The gender well-being gap

David Blanchflower
Bruce V. Rauner Professor of Economics
Dartmouth College
Adam Smith School of Business,
University of Glasgow and NBER
Blanchflower@Dartmouth.EDU

Alex Bryson
Professor of Quantitative Social Science
UCL Social Research Institute
University College London and IZA
a.bryson@ucl.ac.uk

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Abstract

Given recent controversies about the existence of a gender wellbeing gap we revisit the issue estimating gender differences across 55 SWB metrics – 37 positive affect and 18 negative affect – contained in 8 cross-country surveys from 167 countries across the world, two US surveys covering multiple years and a survey for Canada. We find women score more highly than men on all negative affect measures and lower than men on all but three positive affect metrics, confirming a gender wellbeing gap. The gap is apparent across countries and time and is robust to the inclusion of exogenous covariates (age, age squared, time and location fixed effects). It is also robust to conditioning on a wider set of potentially endogenous variables. However, when one examines the three 'global' wellbeing metrics - happiness, life satisfaction and Cantril's Ladder - women are either similar to or 'happier' than men. This finding is insensitive to which controls are included and varies little over time. The difference does not seem to arise from measurement or seasonality as the variables are taken from the same surveys and frequently measured in the same way. The concern here though is that this is inconsistent with objective data where men have lower life expectancy and are more likely to die from suicide, drug overdoses and other diseases. This is the true paradox – morbidity doesn't match mortality by gender. Women say they are less cheerful and calm, more depressed, and lonely, but happier and more satisfied with their lives, than men.

"More generally, we stress in this section that additional measures of women's well-being exist beyond those typically used by labor economists ...and that a creative use of those measures could lead to a richer perspective on women's progress." Bertrand, (2011)

1. Introduction

Academics and policy makers alike are placing increased emphasis on subjective well-being as an important indicator of how societies are doing,[1] with some advocating setting policy with maximizing happiness in mind (Layard, 2011). It may be a cause for concern, therefore, that sizeable gaps exist in the wellbeing of citizens. One example is that in wellbeing between men and women which we call the *gender wellbeing gap*.

Evidence is emerging of a sizeable and persistent gender well-being gap. Across countries and time women have worse mental health than men, regardless of the measure used. They report a higher number of bad mental health days and more restless sleep. They are also less satisfied with many aspects of life such as the economy, democracy and public services, as well as expressing less happiness in the moment in terms of peace, calm, and cheerfulness (Blanchflower and Bryson, 2024). Women tend to report significantly poorer health than men on self-reported health indicators (Boerma, Hosseinpoor, Verdes *et al.*, 2016). Women also tend to take anti-depressants more than men (Blanchflower and Oswald, 2016).

Evidence on gender differences in happiness and life satisfaction is less clear-cut, varying across time and place, with covariate adjustments and even across months within the year (Blanchflower and Bryson, 2023a). This has led to speculation about a 'female happiness paradox' in which women are less happy than men in negative affect equations whereas there is ambiguity in gender differences in happiness and life satisfaction. Some go further and argue that there is a clear paradox with women being both more depressed and more satisfied with life (Becchetti and Conzo, 2022).

Diener et al. (1999) argue that a possible explanation of the paradox is that women, on average, experience both positive and negative emotions more strongly and frequently than men. So, in the general population, women's more intense positive emotions potentially balance their higher negative affect, resulting in levels of global subjective well-being (SWB) similar to those of men. Fujita, Diener and Sandvik (1991) argue that as women are more open to emotional experience on average this may make them more vulnerable to depression, while if their lives are good, women may be more likely to experience intense levels of happiness. Even though intensely happy and intensely unhappy individuals are rare women may therefore be overrepresented in both groups. "*Women may be more willing to experience and express emotions*" (Diener et al 1999, p.292).

The 'paradox' interpretation of the gender well-being gap has been challenged recently from two quarters. First, Blanchflower and Bryson (2024) maintain that men have become happier and more satisfied with life than women since a period just before the COVID pandemic, implying women are less happy today than men, whether one uses positive or negative affect metrics to capture wellbeing. The second challenge has come from Bartram (2022) who maintains that the paradox is an artefact of analysts conditioning on 'bad' controls. He argues that a number of the variables

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[1] See especially the World Happiness Report and annual reports from 2012-2022 - https://worldhappiness.report

that researchers tend to condition on in the wellbeing literature partial out some of the gender effects they seek to isolate. If one omits such controls, he argues, there is no significant difference in the life satisfaction of men and women, and thus no paradox.

It is also arguable from a theoretical perspective that there is no paradox because these SWB metrics are capturing different things. Diener et al. (1985) argue that positive affect and negative affect refer to affective, emotional aspects of SWB while life satisfaction is a 'cognitive-judgment' aspect of SWB. Life satisfaction is based on a judgment of how content people are based on a comparison each person sets for themselves. If one recognizes these differences, the question is why it is that women differ from men along these different dimensions of SWB?

In any event, despite the findings on women's economic progress in terms of participation and wages there is solid and consistent evidence that there continues to be wellbeing gaps. In particular, women continue to have lower levels of mental health than men so there is a mental health gap. The evidence on positive affect – including happiness, satisfaction, enjoyment, cheerfulness - as we will show is contradictory.

We estimate gender wellbeing gaps across 50 SWB metrics – 33 positive affect – including happiness and life satisfaction - and 17 negative affect – contained in eleven surveys from 167 countries across the world. We find women score more highly than men on all 17 negative affect measures and lower than men on all but three positive affect metrics, confirming a gender wellbeing gap. The gap is apparent across countries and time and is robust to the inclusion of exogenous covariates (age, age squared, time and location fixed effects). It is also robust to conditioning on a wider set of potentially endogenous variables.

However, when one examines the three 'global' wellbeing metrics - happiness, life satisfaction and Cantril's Ladder - women are either similar to or 'happier' than men.[2] Contrary to recent claims in the literature, this finding is insensitive to which controls are included and varies little over time. Furthermore, the relative happiness of women with respect to these global wellbeing metrics does not seem to arise from measurement or seasonality as the variables are taken from the same surveys and frequently measured in the same way. The female happiness paradox is most apparent in the Gallup Daily Tracker and World Poll Surveys where women are always happier and more satisfied with life than men, regardless of covariate adjustment, but also sadder, more stressed, worried and in pain and have less enjoyment and are less likely to be well rested.

We examined several reasons, as to why women have poorer mental health than men, have lower momentary wellbeing and are less satisfied with most domains in their life yet, at the same time, express higher life satisfaction and higher happiness. The female coefficient in positive affect equations is not sensitive to what time-period the positive affect variable refers to: those variables

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[2] Cantril (1965) described this metric as the Self-Anchoring Striving Scale - see Easterlin (1974). Cantril claims it was utilized "as a means of discovering the spectrum of values a person is preoccupied or concerned with and by means of which he evaluates his own life. He describes the top anchoring point his wishes and hopes as he personally conceives them and the realization of which would constitute for him the best possible life. At the other extreme he describes the worries and fears, the preoccupations and frustrations, embodied in his conception of the best possible life he could imagine. Then utilizing a nonverbal ladder device [showing a scale from 0 to 10], symbolic of the 'ladder of life", he is asked where he thinks he stands on the ladder today, with the top being the best life *as he has defined it*, the bottom the worst life *as he has defined it*."

that refer to life as a whole generate broadly the same answers as those asking how the respondent felt yesterday or the last week or two.

It doesn't seem to matter much how the life satisfaction variable is coded, be it 4-step such as used in the Eurobarometer and Latinobarómetro or 10- or 11-step as used in, for example, the Gallup World Poll and US Daily Tracker's 11-step (0-10) Cantril life satisfaction measure, or 11-step variables (0-10) used in the European Social Survey, or 10-step (1-10) life satisfaction variable used in the European Quality of life Survey or the UK Annual Population Survey or the European Values Survey or the PISA 2018 Survey. The same result is obtained in the Gallup files for a (1,0) dummy variable for happiness relating to yesterday as for the Cantril ladder variable.

A positive female coefficient is much less likely to be found in other positive affect variables such as enjoyment, calmness, cheerfulness as well as views on the economy, the education system etc. which also are measured in a variety of ways as well as in expectations. These are obtained from the same surveys and hence the same individuals reporting happiness and life satisfaction. This implies no female paradox. So, the female happiness paradox appears to relate *only* to happiness and life satisfaction variables and, even then, not in every estimate.

In contrast, the female coefficient is highly *insensitive* generally to changes in specification in negative affect variables, where always and everywhere the female coefficient is positive and does not depend on how the variable is measured, what time period is covered, what the variable refers to be it depression, loneliness, sadness, or anxiety.

It may be that women have a different set point to men in responding to global wellbeing questions compared to responses on all other positive and negative affect questions. Given the uncertainty as to why the lower wellbeing of women, apparent in all other positive and negative affect metrics, switches sign when focusing on happiness, life satisfaction and Cantril's Ladder, analysts would do well to devote greater attention to a wider set of wellbeing metrics than is currently the case.

2. Previous Literature
It is well-established that women report poorer mental health than men, and that this finding is robust across all aspects of negative affect, and across time, place and model specification (see Salk, Hyde, and Abramson, 2017). Weisman et al (1996) across ten countries - United States, Canada, Puerto Rico, France, West Germany, Italy, Lebanon, Taiwan, Korea, and New Zealand – which shows women had higher rates of mental ill-health. This was most recently demonstrated by Blanchflower and Bryson (2024) in relation to feeling anxious, depressed, downhearted, tense, lonely, frustrated, sad, and experiencing restless sleep.

Campbell et al. (2021) find that male adolescents aged 15 report higher levels of life satisfaction (males=7.3 females=6.9 on a 0-10 scale) and lower levels of psychological distress than female students age 15 across 73 countries using data from the 2018 Programme for International Student Assessment (PISA). Females also reported lower levels of hedonia (positive affect) and

eudaemonic wellbeing (the experience of purpose and meaning in life) than males.[3] This was apparent in the raw data and with controls for age, socioeconomic status, and immigration status.

Some of this research goes beyond subjective wellbeing in examining chronic pain, biomarkers and susceptibility to COVID. Women have higher pulse rates (Blanchflower and Bryson, 2022c) are more likely to suffer chronic pain (Blanchflower and Bryson, 2022a) and are more likely to get both COVID and Long COVID (Blanchflower and Bryson, 2022b, 2023b). Women also score lower on self-esteem measures (Kling, Hyde, Showers and Buswell, 1999).

