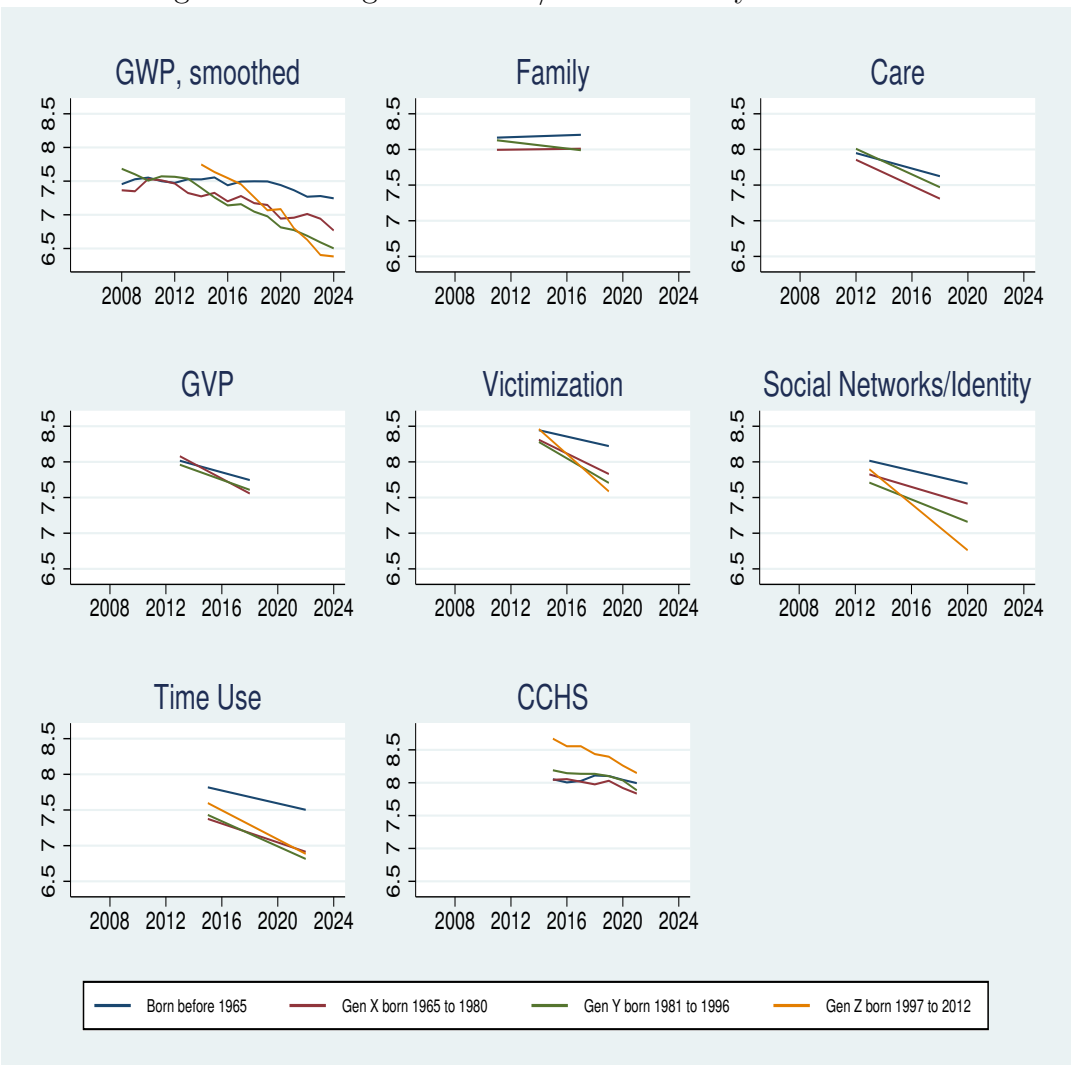
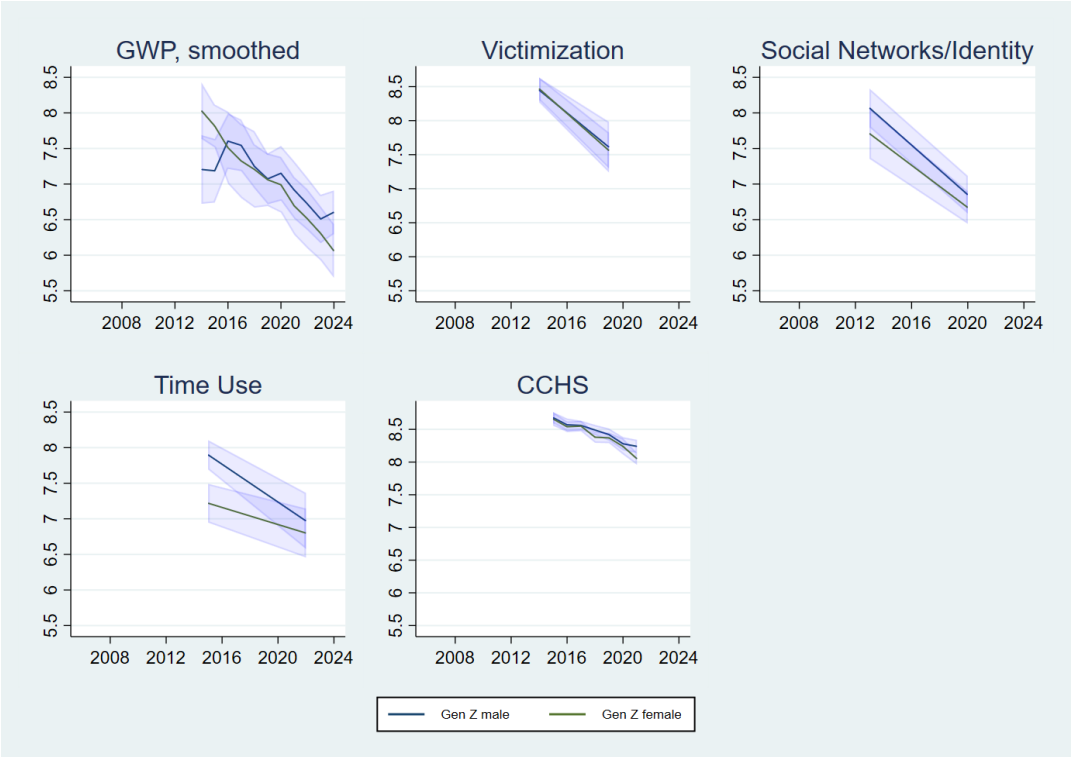