This gender gap in ill-being appears in adolescence (Patalay and Fitzsimons, 2018), with some research indicating that the gap is getting wider among more recent cohorts (Bor et al., 2014). There is relatively little research exploring the factors that might lie behind this gap. An early review paper identified family environment, hormones, social norms, social support and measurement issues as potential contributors (Piccinelli and Wilkinson, 2000). But in their recent paper Patalay and Demkowicz (2023) say "*more than 20 years on we have little empirical evidence delineating the drivers of this gender gap*". They point to gendered risk factors such as exposure to sexual harassment as potential contributors, calling for more research in these areas. A small study for Spain suggests gender differences in wellbeing are absent in childhood but emerge in adolescence (Esteban-Gonzalo et al., 2020).

Although women's greater propensity for depression and anxiety might be linked to estrogen and progesterone production across the reproductive lifecycle, there is little empirical support for this proposition (Nolen-Hoeksema and Rusting, 1999; Nydegger, 2004).

There seems to be some support for the proposition that differences in the gender wellbeing gap across countries are linked to ambient social norms and objective gender equality metrics. This literature suggests women's lower wellbeing is linked to a lack of access to resources relative to men as well as the experience of powerlessness and violence (Russo and Green, 1993).[4] Tesch-Romer et al. (2008) find empirical support for this proposition in their examination of subjective wellbeing (life satisfaction and self-assessed health) across 57 countries using the World Values Survey and data from the OASIS project. They conclude that:

> "*societal gender inequality is connected with gender differences in SWB and…that gender differences in SWB are influenced by unequal access to individual resources*

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[3] . Life satisfaction was measured by the question: "on a scale of 0–10, overall, how satisfied are you with your life as a whole these days?", with 0 meaning not at all satisfied and 10 meaning completely satisfied. Psychological distress was assessed with responses to how often adolescents felt sad, miserable, scared, and afraid on a scale of never, rarely, sometimes, and always. Answers were scored 1–4 and summed to give an overall score ranging from 4-16. Hedonia (positive affect) was assessed with responses (never to always) to how often adolescents felt happy, lively, proud, joyful, and cheerful. Answers were summed to give an overall score ranging from 5-20. Eudaemonic wellbeing was measured by asking students how much they agreed on a scale of strongly disagree, disagree, agree, and strongly agree to the following statements: "my life has clear meaning or purpose"; "I have discovered a satisfactory meaning in life"; and "I have a clear sense of what gives meaning to my life". The answers were summed to give an overall score ranging from 3-12.

[4] There is also an extensive literature on the importance of income in wellbeing equations, including contributions from Nobel Prize winners (Easterlin, 1995, Kahneman and Deaton, 2010 and Killingsworth, Kahneman and Mellers, 2023). It is possible that women's lower wellbeing might reflect being 'poorer' than men. But this is a difficult proposition to test in the absence of credible methods to establish the sharing of resources within household.

and – even more significant – by indicators of macro-structural settings that describe the degree to which women are disadvantaged or excluded from societal resources and opportunity structures" (p. 344).

However, the evidence linking equality metrics to the gender wellbeing gap is contested, with other studies challenging the fundamental proposition that women's wellbeing is higher relative to men's in more equal countries. For instance, in their meta-analysis Batz-Barbarich et al. (2018) found countries scoring higher on the Gender Inequality Index saw greater gender differences in job satisfaction, but not life satisfaction. Perhaps more surprisingly, in a recent study analyzing the Programme for International Student Assessment (PISA) data for 2015 and 2018 from 78 countries it appears that gender gaps in adolescents' SWB (life satisfaction, positive and negative affect) are *larger* in more gender-equal countries (Guo et al., 2022).

There is clear evidence of closure in gender gaps on objective metrics across countries. For instance, Albanesi, Olivetti and Petrongolo (2022) examined data for 24 countries and found evidence of clear gender convergence over the past five decades in educational attainment, employment and earnings accompanied by a decline in marriage rates and fertility. Within the United States Blau (2008) examined trends in the well-being of women from 1970-1995 and concluded that:

> "*women have made substantial progress toward gender equality over the past 25 years across a number of dimensions. Gender differences in labor force participation have narrowed sharply and women now remain in the labor market more consistently over the life cycle. Differences between men and women in occupations, types of education, and rates of self-employment have been greatly diminished; and women have narrowed the gender wage gap substantially.*"[5]

One might therefore imagine that there has been convergence in SWB as between women and men over time. However, trends are not so clear. Indeed, Blanchflower and Bryson (2024) continue to find women's wellbeing (happiness and life satisfaction) declining when compared with men in the US General Social Survey between 2008 and 2021.

Much of the literature on gender wellbeing gaps tends to focus on life satisfaction and, to a lesser extent, happiness. Here evidence of a gender gap is less clear-cut. Several meta-analyses have been undertaken into gender effects on life satisfaction and the results were mixed. Gurin, Veroff and Field (1960) found no gender differences. A quarter of a century later, Haring, Stock, and Okun (1984), concluded that men had higher life satisfaction than women. A further review conducted by Wood, Rhodes, and Whelan (1989) concluded that men had lower levels of life satisfaction than women. The third review, by Pinquart and Sörensen (2001), found that men had slightly higher levels of life satisfaction than women. More recently Batz-Barbarich, et al (2018) found no significant gender gap. "*The overall picture presented is that there are not significant gender differences in life satisfaction.*" Lepinteur, et al 2022 examined panel data from the German Socio-

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[5] Since World War Two female labor force participation rates have risen and wage gaps remain but have closed. Blau and Kahn (2008) for example noted the rise in women's labor force participation, both absolutely and relative to men, and the decline in the male to female pay ratio between 1980 and 2000 across ten advanced countries (see also Blau and Kahn, 2003, 2013, 2017). In the United States women now constitute 58% of undergraduate students.

Economic Panel from 2013-2021 and also found no significant difference in life satisfaction between men and women in pre-pandemic years but there was a big drop in life satisfaction of women and hence a negative gender gap in 2020.[6] Diener et al (199) concluded that "*when differences are observed women usually report higher SWB but differences often disappear when other demographic variables are controlled*", (p.292)

Becchetti and Conzo (2022) examined life satisfaction and depression data in sweeps #1-#8 of the European Social Survey (ESS) and concluded there was a paradox given the sign of the female coefficient was positive in both a life satisfaction and a depression equation with a host of controls. This is the path taken by most prior papers evaluating gender differences which tend to include controls for some combination of age and its square, race, immigrant, labor force status and education, marital status and income. Venetoklis (2019) for example, who also uses the ESS, 1981-2005, includes controls for age and its square, children, education, labor force status, religiosity, political orientation, trust in the legal system, trust in parliament, social meetings, marital status, health along with country and sweep dummies. Ballas and Thanis (2022) used the ESS and found women were happier than men.

Joshanloo and Jovanovic (2020) used the Gallup World Poll and found women had higher Cantril life satisfaction than men, but the difference was small. Geerling and Diener (2020) also found small gender effects using these same data, 2005-2015 as well as data for the US from the Gallup-Sharecare 2015 Daily Survey. Schmotkin (1990) found similarly.

Recently Smith and Wesselbaum (2023) analyzed data from the Gallup World Polls of 2009–2017 and 158 countries. They found a positive female coefficient in a life satisfaction equation including age controls, children, marital status, education, income, labor force status, health and urban/rural and country and year. Frey and Stutzer (1999) for Switzerland, Diener et al., 1999 and Alesina et al., (2004) also found a positive female effect. Clark (1997) found that women have higher levels of job satisfaction.

In summary, the literature establishes clearly that women have poorer mental health and have lower SWB than men on most metrics, with the exception of life satisfaction, Cantril's Ladder and happiness – all 'global' assessments of wellbeing – where the evidence is much more mixed. The latter findings have led to speculation about a gender wellbeing paradox. There is little evidence explaining the reasons for the gender wellbeing gap, but it does seem to emerge during adolescence.

3. Data and Estimation Methods

In this section we provide an overview of the 10 data sets we use to examine the gender wellbeing gap. We take each in turn and comment on the wellbeing metrics each data set contains together with other key features of the data that influence our analytical approach.

Throughout we present graphs of raw means for wellbeing measures by sex over time before presenting linear regression analyses which isolate the partial correlation between gender and

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[6] Lepinteur et al (2022) also found women were lonelier than men.

wellbeing having conditioned on various controls. In deploying linear estimates we are following standard practice in the literature. However, all gender differences reported in the paper are robust to the use of ordered probit estimation. Most of the time we pool data across countries and incorporate country fixed effects but, in some instances, we present separate country estimates to explore whether gender wellbeing gaps vary across country. We begin with models containing no controls which simply replicate mean differences by sex. Then we condition on what might be considered to be exogenous variables such as location and time effects, together with age and age squared. In some instances, we extend the set of controls to include potentially endogenous regressors such as marital status because, as noted earlier, some analysts argue that one reason for variance in estimated gender gaps in wellbeing is differences in model specification across studies.

The tables present coefficients for the female dummy in the regression, together with the t-statistic and sample size for the analysis.

3.1: Dataset #1 – European Social Survey (ESS), 2002-2020
We use data from the first ten sweeps of the European Social Survey (https://www.europeansocialsurvey.org/), a survey conducted every two years between 2002 and 2020. The data are available for 39 countries and contain 20 wellbeing metrics. These include seven questions that appear in all ten sweeps. The first is an 11-step life satisfaction variable based on the question

Q1. '*How satisfied are you with life as a whole?*

Because it is available in all ten sweeps analysis is conducted on around 460,000 observations. Similarly, the 11-step happiness measure based on responses to the question "How happy are you?" is available in all sweeps. A further five wellbeing questions appearing in all sweeps ask about domain specific satisfaction using the same 11-step scale running from zero to ten. They ask about satisfaction with "national government", "the way democracy works in the country", "the present state of the economy", "the state of education" and "health services".

We also examine seven measures of negative affect in response to the question:

Q2. *How often in the past week have you felt ..none or almost none of the time=1; some of the time=2; most of the time=3; all or almost all of the time=4?....depressed; anxious; sad; lonely; tired; sleep was restless; everything I did was an effort*

Sample sizes were smaller for these estimates because the question was only asked in three, two or one sweep of the data (as indicated in Table 3). A further six measures capture positive affect in response to the question:

Q3. *How often have you felt…calm and relaxed; fresh and rested; cheerful and in good spirits; daily life interests me; active and vigorous; enjoyed life…in the last two weeks?* with responses coded *all of the time =6; most of the time=5, more than half the time=4; less than half the time=3; some of the time=2; at no time=1?*

Again, these measures only appeared in three, two or a single sweep (see Table 3 for details).

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3.2: Dataset #2 - Eurobarometers (EB), 1991-2022

Our second data set are the Eurobarometer surveys for 1991-2022 (https://europa.eu/eurobarometer/screen/home) run by the European Union. We analyze the four-step life satisfaction measure based on the question: *"On the whole, are you very satisfied, fairly satisfied, not very satisfied or not at all satisfied with the life you lead? Not at all satisfied (= 1); not very satisfied (= 2); fairly satisfied (= 3) and very satisfied (= 4)"* as well as measures of their emotional state where respondents were asked *"What feeling best describes your current emotional status?"* where they were asked to rank their first and second emotional state from ten possible ones. In our analyses we constructed a dependent variable equal to 1 if the response was identified as either first or second. The survey also provided information on individuals' expectations in response to the question:

What are your expectations for the next twelve months: will the next twelve months be better (=3), same (=2), worse (=1), when it comes to...?
Q4. The economic situation in (OUR COUNTRY)?
Q5. The employment situation in (OUR COUNTRY)?
Q6. Your life in general?
Q7. The financial situation of your household?
Q8. Your personal job situation

3.3: Dataset #3 – European Quality of Working Life Survey (EQWLS), 2003-2016

The EQWLS, which was conducted by the EU's European Foundation in 2003, 2007, 2012 and 2016 (https://www.eurofound.europa.eu/en/surveys/european-quality-life-surveys-eqls), offers 18 wellbeing metrics – seven capturing negative affect, 6 capturing positive affect, three capturing domain-specific satisfaction and two global wellbeing metrics. They are based on the following questions:

a) To what extent do you agree or disagree with the following statements?
Q9. In my daily life I seldom have time to do things I really enjoy?
Q10. I feel I am free to decide how to live my life?
Q11. Life has become so complicated today that I almost can't find my way?
Q12. I generally feel that what I do in life is worthwhile?

These all have the responses *strongly agree (5); agree (4); neither (3); disagree (2); strongly disagree (1)?*

b) Over the last two weeks I have felt?
Q14. Particularly tense?
Q15. Lonely?
Q16. Downhearted and depressed?

These have the responses *at no time (1): some of the time (2): less than half the time (3); more than half the time (4); most of the time (5); all of the time (6)?*

c) Please indicate for each of the five statements which is closest to how you have been feeling over the last two weeks
Q17. I have felt cheerful and in good spirits?
Q18. I have felt calm and relaxed?
Q19. I have felt active and vigorous?
Q20. I woke up feeling fresh and rested?
Q21. My daily life has been filled with things that interest me?

With the responses at no time *(1): some of the time (2): less than half the time (3); more than half the time (4); most of the time (5); all of the time (6)?*

d) To what extent do you agree or disagree with the following statements?
Q22. I feel left out of society? - never; less often/rarely; several times a year; several times a month; several times a week?

e) Could you please tell me on a scale of 1 to 10 how satisfied you are with each of the following items, where 1 means you are very dissatisfied and 10 means you are very satisfied?
Q23. Your – education?
Q24. Your present living standards?
Q25. Your family life?

f) Happiness and life satisfaction
Q26. Taking all things together on a scale of 1-10 how happy would you say you are?
Q27. All things considered, how satisfied would you say you are with your life these days? Please tell me on a scale. from 1 to 10, where [1] means 'very dissatisfied' and [10] means 'very satisfied?

Sample sizes vary depending on which survey waves contained each metric.

3.4: Dataset #4 - European Values Surveys (EVS), 1981-2021
Our fourth data set consists of the five sweeps of the European Values Survey (EVS, https://europeanvaluesstudy.eu/) covering 48 European countries between 1981 and 2021.[7] The data include 14 wellbeing metrics including three that were asked in all five surveys namely:

Q28. All things considered, how satisfied are you with your life as a whole these days - 1 dissatisfied....10 satisfied?
Q29. Taking all things together, would you say you are: 4=Very happy; 3=Quite happy; 2=Not very happy; 1=Not at all happy?
Q30. During the past few weeks, did you ever feel ... Trust – most people can be trusted/can't be too careful? – Yes/no

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[7] Countries are - Albania; Azerbaijan; Austria; Armenia; Belgium; Bosnia and Herzegovina; Bulgaria; Belarus; Canada; Croatia; Cyprus; Northern Cyprus; Czech Republic; Denmark; Estonia; Finland; France; Georgia; Germany; Greece; Hungary; Iceland; Ireland; Italy; Kosovo; Latvia; Lithuania; Luxembourg; Malta; Moldova; Montenegro; Netherlands; Norway; Poland; Portugal; Romania; Russia; Serbia; Slovakia; Slovenia; Spain; Sweden; Switzerland; Turkey; Ukraine; North Macedonia; UK and USA

The data also contain three domain-specific satisfaction questions asked in one or two surveys, namely:

Q31. How satisfied are you with the financial situation of your household - 1 dissatisfied....10 satisfied?
Q32. How satisfied are you with the political system - 1 dissatisfied....10 satisfied?
Q33. Overall, how satisfied or dissatisfied are you with your home life? 1 dissatisfied...!0. satisfied?

A further eight measures were asked in sweeps 1 and 2 eliciting a yes/no response to the following questions:

During the past few weeks, did you ever feel ...
Q34. Bored?
Q35. Depressed or very unhappy?
Q36. That things are not going your way?
Q37. Upset as somebody criticized you?
Q38. Pleased about having accomplished something?
Q39. Very lonely or remote from other people?
Q40. So restless you couldn't sit long in a chair?
Q41. Particularly excited or interested in something?

3.5: Dataset #5 - The 2018 Programme for International Student Assessment (PISA) at age 15
PISA (https://www.oecd.org/pisa/data/2018database/) asks young people across 72 countries about their life satisfaction using an 11-step measure. The data also contain nine additional wellbeing metrics based on the following question: *Question. Thinking about yourself and how you normally feel: how often do you feel .. never (=1), rarely (=2), sometimes (=3), always (=4)?* This was asked in relation to being sad, miserable, scared, afraid, lively, proud, joyful, cheerful and happy.

3.6. Dataset #6 - Latinobarómetro, 2020
We also have data available on three wellbeing variables in 2020 for 18 South and Central American countries from Latinobarómetro[8] all coded 1= not at all satisfied, 2=not very satisfied, 3=quite satisfied and 4=very satisfied. The variables ask,

Q42. How satisfied are you with your life,
Q43. How satisfied are you with democracy and c)
Q44. How satisfied are you with the economic situation (in general).

3.7 Dataset #7 - US General Social Surveys (GSS), 1972-2021 and Dataset #8 Canadian Social Survey, 2017 (CGSS).

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[8] Countries are - Argentina; Bolivia; Brazil; Chile; Colombia; Costa Rica; Dominican Republic; Ecuador; El Salvador; Guatemala; Honduras; México; Nicaragua; Panamá; Paraguay; Perú; Uruguay and Venezuela. https://www.latinobarometro.org/lat.jsp?Idioma=0

Our seventh and eighth data sets are the US and Canadian General Social Surveys (https://gss.norc.org/ and https://www150.statcan.gc.ca/n1/pub/89f0115x/89f0115x2013001-eng.htm respectively).

For the United States we analyze a happiness question.

Q45. Taken all together, how would you say things are these days—would you say that you are very happy (=3), pretty happy (=2), or not too happy (=1)?
Q46. We are interested in how people are getting along financially these days. So far as you and your family are concerned, would you say that you are pretty well satisfied with your present financial situation (=3), more or less satisfied (=2), or not satisfied at all (=1)?

We also examine an additional variable, satisfaction with family life, available from 1973-1994. The question is:

Q47. How successful do you feel in your family life? not at all successful (=1); not very successful (=2); somewhat successful (=3); very successful (=4) and completely successful (=5)?

From the CGSS we estimate an 11-step life satisfaction equation using the 2017 survey. The question used was

Q48. U*sing 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*?

3.8: Dataset #9: International Social Survey Programme (ISSP), 2017
Data in the ISSP are available for thirty countries and sample size is just over 43,000.[9] We examine two positive affect metrics and five negative affect metrics available in the 2017 survey. Life satisfaction is captured with the question:

Q49. All things considered, how satisfied are you with your life as a whole nowadays? - completely dissatisfied (=1); very dissatisfied (=2); fairly dissatisfied (=3); neither (=4); fairly satisfied (=5); very satisfied (=6); completely satisfied (=7).

The second positive affect metric is accomplishing goals:
Q50. To what extent is the following statement true or untrue for you? It is easy for me to accomplish my goals. Male=3.88 female=3.79
1=Completely untrue
2=Mostly untrue
3=Somewhat untrue
4=Neither true nor untrue
5=Somewhat true
6= Mostly true
7=Completely true

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[9] Australia; Austria; China; Taiwan; Croatia; Czechia; Denmark; Finland; France; Germany; Hungary; Iceland; India; Israel; Japan; Lithuania; Mexico; New Zealand; Philippines; Russia; Slovakia; Slovenia; South Africa; Spain; Surinam; Sweden; Switzerland; Thailand; UK and USA.

The five negative affect variables are based on the following 5-step questions:
How often in the past 4 weeks have you felt that ...
*Q51. you are **isolated** from others?*
*Q52. you lack **companionship**, you are left out?*
1=Never
2=Rarely
3=Sometimes
4=Often
5=Very often

During the past 4 weeks how often..
Q53. Have you felt unhappy and depressed? ...
Q54. Have you felt difficulties were piling up so high that you could not overcome them?
1=Never
2=Rarely
3=Sometimes
4=Often
5=Very often

3.9. Dataset #10 - Gallup's World Polls (GWP), 2005-2021 and Dataset #11 - US Daily Tracker (USDT), 2008-2017
We examine data on 167 countries, including all the European countries examined above, as well as other developed and developing countries from the Gallup World Poll, 2005-.[10] Using the same variables we also run similar analyses using Gallup's US Daily Tracker (https://library.virginia.edu/data/datasources/licensed/gallup-microdata) for the period 2008-2017. Both have samples sizes of over two million respondents. We examine five metrics capturing well-being and five capturing ill-being.