Figure 8: Average life ladder/satisfaction by birth cohort



Notes: The GWP time series use three-year averaging so that each point represents the average of current and last 2 years.

Figure 9: Average life ladder/satisfaction of Gen Z, by gender



Notes: The GWP time series use three-year averaging so that each point represents the average of current and last 2 years.

Department of Economics, University of Alberta
Working Paper Series

2025-02: Employment Adjustments to Increased Imports: Evidence from a Developing Country – **Ural Marchand, B.**

2025-01: Estimating Discrete Choice Demand Models with Sparse Market-Product Shocks – Lu, Z., **Shimizu, K.**

2024-11: Canada's "COVID-19 Referendum": Voting in the Early Federal Election of 2021 – **Marchand, J.,** Wang, Y.

2024-10: On Prior Confidence and Belief Updating – Chan, K., Charness, G., **Dave, C.,** Reddinger, J.

2024-09: Merger Review under Asymmetric Information – **Langinier, C.,** Ray Chaudhuri, A.

2024-08: Environmental Regulations and Green Innovation: The Role of Trade and Technology Transfer – **Langinier, C.,** Martinez-Zarzoso, I., Ray Chaudhuri, A.

2024-07: Green Patents in an Oligopolistic Market with Green Consumers– **Langinier, C.,** Ray Chaudhuri, A.

2024-06: The Effect of Patent Continuation on the Patenting Process – **Langinier, C.**

2024-05: Applying Indigenous Approaches to Economics Instruction – Chavis, L., **Wheeler, L.**

2024-04: Electric Vehicles and the Energy Transition: Unintended Consequences of a Common Retail Rate Design – Bailey, M., **Brown, D.,** Myers, E., Shaffer, B., Wolak, F.

2024-03: Electricity Market Design with Increasing Renewable Generation: Lessons From Alberta – **Brown, D.,** Olmstead, D., Shaffer, B.

2024-02: Evaluating the Role of Information Disclosure on Bidding Behavior in Wholesale Electricity Markets – **Brown, D.,** Cajueiro, D., **Eckert, A., Silveira, D.**

2024-01: Medical Ethics and Physician Motivations – **Andrews, B.**

2023-14: Employers' Demand for Personality Traits and Provision of Incentives – **Brencic, V., McGee, A.**

2023-13: Demand for Personality Traits, Tasks, and Sorting – **Brencic, V., McGee, A.**

2023-12: Whoever You Want Me to Be: Personality and Incentives – **McGee, A.,** McGee, P.

2023-11: Gender Differences in Reservation Wages in Search Experiments – **McGee, A.,** McGee, P.

2023-10: Designing Incentive Regulation in the Electricity Sector – **Brown, D.,** Sappington, D.

2023-09: Economic Evaluation under Ambiguity and Structural Uncertainties – **Andrews, B.**

2023-08: Show Me the Money! Incentives and Nudges to Shift Electric Vehicle Charge Timing – Bailey, M., **Brown, D.,** Shaffer, B., Wolak, F.

2023-07: Screening for Collusion in Wholesale Electricity Markets: A Review of the Literature – **Brown, D., Eckert, A., Silveira, D.**

2023-06: Information and Transparency: Using Machine Learning to Detect Communication – **Brown, D.,** Cajueiro, D., **Eckert, A., Silveira, D.**

2023-05: The Value of Electricity Reliability: Evidence from Battery Adoption – **Brown, D.,** Muehlenbachs, L.

2023-04: Expectation-Driven Boom-Bust Cycles – **Brianti, M.,** Cormun, V.

2023-03: Fat Tailed DSGE Models: A Survey and New Results – **Dave, C.,** Sorge, M.