The first is Cantril's Ladder, an 11-step metric based on responses to the question:

Q55. *Please imagine a ladder with steps numbered from zero at the bottom to ten at the top. Suppose we say that 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. If the top step is 10 and the bottom step is 0, on which step of the ladder do you feel you personally stand at the present time? The future life variable refers to expected life satisfaction in 5 years using the 0-10 scale of life satisfaction from worst to best, phrased as above*

The following three wellbeing metrics ask for Yes/No responses to recent feelings:

Q56. *Happy - Did you experience the following feelings during a lot of the day yesterday? How about happiness – Yes/No?*
Q57. *Enjoy - Did you experience the following feelings during a lot of the day yesterday? How about enjoyment – Yes/No?*

Q58. Well-rested - Now, please think about yesterday, from the morning until the end of the day. Think about where you were, what you were doing, who you were with, and how you felt. Did you feel well-rested yesterday – Yes/No?

The five negative affect questions elicit Yes/No responses regarding feelings the previous day:

Q59. Pain - Did you experience the following feelings during a lot of the day yesterday? How about physical pain – Yes/No?
Q60. Sadness - Did you experience the following feelings during a lot of the day yesterday? How about sadness - Yes/No?
Q61. Worry -Did you experience the following feelings during a lot of the day yesterday? How about worry-Yes/No?
Q62. Stress *-Did you experience the following feelings during a lot of the day yesterday? How about stress -Yes/No?*
Q63. Depress *-Did you experience the following feelings during a lot of the day yesterday? How about depression -Yes/No?*

In addition to charting mean raw differences in these wellbeing metrics between men and women over time we run regression analyses for each using four model specifications which gradually add controls to the mean raw differences between men and women.

4. Results
We now estimate wellbeing equations using seven cross country micro-data files and two for the United States.

4.1: Dataset #1 - European Social Survey (ESS), 2002-2020
In recent work using Sweeps 1-8 of the ESS, Becchetti and Conzo (2022) examined life satisfaction and depression and concluded there was a paradox given the sign of the female coefficient was positive in both a life satisfaction and a depression equation with a host of controls. In a follow-up study Bartram (2022) argued that the result of a positive female coefficient in a life satisfaction equation was driven by the inclusion of what he considered to be 'inappropriate' controls. In his model excluding this set of mostly endogenous controls[11] the gender differential disappears.

We begin our exploration of gender wellbeing gaps by examining the life-course changes in life satisfaction and happiness for men and women by age. The motivation for doing so is Inglehart's (2002) observation that women are happier than men at younger ages but less happy than men at older ages. We should be mindful that there is evidence of a mortality selection bias after age seventy – happy people survive longer (Hudomiet, Hurd and Rohwebber, 2021, Becker and Trautmann, 2022).[12]

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[11] The ten variables are age dummies (*agea*); marital status (harmonized across *maritala, maritalb*), labor force status (*mnactic*). Household income (*hinctnta*), household size (*hhmmb*), health status (*health*); frequency of social interaction (*sclmeet*), left-right political ideology (*lrscale*), education (*eisced*), and feelings about household income (*hincfel*) with ESS variable names in parentheses.
[12] Hudomiet et al (2021) find, using the Health and Retirement Survey for the United States that females over the age of fifty have slightly *lower* levels of life satisfaction than men.

Part a) of Table 1 presents estimates for depression. Model (1) presents the raw gap with no controls: women are more depressed than men by .16 points on the four-step scale. The gap shrinks only very marginally when conditioning on year and time dummies in Model (2) and with the addition of age and age squared in Model (3), remaining strongly statistically significant.

Part b) of Table 1 estimates life satisfaction. Without any controls the female coefficient is negative and highly statistically significant (Model 1). Adding country and sweep the female coefficient switches to positive with a t-statistic of 1.42 (Model 2). With the addition of age and age squared in Model (3) it becomes positive and statistically significant.

Part c) of Table 1 estimates happiness (which was not examined in Bartram (2022)). In this case the significant negative coefficient in the absence of controls in Model (1) becomes positive and statistically significant in Model (2) with the addition of country and sweep dummies. The coefficient almost doubles in size with the addition of age and age squared (Model 3).

It is apparent from these results that, although there appears to be no female happiness paradox in the raw data, it is not the case – as Bartram (2022) asserted - that the female happiness paradox arises *only* when one conditions on 'bad' controls since the paradox emerges as soon as one conditions on country and time.

Some studies suggest that gender wellbeing gaps vary by country (Campbell et al., 2021). To examine cross-country variance, we ran separate country life satisfaction, happiness and depression equations for 39 countries in the ESS with time and age dummies to isolate the gender coefficient. We also extended the analysis to two additional outcomes, namely feeling sad and enjoying life.[13] There is a good deal of variation in sample sizes as well as coverage by sweeps especially for depression. Table 2 simply reports whether the female coefficient was statistically significant and, if so, its sign. In all thirty countries that had depression there was a significantly positive female coefficient while for all thirty-one countries with 'feeling sad' the female coefficient was positive, again confirming women score lower on ill-being metrics.

The results for 'enjoying life' were also unambiguous: of the thirty countries with the variable, the female coefficient was negative in 22 and non-significant in 7. In only one country – Estonia – was it positive. However, results were more mixed in the case of life satisfaction and happiness. There were ten positive coefficients for life satisfaction and six negative coefficients, whereas there were 17 positive coefficients for happiness and six negatives. The top row of Table 2 reports the pooled results indicating women are more likely to report higher life satisfaction and happiness, whilst at the same time reporting more depression, sadness and less enjoyment with life, confirming the female happiness paradox.

Table 3 underscores just how unusual life satisfaction and happiness are when it comes to the gender wellbeing gap by presenting female coefficients on raw differences (column 1) and differences adjusting for country, sweep, age and age squared (column 2) for eighteen other wellbeing variables collected in ESS. We group results for these eighteen other metrics into three sets– negative affect in the past week (part a), positive affect in the past two weeks (part b), and

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[13] Both are asked with reference to the past week and are coded on a four-step scale from 'none or almost none of the time' to 'all more almost all of the time'.

domain satisfaction (part c). Below the table we report the exact question wording, and the gender means on each variable.

It is apparent from part a) that the female coefficient is positive and statistically significant on all seven negative affect measures. This is the case both with and without controls. In part b) the female coefficient is consistently negative and significant for positive affect as captured being calm and relaxed; fresh and rested; cheerful and in good spirits; daily life interests me; felt active and vigorous; and enjoyed life. These have sample sizes of around 45,000-130,000. With the exception, of 'enjoyed life', which relates to the prior week, these questions relate to what happened in the last two weeks.

Part c) adds a further five variables that report satisfaction with national government, democracy, the state of the economy, of education and health services, all coded 0-10 and available in all ten sweeps so sample sizes are around 450,00 for each. The female coefficient is again consistently negative and statistically significant – in stark contrast to the life satisfaction results in row 19 which shows the female coefficient flipping from negative and statistically significant without controls to positive and significant with controls – as does happiness in row 20.

If one focuses on rows 1 through 18 there is no female happiness paradox. Instead, there is an unambiguous gender wellbeing gap, both in terms of positive and negative affect. However, there is a paradox in relation to life satisfaction and happiness since the female coefficients are positive with the addition of time, country, age and age squared. Why is it that these two measures behave so differently to the others? One possible reason is the other variables anchor the respondent in the last week or two weeks whereas happiness and life satisfaction are asked without any reference to specific time periods. We explore this in more detail below and this does not seem to be a plausible explanation.

In the earlier literature – reviewed in Blanchflower and Bryson (2024) - there was much speculation as to whether the gender gap in life satisfaction was closing with men becoming more satisfied relative to women. Much of this literature was for the United States and conditions on a wider set of variables than we use here. In Table 4 we present time-trends on the gender gap on satisfaction with life as a whole and satisfaction with four specific domains namely the economy, national government, democracy, and health services. All are coded 0-10 and are available in every wave of ESS. The female coefficients for all four domain-specific satisfaction metrics are consistently negative and statistically significant, with the exception of government and democracy in 2020, where there are no significant gender gaps.

The life satisfaction variable is the only one with a significant positive coefficient at the outset. However, from 2006 the coefficient is not statistically significant, and is even negative in two years, albeit not significantly so. This is consistent with the findings of Blanchflower and Bryson (2024) who found using Annual Population Survey data for the UK that women were consistently more anxious than men in each year between 2012 and 2021 whereas in the case of happiness and life satisfaction there was considerable variation of sign with some evidence of positives in the period up to 2018 and negatives in the later period.

4.2: Dataset #2 - Eurobarometers (EB), 1991-2022

We repeat the exercise for Europe using a different data set, the Eurobarometer. Chart 1 shows a plot of raw life satisfaction rates based on a 4-step measure across the European Union using the Eurobarometers, for the period 1991-2022. There are nearly 1.8 million observations. In early years, women report higher life satisfaction than men, but the differential disappears in the late 1990s, followed by a period in which men report higher life satisfaction (between 2002 and 2015). Since then, the raw difference has largely vanished. In 2022 both scores were 3.00.

Patterns look a little different in regression analyses controlling for country in column 1 of Table 5. The female coefficient tends to be positive early on, reverting to negative in the middle years, but returns to positive later in the series. The pattern is similar when conditioning on age and age squared in column 2. However, it is notable that in the pooled regression containing year and country dummies in the final row of the table the female coefficient is negative and significant, but the coefficient falls to zero with the addition of age and age squared in column 2.

A recent literature points to a gender expectations gap arising from different socio-economic experiences of men and women – what D'Acunto et al. (2021) refer to as 'social conditioning'. Earlier research showed women expressed higher satisfaction with jobs compared with men in very similar jobs, leading to speculation that the differences were accounted for by lower job expectations among women (Clark, 1997). The Eurobarometers incorporate respondents' expectations about five issues allowing us to test for gender differences in expectations. Results are reported in part a) of Table 6 using the same pooled Eurobarometer data files. Respondents are asked about their expectations in the coming 12 months in relation to the economic and employment situation in the country they live in, the financial situation of the household, their personal job situation, and 'life in general'.

We find in four of the five variables that the female coefficient is negative and significant, confirming the proposition that women have lower expectations of the future. However, in relation to 'life in general' over the next year the sign is reversed: women have higher expectations of life in general than men. It does not appear to be the case that gender differences in wellbeing are driven by differences in expectations. Women have lower domain-specific satisfaction despite having lower expectations and have higher evaluations of life in general notwithstanding their higher expectations.

We also have recent evidence on a respondent's current emotional status from Eurobarometer #97.3 surveyed between April and May 2022.[14] Respondents were asked for ten possible responses that they should rank first and second and we simply set the value of the dependent variable to 1 if the response was identified either first or second ('and then')? Part b) of Table 6, which includes country controls and age and its square shows significant negatives for the female coefficient for three positive affect variables – confidence, serenity, and motivation - and three

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[14] Blanchflower and Bryson (2024) found from Eurobarometer #76.2 for Sept-Nov 2011 that asked how satisfied respondents were with their life in general; their health; their ability to perform day-to-day activities and their living conditions in all four cases the female variable was significantly negative. In #95.1, March to April 2021 they found significant negatives for loneliness, fear, helplessness, frustration and uncertainty and a significant positive for calmness. Finally, they also found significant positives in expectations of the financial situation of the household; the economic situation and employment situation of the country in #94.3 June-July 2021. All controlled for country only.

positives for the negative affect variables – fear, uncertainty and helplessness. The standard Eurobarometer 4-step life satisfaction variable was weakly positive and inconsistent again.

4.3. Dataset #3 - European Quality of Life Surveys (EQLS), 2003-2016
Table 7 analyzes data from the EQLS. In each case we report regressing the variable in question, using OLS, first on a female dummy alone, then we add, for 'some' controls 3 wave and 35 country dummies and age and its square. 'Full' controls add 7 labor force status and 2 education dummies.

Part a) rows 1-7 presents results for the seven negative affect variables. The female coefficients are all significantly positive, irrespective of model specification. Part b) in rows 8-16 presents results for six positive affect items. The female coefficient is always negative and significant regardless of model specification. Part c) reports the female coefficients for domain-specific satisfaction. Once again, they are negative, statistically significant and robust to the choice of controls. In part d), and in keeping with estimates from the pooled ESS and pooled Eurobarometers, in the absence of controls women are less satisfied with life and less happy than men but the difference becomes statistically non-significant with the inclusion of wage, country and age controls.

There is no evidence of a female happiness paradox here. We see no positive and significant coefficient on a positive affect variable other than for life satisfaction and happiness with no controls at all. Females are less happy and consistently more unhappy.

4.4: Dataset #4 - European Values Surveys (EVS), 1981-2021
Table 8 uses data from the EVS for 11-step life satisfaction and 4-step happiness. We also have a number of positive affect variables including trust, being excited, pleased, satisfaction with their home life and their financial situation[15] as well as one on the national political system. There are also five negative affect variables – being bored, lonely, restless, depressed, or unhappy and upset at being criticized. Several of the variables are only available in the early sweeps of the survey.

The female coefficient is insignificant for both life satisfaction and happiness in the pooled data but the bottom part of the table shows there is a good deal of variation over time with the female coefficient being positive and statistically significant for both life satisfaction and happiness in the period 2017-2021. Consistent with findings above, the female coefficients are always negative on the positive affect equations and vice versa for negative affect. All but one of these coefficients is statistically significant.

We can conclude that the evidence across European countries using ESS, EQLS, Eurobarometer and WVS is that there is no evidence of a female paradox other than from happiness and life satisfaction data. The life satisfaction and happiness data provide very unstable estimates that vary by time, which controls are used and by country in a way all the other variables do not.

4.5. Dataset #5. The 2018 Programme for International Student Assessment (PISA) at age 15
Following Campbell et al (2021) we analyze the 11-step life satisfaction variable asked in 2018 of young people ages 15 and 16. The raw data show higher weighted means for boys (7.29) than

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[15] Easterlin et al. (2010) also used a financial situation variable as a measure of well-being using the *Latinobarómetros* examined below.

girls (6.94) using student non-response adjusted weight *w_fstuwt*. We regressed life satisfaction on country dummies, school grade, and being foreign born using OLS. The female coefficient and T-statistic and sample size were as below.

The data also contain seven additional SWB metrics based on the following question:

Q64. Thinking about yourself and how you normally feel: how often do you feel .. never (=1), rarely (=2), sometimes (=3), always (=4)?

Below we report female coefficients and t-values from models with the same controls as above for three 4-step positive and four 4-step negative affect metrics.

	Coefficient (t-value)	N	Adj R^2
Life satisfaction	-.4053 (55.85)	477,671	.0603
Joyful	+.0333 (16.81)	496,399	.0650
Cheerful	+.0121 (5.90)	497,199	.0669
Happy	+.0200 (10.46)	501,567	.0390
Sad	.3462 (166.34)	496,302	.0847
Miserable	.1537 (66.23)	495,358	.1006
Scared	.3047 (143.81)	496,899	.0852
Afraid	.2877 (129.13)	495,794	.1422

Young girls score lower than fifteen-year-old boys on life satisfaction but higher on being cheerful, happy and joyful as well as on sad, miserable, scared or afraid.[16]

4.6. Dataset #6 - Latinobarómetro, 2020
Column 1 in the table below presents the coefficients and t-statistics on the female dummy from a regression conditioning on country controls, age and age squared and race. Column 2 adds labor force status and education.

	(1)	(2)	N	Adj R^2
Life satisfaction	-.0091 (0.76)	.0149 (1.17)	19,951	.0703
Satisfaction with democracy	-.0443 (3.30)	-.0446 (3.32)	19,258	.1172
Satisfaction with economic situation	-.0649 (5.51)	-.0652 (5.52)	19,561	.1072

Domain-specific satisfaction with democracy and the economic situation are lower for women than men. The difference is robust to controls. In contrast the lower life satisfaction among women is statistically non-significant with or without controls. The sample size and adjusted R-squareds relate to column 1.

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[16] Rudolf and Bethmann (2023) using data from 72 middle- and high-income countries from PISA 2018 report that adolescent well-being falls with GDP per capita and that this paradox is partly driven by education competition and school-related stress. It further shows that girls are more sensitive to education-related stress which may be one reason why the well-being gap starts in adolescence. We thank a reviewer for drawing our attention to this.

4.7 Dataset #7 - US General Social Surveys (GSS), 1972-2021 and Dataset #8 Canadian Social Survey, 2017 (CGSS).

The GSS was used in a number of the earliest papers examining female wellbeing gaps. (Blanchflower and Oswald, 2004, Stevenson and Wolfers, 2008, 2009). In Blanchflower and Oswald (2004) data from 1972-1998 sweeps were examined and controls for age and its square was included along with a time variable and two race dummies. It was found that a female variable was significantly negative.

In a regression controlling for age and its square, year, region and race the coefficient on the full sample from 1972-2021 for the female variable is +.0147 (t-stat=2.82), n=59,860 for happiness. When we add controls for labor force status and education the coefficient on the female variable is +.0111 (t=1.98, n=59,715).

As can be seen from Chart 2 there is no consistent raw, female-male happiness gap by year. In twenty-one instances the female difference is positive and in thirteen it is negative. There seems to have been a trend down through 2002 as identified by Stevenson and Wolfers (2009) which reversed after that.

In contrast, the GSS included domain-specific satisfaction variables that generate negative female coefficients.[17] Blanchflower and Bryson (2024) examined financial satisfaction and marital satisfaction using the same controls for race, age and time and found the female coefficient was negative for both. Chart 2 also includes plots for financial situation by gender. It is apparent that males report higher levels of satisfaction than females. For both happiness and financial satisfaction there are downward time trends.

Regarding satisfaction with family life, again, we found a negative female coefficient. It is robust to controls for year, age, gender, race and region (-.095, t=6.8, n=23,034) and remained significantly negative when controlling for labor force status and education were added (-.076, t=4.8, n=22,974).

Turning to life satisfaction in the Canadian GSS the mean scores on the 11-step variable are 8.13 for females and 8.07 for males. Controlling for region, age and its square, education and foreign born the female coefficient is +.0495 (t=2.1) with a sample size of 20,272.[18]

So once again the evidence from the GSS and CGSS is contradictory – positive female coefficients for happiness and life satisfaction and negative for financial and marital sentiment, and family life.

4.8. Dataset #9. International Social Survey Programme (ISSP), 2017

We report estimates for two positive affect and five negative affect outcomes in Table 9. In the first column we control for country dummies. In the second column we also condition on age and its square and labor force status. The female coefficients change very little with the addition of

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[17] Easterlin (2006) analyzed happiness data from the GSS for 1973–1994 as well as financial satisfaction and family life.

[18] The data files are available here
https://outlook.office.com/mail/inbox/id/AAQkAGRmNjRjMDczLWEyYTUtNGE0ZS1hYzhmLTFjNDAzZWE1N zVkMAAQAAReG3yiqU1Ap7gz2pJtvLA%3D

labor force status. The female coefficient on the life satisfaction variable is negative as it is for being 'easy for me to accomplish my goals'. The five negative affect variables all have significant and positive female coefficients – 'unhappy and depressed'; 'difficulties were "piling up so high that you could not overcome them', often 'isolated from others'; 'felt left out'   and   'lacked companionship'.

4.9. Dataset #10 - Gallup's World Polls (GWP), 2005-2021 and Dataset #11 - US Daily Tracker (USDT), 2008-2017
We now move on to Gallup data where there is especially strong evidence of a positive female coefficient for life satisfaction and a number of negative affect variables. But as before other positive affect variables have a negative sign for the female coefficient. Large samples generate very stable estimates especially over time.

There is some precedent for using the variables for identifying positive and negative affect using these data files. Geering and Diener (2020) used the 2005-2015 GWP and the Gallup-Sharecare 2015 Daily Survey for the US to measure gender life satisfaction effects. They used Cantril's ladder plus a composite measure of positive affect, computed as an arithmetic average of respondents' answers to whether they experienced a lot of enjoyment yesterday (yes or no), and whether they experienced a lot of smiling/laughing yesterday (yes or no). Similarly, negative affect was computed as an arithmetic average of respondents' answers to two whether they experienced a lot of sadness yesterday (yes or no), and whether they experienced a lot of worry yesterday (yes or no). Diener et al (2018) also examined the GWP data using these positive and negative affect variables (adding anger). Blanchflower and Bryson (2023c) also used the Gallup World Poll and Daily Tracker data.

Table 10 uses data from both the GWP and USDT to report separate results for five positive affect variables – life satisfaction, happiness, future life satisfaction, enjoyment depression and being well rested. The addition of controls makes no difference to any signs and the coefficient size is remarkably stable to changes in specification. Results are consistent across the GWP and USDT.

We start with data on Cantril's life satisfaction ladder, coded 0-10, that has been used previously by many researchers (Graham and Pozuelo, 2017, Deaton, 2018, Diener and Tay, 2015) and especially in various World Happiness Reports.[19] The sign on the female coefficient is significantly positive as it is for happiness and future life expectations. However, for being well rested and experiencing enjoyment 'yesterday' the signs switch to negative. These results are insensitive to changes in controls.

Table 11 shows estimates by year for both files for life satisfaction and enjoyment. For every year the female coefficient is significantly positive over time in the former case and significantly negative in the latter in both surveys. The estimates are highly stable over time but less so by country. In Appendix Table 2 we present results by country for Cantril, enjoy, rested, pain, sad and worry. Cantril has 82/167 positive female coefficients and 57/167 which are insignificantly different from zero. In the case of Cantril there are only 28 cases where the female coefficients are significantly negative and these are in less developed countries such as Togo, Rwanda, Ghana

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[19] Christian Bjørnskov (2010) notes some differences between life satisfaction questions in the EVS and GWP.

and Chad which is consistent with the findings of Graham and Chattopadhyay (2012) who found evidence that woman are happier than men at worldwide scale, with exception of poor countries.[20]

So even for Cantril there is a lot more variation by country than there is over time. There are many more negative signs for enjoyment and well-rested. The vast majority of countries have a positive female coefficient for the negative affect variables. In the case of sadness 147 were positive and none were negative; for worry there were 128 positives and for pain 135/167.[21]

It is likely that enjoyment and happiness, for example, have somewhat different correlates in the circumstances of one's life. Not all positive emotions are alike. For example, a respondent would not check enjoyment unless there was some specific thing to enjoy. Happiness is more like contentment and does not require a particular stimulus. Indeed, if I think of myself as generally happy, I am likely to say that I was happy yesterday if it was just a normal day. In other words, 'was happy yesterday' is closer to life satisfaction than is 'enjoyed yesterday'.

The first step is a search for background variables (e.g., education, age, number of children) that show different patterns of correlations with the affect variables and with the life satisfaction or "happiness these days" measures. Looking at the pattern of these correlations for individual items, the suggestion is we should find "happiness yesterday" somewhat closer to evaluation than to affect.

Table 12 reports the full regression results using USDT with controls for age, gender, education, year, state and labor force status for enjoy, happy and worry. They look very similar in terms of their determinants, of course, with the main exception, of the female variable. Table 13 repeats the exercise using GWP data for 2009-2013 and the results for the same three variables look similar again[22].

The patterns we observe are broadly consistent across all eleven of the datasets we examined. There is no evidence of any paradox for twenty-four of our positive affect variables. Life satisfaction and happiness are different. It is unclear why.

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[20] We also ran country regressions for happiness and there were only significant negatives in Italy and Portugal and 23 developing countries - Bolivia; Brazil; Cambodia; Chad; Colombia; Dominican Republic; Ecuador; Georgia; Guatemala; Honduras; Liberia; Libya; Malawi; Nicaragua; Pakistan; Panama; Peru; Romania; Saudi Arabia; Somaliland; Tajikistan; UAE and Uganda.

[21] Arrosa and Gandelman (2016) found that females had higher happiness rates than men using the 2006 GWP, the 1981-2008 WVS and the 2002-2006 ESS. This paper used the Cantril variable with the GWP, the 4-step happiness variable with the WVS and the 10-step happiness variable with the ESS. The finding of significant positive female coefficients was obtained using controls for age and its square, marital status, labor force status and education. The authors estimated country equations and found 61/117 significant positives with GWP, 43/87 for WVS and 16/29 in ESS.

[22] El Jahel, MacCullouh and Shafee (2022) use data from the GWP 2005-2019 to calculate the impact of inflation rate and the unemployment rate. They find that a 1% rise in inflation is about 6 times higher than an equivalent rise in the unemployment rate using Cantril. The effects are also measured using pain (13 times), sadness (9 times), enjoyment (5 times) and smiling (4 times) as dependent variables with the number in parentheses the multiple of the effect of a 1% rise in unemployment versus a 1% rise in inflation. Macchia and Oswald (2021) find using the same GWP data 2005-2018 that pain falls in a boom and rises in a downturn and is high when unemployment is high and increases in pain are borne primarily by women.

4. The Real Paradox

The overwhelming evidence we presented in the last section is consistent with the proposition that women express lower subjective wellbeing than men, notwithstanding the somewhat paradoxical findings with respect to life satisfaction and happiness. One might think that this gender wellbeing gap would be reflected in a gender health gap. Yet this does not appear to be the case. The real paradox is that whilst women express lower wellbeing than men, men suffer from poorer health than women and have lower life expectancy.

Men are more likely to die from deaths of despair including drug overdoses[23], cirrhosis of the liver and suicide (Case and Deaton, 2015). Suicide rates for men (16.85/100000) are much higher than for women (4.5/100000) in the EU (see appendix 1) and the United States (men=22 and women=6).[24] In the US, where suicides are rising there are 3.9 male suicide deaths for every female suicide death. In contrast, women are two to three times more likely to discuss thoughts of suicide than men, and there are approximately three female suicide attempts per every one male suicide attempt. Depression, bipolar disorder, and substance use are strongly linked to suicidal thinking and behavior.[25]

Women live longer than men and see doctors more often than men. Men though are more burdened by illness during life. They fall ill at a younger age and have more chronic illnesses than women. Men are nearly 10 times more likely to get inguinal hernias than women, and five times more likely to have aortic aneurysms. American men are about four times more likely to be hit by gout; they are more than three times more likely than women to develop kidney stones, to become alcoholics, or to have bladder cancer. And they are about twice as likely to suffer from emphysema or a duodenal ulcer.[26]

5. Conclusion

Using fifty-five metrics from eleven separate data sets across the world we investigate gender differences in subjective wellbeing (SWB). These variables give a *richer perspective* on women's lives than previously documented (Bertrand, 2011). In doing so we are able to dismiss the idea that there is a gender paradox with women expressing both greater happiness and greater sadness than men. Almost always and everywhere, women express higher negative affect and lower positive affect than men.

We found evidence of a positive sign on female coefficients for **twenty-two** negative affect variables, namely: anxious; down; depressed; lonely; sad; miserable; tired; stressed; fearful; uncertain; restless sleep; worry; everything is an effort; pain; restless; bored; upset, unhappy and depressed; difficulties were piling up so high that you could not overcome them, often isolated from others; felt left out and lacked companionship.[27]

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[23] https://nida.nih.gov/research-topics/trends-statistics/overdose-death-rates
[24] Suicide data and statistics, CDC. https://www.cdc.gov/suicide/suicide-data-statistics.html
[25] https://afsp.org/what-we-ve-learned-through-research
[26] 'Mars vs. Venus: The gender gap in health', August 26, 2019, Harvard Medical School https://www.health.harvard.edu/newsletter_article/mars-vs-venus-the-gender-gap-in-health
[27] Blanchflower, Oswald and Stewart-Brown (2013) also found evidence of a positive female coefficient for three further negative affect variables. Question - have you been a) '*nervous*' b) '*downhearted and low'* where 1 = 'none of the time" 2= 'a little of the time", 3=some of the time' and 4='all of the time" using the Welsh Health Survey of

We found consistent evidence of a *negative* sign on female coefficients in every one of a further **thirty-one** positive affect variables. Of these, twenty-one relate to the individual: calm and relaxed; fresh and rested; cheerful and in good spirits; daily life interests me; active and vigorous; enjoyed life; excited; pleased; 'going your way'; free to decide; easy for me to accomplish my goals, confidence; serenity; motivation; living standards; education; family life; financial situation; home life; lively; proud. Six related to satisfaction on national issues: democracy; the national government; the economy; health services; education; and the political system. And four relate to expectations a year ahead on: the economic situation in the country; employment situation in the country; the financial situation of your household; and your personal job situation.

These results hold across county and over time. They are insensitive to the response coding, or the period over which the respondent is asked to assess their SWB (now, yesterday, last week and so on). They are robust to controlling for exogenous variables and, in many cases, for endogenous variables.

There is no paradox here.

However, there are three SWB variables where the gender wellbeing gap is less obvious and where the female coefficient is not robust across time, country and model specification. These SWB metrics are life satisfaction including Cantril's ladder of life, happiness and life expectations. For these variables we do not frequently see significant negatives on the female coefficient.[28] In the thirty-four findings below eight were negative, nine were insignificant and seventeen positives.

	Life satisfaction		Happiness	
	Some controls.	Full controls	Some controls	Full controls
EB	-	+	N/A	N/A
ESS	0	0	+	+
Latinobarómetro	0	0	N/A	N/A
EVS	0	0	0	0
EQLS	-	0	-	0
ISSP	-	-	N/A	N/A
PISA	-	-	+	+
GSS	N/A	N/A	+	+
CGSS	+	+	N/A	N/A
GWP	+	+	+	+
USDT	+	+	+	+

Why is it that women express lower positive affect, higher negative affect, but there is no clear gender gap on life satisfaction, happiness and Cantril's Ladder?

2007-2010. Female positive coefficients were also found using a GHQ score as dependent variable with data from both the Scottish Health Surveys of 2008-2009 and the English Health Survey of 2008.

[28] The main exception is by country as shown in Table 3 and Appendix Table 2 where there are a few negatives with some controls, for example for Italy and Portugal in both.

The three outlier variables are all what Deaton and Kahneman (2010) refer to as a 'cognitive evaluation'. Like Diener et al (1999) and Easterlin (1974, 1995, 2006) before them, they argue that these cognitive evaluations are conceptually different from, albeit related to affect. The latter is an emotive state, whereas cognitive evaluations are not. This implies that some determinants of evaluative SWB may be different from those relating to positive and negative affect. Continuing that theme, Zuckerman, Li and Diener (2017) helpfully explain that "*happiness, is comprised of three components: life satisfaction, positive emotions, and negative emotions and because the components are relatively independent, a gender difference in one component may not generalize to any of the two others.*" (p.329).

Of particular note also is that we find a female coefficient in a series of variables asking about non-personal issues including the state of the economy, democracy, health services, education and the political system. This seems to have not been noted before in the psychological literature, suggesting a broader applicability of these findings, which go beyond the individual. We find similarly that females have lower expectations a year ahead of the economic and employment situation of the economy. It is particularly notable in Table 6 using the Eurobarometers where the sign on the female coefficient is positive for life in general a year ahead and negative for variables relating to the economy and employment a year ahead. Females also report lower expectations than men for their own financial and job situations, differing from their views on their *life,* a year ahead. This is new.

We hypothesize that women express greater negative affect and lower positive affect on experiential dimensions of wellbeing because in their daily lives they face a world that, even today, is patriarchal – structured by men, for men. There are four hypotheses as to why this does not show up in a gender gap on cognitive evaluations of their lives.

First, there may be more ways for women to have successful lives than there are for men – being a good mother or homemaker is a substitute for success at work that men can achieve.

Second, it may be that women respond differently to men to the normative component of these evaluative questions. As Diener (1999) argues: "*if people believe happiness is normatively appropriate, they may report that they are happier than other types of assessments may indicate…because different measures of SWB can produce different scores a battery of diverse measures will produce the most informative composite*" (p.35). Could it be that women are more prone to divergence in this regard than men?

Third, it may be that women's cognitive evaluations of their lives factor in lower expectations and aspirations compared with men precisely because, in patriarchal societies, women expect and aspire to less than their male counterparts. If this is so then their 'set points' against which they respond to life satisfaction, happiness and Cantril's Ladder will be lower than those for men.

Fourth, it may be that gendered social norms lead to gendered reporting biases which are linked to the gendered socialization of emotion which encourages or discourages the expression of certain emotions in gender-specific ways (Thomassin et al., 2019, Akerlof, 2010). It is possible, for instance, that men are encouraged by social expectations to understate their negative emotions to

survey enumerators. If so, then it is possible that the gender wellbeing gap identified here is upwardly biased by gender-specific reporting bias.

These hypotheses are worth testing in future research. But for now, it is clear that Diener et al. (1999) were correct in arguing for the need to examine multiple SWB metrics in furthering our understanding of the world. It is our view that any attempt at measuring SWB is likely to have to be multidimensional and should not be restricted to happiness and life satisfaction.

In discussing the potential components of a national SWB Index Diener (2000) also argued for it to have several components.

"Ideally, the national SWB indicators would include various components of SWB, such as pleasant affect, unpleasant affect, life satisfaction, fulfillment, and more specific states such as stress, affection, trust, and joy (p.40).

There remains a major paradox though, because in the observed data there is an anomaly because men have higher deaths of despair. It is clear though that there is not a contradiction in that morbidity rates tend to be highest in midlife, and especially among the least educated and deaths of despair are highest for those groups – from suicide, drug overdoses and alcohol poisonings. Women seem less content than men on most aspects of their lives.

Table 1. Depression, Life satisfaction and happiness - OLS

a) Depression, sweeps 3,6,7

	Model 1	Model 2	Model 3
Female	+.1604 (42.35)	+.1438 (39.14)	+.1388 (37.85)
Control for countries	No	Yes	Yes
Control for time	No	Yes	Yes
Control for age and age^2	No	No	Yes
Constant	1.4153	1.8251	1.7133
Observations	136,615	136,615	136,174
R^2	.0130	.1140	.0818

b)   Life satisfaction, sweeps 1-10

	Model 1	Model 2	Model 3
Female	-.0898 (13.24)	+.0089 (1.42)	+.0188 (3.02)
Control for countries	No	Yes	Yes
Control for time	No	Yes	Yes
Control for age and age^2	No	No	Yes
Constant	6.8422	5.6964	6.8809
N	463,446	463,446	461,446
R^2	.0004	.1525	.1616

c) Happiness, sweeps 1-10

	Model 1	Model 2	Model 3
Female	-.0462 (7.75)	+.0264 (4.70)	+.0421 (7.51)
Control for countries	No	Yes	Yes
Control for time	No	Yes	Yes
Control for age and age^2	No	No	Yes
Constant	7.2345	6.3512	7.1464
N	463,188	463,188	461,191
R^2	.0001	.1139	.1268

Source : European Social Survey, sweeps 1-10

Table 2. Country results (39) with ESS sweep and age and age squared as controls female coefficients

	Life satisfaction	Happiness	Depression	Felt Sad	Enjoyed life
All 39 countries	+	+	+	+	-
Albania	0	0	+	+	-
Austria	+	+	+	+	-
Belgium	0	0	+	+	-
Bulgaria	0	0	+	+	-
Croatia	0	+			
Cyprus	-	-	+	+	-
Czechia	0	+	+	+	-
Denmark	0	0	+	+	-
Estonia	+	+	+	+	+
Finland	+	+	+	+	0
France	-	0	+	+	-
Germany	0	0	+	+	-
Greece	-	-			
Hungary	+	+	+	+	-
Iceland	0	+	+	+	-
Ireland	+	+	+	+	0
Israel	+	0	+	+	0
Italy	-	-	+	+	
Kosovo	+	+	+	+	0
Latvia	+	+			
Lithuania	+	+	+	+	0
Luxembourg	0	0			
Montenegro	0	+			
Netherlands	0	0	+	+	-
North Macedonia	0	0			
Norway	0	0	+	+	
Poland	0	+	+	+	0
Portugal	-	-		+	-
Romania	0	0	+		-
Russia	0	0	+	+	-
Serbia		0			
Slovakia	0	+	+	+	0
Slovenia	0	+	+	+	-
Spain	-	-	+	+	-
Sweden	0	+	+	+	-
Switzerland	+	+	+	+	-
Turkey	0	0			
Ukraine	0	0	+	+	-
United Kingdom	0	0	+	+	-
N	463,762	463,495	136,743	136,737	136,133

Notes. 0=insignificant +=significantly positive -=significantly negative based on t-statistics being >1.65 on the female dummy variable. All 39 includes country dummies

Table 3. Other Positive and negative affect measures in the ESS.

	No controls	Some controls	N
a) Negative affect			
1. Depressed (3,6,7)	+.1604 (42.35)	+.1388 (37.85)	136,174
2. Anxious (3,6)	+.1225 (27.94)	+.1308 (28.59)	96,176
3. Sad (3,6,7)	+.1944 (51.24)	+.1668 (45.62)	136,170
4. Lonely (3,6,7)	+.1233 (31.08)	+.0972 (25.19)	136,218
5. Tired (3)	+.1443 (19.79)	+.1257 (17.53)	42,377
6. Sleep was restless (3,6,7)	+.2022 (44.10)	+.1847 (40.77)	136,523
7. Everything an effort (3,6,7)	+.1225 (27.94)	+.0974 (23.05)	136,164
b) Positive affect part 1			
8. Calm and relaxed (2, 5)	-.2431 (30.28)	-.2185 (27.67)	101,280
9. Fresh & rested (2)	-.2348 (17.46)	-.2290 (17.10)	47,030
10. Cheerful & good spirits (2, 5)	-.1444 (18.48)	-.0952 (12.77)	101,331
11. Daily life interests me (2)	-.2431 (30.28)	-.1318 (10.93)	46,976
12. Active & vigorous (2,5)	-.2384 (28.03)	-.1952 (23.73)	101,229
13. Enjoyed life (3,6,7)	-.0908 (19.47)	-.0680 (15.00)	135,576
c) Positive affect part 2 (1-10)			
14. Satisfied national government	-.1152 (15.39)	-.0511 (7.24)	446,727
15. Satisfied with democracy	-.2147 (28.17)	-.1178 (16.92)	445,008
16. Satisfied state of the economy	-.3200 (42.65)	-.2030 (31.06)	452,934
17. Satisfied state of education	-.1090 (15.14)	-.0373 (5.68)	440,821
18. Satisfied health services	-.3349 (43.74)	-.2298 (33.99)	458,336
d) Positive affect part 3			
19. Life (1-10)	-.0898 (13.24)	+.0188 (3.02)	461,446
20. Happiness (1-10)	-.0462 (7.75)	+.0421 (7.51)	461,191

Table 4. Time series estimates ESS – includes controls for country age and its square, ESS

	Economy	Government	Democracy	Health	Life
2002	-.2181 (10.48)	-.0872 (3.83)	-.2147 (9.48)	-.2851 (12.65)	+.0404 (1.94)
2004	-.2701 (13.59)	-.0914 (4.35)	-.1700 (7.94)	-.2290 (10.58)	+.0345 (1.76)
2006	-.3380 (16.59)	-.0953 (4.36)	-.1603 (7.32)	-.2597 (12.01)	-.0108 (0.53)
2008	-.1589 (8.83)	-.0386 (1.99)	-.1274 (6.45)	-.1785 (9.22)	.0221 (1.19)
2010	-.1301 (7.42)	-.0504 (2.59)	-.1014 (5.08)	-.2216 (11.48)	.0219 (1.18)
2012	-.1552 (8.43)	-.0218 (1.07)	-.0806 (4.06)	-.2156 (11.07)	.0107 (0.57)
2014	-.2222 (10.48)	-.0814 (3.57)	-.1597 (6.75)	-.2820 (12.79)	.0130 (0.63)
2016	-.1725 (8.66)	-.0154 (0.70)	-.0651 (2.90)	-.2277 (10.86)	.0230 (1.23)
2018	-.2381 (12.44)	-.0486 (2.24)	-.0967 (4.54)	-.2503 (12.16)	.0287 (1.55)
2020	-.1496 (6.20)	.0248 (0.92)	-.0005 (0.02)	-.1802 (7.04)	-.0108 (0.48)

Variables are satisfied with national government, democracy, health services and the state of the economy

Table 5. OLS Eurobarometers. Life satisfaction, 1991-2022 female coefficients by time
*=significantly positive **=significantly negative (t>1.65)

			N
1991	-.0105 (0.89)	-.0118 (1.00)	13,910
1992	+.0166 (2.38)*	+.0172 (2.47)*	40,894
1993	+.0013 (0.16)	+.0011 (0.14)	28,035
1994	+.0205 (2.65)*	+.0227 (2.95)*	32,374
1995	+.0280 (2.68)*	+.0285 (2.73)*	17,042
1996	+.0287 (2.85)*	+.0255 (2.54)*	20,599
1997	-.0035 (0.33)	-.0037 (0.35)	16,035
1998	-.0136 (1.25)	-.0132 (1.21)	16,032
1999	+.0008 (0.11)	+.0011 (0.16)	31,928
2000	-.0115 (1.92)*	-.0112 (1.87)**	49,808
2001	-.0076 (1.03)	-.0074 (0.99)	31,685
2002	-.0117 (1.11)	-.0099 (0.94)	15,909
2003	-.0211 (1.93)**	-.0204 (3.38)**	15,582
2004	-.0288 (3.78)**	-.0244 (4.12)**	56,021
2005	-.0265 (4.42)**	-.0140 (2.27)**	58,481
2006	-.0081 (1.37)	-.0037 (0.63)	58,044
2007	-.0248 (4.23)**	-.0192 (3.31)**	59,198
2008	-.0193 (3.25)**	-.0162 (2.75)	59,961
2009	-.0020 (0.40)	+.0013 (0.26)	90,624
2010	-.0014 (0.23)	+.0026 (0.44)	61,225
2011	-.0081 (1.65)**	+.0035 (0.72)	89,835
2012	+.0052 (1.06)	+.0087 (1.79)*	89,538
2013	+.0012 (0.25)	+.0078 (1.64)*	92,395
2014	-.0221 (5.29)**	-.0167 (4.03)**	121,808
2015	-.0159 (2.82)**	-.0149 (2.68)**	65,501
2016	+.0068 (1.21)	+.0099 (1.80)*	65593
2017	+.0040 (0.74)	+.0055 (1.02)	66,110
2018	+.0124 (2.31)*	+.0132 (2.49)*	65,413
2019	+.0104 (1.92)*	+.0125 (2.33)*	64,789
2020	+.0129 (2.39)*	+.0128 (2.38)*	61,269
2021	+.0067 (1.79)*	+.0061 (1.63)	128,837
2022	+.0077 (1.81)*	+.0090 (2.13)*	101,104
All	-.0026 (2.43)**	-.0004 (0.41)	1,785,219

Column 1 includes controls for country and column 2 adds age and its square. N refers to sample size in column 1.

Table 6. Eurobarometer expectations and emotional status.

a) Expectations

	Economic situation	Employment situation	Life in general	Financial situation	Personal job situation
Female	-.0210 (15.54)	-.0080 (5.84)	+.0031 (2.78)	-.0184 (16.60)	-.0208 (13.21)
Age	-.0117 (48.75)	-.0124 (50.74)	-.0168 (84.47)	-.0172 (88.17)	-.0193 (49.56)
Age^2*100	+.0101 (41.25)	.0105 (42.16)	.0098 (48.61)	.0117 (59.41)	.0139 (31.72)
Adj R^2	.0547	.0711	.1028	.0802	.0670
N	1,271,688	1,230,131	1,299,692	1,327,084	551,989

Controls are age, age squared, labor force and education, country and year. Job situation workers only. T-statistics in parentheses. Source Eurobarometers, 1991-2022.

b) Emotional status?
Sample size is 26,538 except for life where n=26,506

	Female coefficient
Confidence	-.0251 (4.58)
Serenity	-.0500 (9.59)
Motivation	-.0392 (7.58)
Fear	+.0874 (16.78)
Uncertainty	+.0263 (4.35)
Helplessness	+.0401 (7.60)
Life	+.0138 (1.74)

Controls: female country dummies, age and age squared and T-statistics in parentheses. Source: Eurobarometer #97.3 April and May 2022.

Table 7. EQLS 2003-2016

	Gender only	Some controls	Full controls	N
a) Negative affect				
1. Downhearted & depressed	+.2135 (23.53)	+.1959 (22.31)	+.1905 (21.17)	79,462
2. Tense	+.1583 (16.32)	+.1505 (15.88)	+.1547 (15.78)	79,522
4. Seldom time to enjoy	+.0478 (5.69)	+.0543 (6.65)	+.0681 (8.08)	79,676
5. Lonely	+.1995 (21.18)	+.1842 (20.10)	+.1833 (19.44)	79,572
6. Left out	+.0346 (5.70)	+.0257 (4.36)	+.0154 (2.54)	114,247
7. Life too complicated	+.1006 (14.25	+.0802 (12.05)	+.0640 (9.40)	114,008
b) Positive affect part 1				
8. Calm & relaxed	-.2394 (32.06)	-.2226 (30.40)	-.2151 (28.26)	114,596
9. Fresh & rested	-.2457 (29.75)	-.2368 (28.84)	-.2326 (27.34)	114,509
10. Cheerful & good spirits	-.1457 (20.22)	-.1195 (17.29)	-.1058 (14.79)	114,584
11. Daily life interests me	-.1541 (19.64)	-.1322 (17.31)	-.1205 (15.27)	114,012
12. Active & vigorous	-.1907 (24.36)	-.1705 (22.46)	-.1583 (20.20)	114,508
13. I am free to decide	-.0469 (6.67)	-.0367 (5.33)	-.0285 (4.01)	79,753
c) Positive affect part 2				
14. Satisfied education	-.1453 (11.25)	-.1323 (10.55)	-.0318 (2.60)	138,311
15. Satisfied living standards	-.0985 (7.90)	-.0513 (4.44)	-.0226 (1.93)	139,618
16. Satisfied family life	-.0700 (6.04)	-.0402 (3.53)	-.0602 (5.09)	138,600
d) Positive affect part 3				
17. Life satisfaction	-.0663 (5.64)	-.0142 (1.29)	-.0077 (0.68)	139,831
18. Happiness	-.0532 (4.97)	-.0125 (1.23)	-.0107 (1.02)	139,258

Column 1 gender only. Column 2 adds wave country age and its square. Column 3 adds education and labor force status. Positive affect part 1 and left out and complicated missing in wave 1. Seldom enjoy, complicated and decide only in waves 2 & 3. N refers to final column with full controls

Table 8. European Values Survey, 1981-2021

			N
Life satisfaction (1-5)	-.0063 (0.68)	-.0027 (0.28)	222,843
Happiness (1-5)	.0041 (1.46)	.0012 (0.41)	218,260
Trust (1-5)	-.0133 (6.93)	-.0049 (2.39)	214,352
Satisfaction with political system (5)	-.0329 (1.67)	-.0365 (1.81)	57,224
Satisfaction with home life (1-2)	-.1027 (6.36)	-.1231 (6.91)	56,706
Satisfaction with financial situation (1-2)	-.0990 (4.97)	-.0754 (3.44)	55,332
Excited (1-2)	-.0322 (7.85)	-.0095 (2.12)	57,231
Pleased (1-2)	-.0175 (4.90)	-.0043 (1.09)	57,178
Going your way (1-2)	-.0217 (5.42)	-.0149 (3.37)	57,066
Restless (1-2)	+.0280 (7.38)	+.0262 (6.24)	57,212
Lonely (1-2)	+.0558 (18.23)	+.0516 (15.24)	57,162
Bored. (1-2)	+.0236 (6.78)	+.0166 (4.34)	57,175
Depressed or very unhappy (1-2)	+.0819 (25.00)	+.0772 (21.28)	57,140
Upset as criticized (1-2)	+.0280 (8.68)	+.0291 (8.15)	56,163

Controls: column 1 year and country; column 2 adds age and its square and labor force status. (1-2) means asked in sweeps 1 and 2; 1-5 in sweeps 1 through 5; and 5 just in the final sweep.

	Life	Happy	N
1981-1984	-.0198 (0.66)	.0103 (1.22)	19,319
1990-1993	-.0556 (2.62)	.0001 (0.02)	37,916
1999-2001	-.0176 (0.80)	-.0072 (1.05)	40,842
2008-2010	-.0282 (1.59)	-.0042 (0.80)	65,772
2017-2021	.0337 (2.00)	.0153 (2.87)	58,994
All	-.0063 (0.68)	.0041 (1.46)	222,843

Controls: wave, country

Table 9. International Social Survey Programme (ISSP), 2017

Life satisfaction	-.0252 (2.29)	-.0215 (1.92)	43,722
Easy to accomplish goals	-.0922 (6.86)	-.0772 (5.70)	42,644
Unhappy and depressed	+.1568 (16.51)	+.1550 (16.19)	43,679
Difficulties piling up	+.1275 (13.13)	+.1259 (12.89)	43,213
Often isolated	+.0508 (5.46)	+.0515 (5.37)	43,558
Left out	+.0515 (5.92)	+.0490 (5.59)	43,399
Lacking companionship	+.0928 (9.47)	+.0906 (9.17)	43,664

Controls column 1 country; column 2 adds age and its square and labor force status
Sample size refers to no controls.

Table 10. Gallup World Poll and US Daily Tracker

a) Gallup World Poll, 2005-2023

	Cantril	Happy	Future life	Enjoy	Rested
No controls	+.1069 (35.78)	+.0066 (6.54)	+.0797 (24.96)	-.0028 (4.74)	-.0191 (32.13)
+country & year	+.0744 (27.43)	+.0024 (2.45)	+.0859 (28.14)	-.0086 (15.00)	-.0185 (31.32)
+ age & education	+.1142 (41.87)	+.0058 (5.83)	+.1218 (40.62)	-.0050 (8.61)	-.0172 (25.43)
+labor force status	+.1575 (50.75)	+.0080 (6.99)	+.1701 (51.29)	-.0004 (0.65)	-.0338 (51.06)
N (no controls)	2,546,826	809,427	2,355,446	2,481,594	2,484,776

	Sad	Stress	Pain	Worry	Depress
No controls	+.0512 (95.68)	+.0194 (31.84)	+.0464 (79.70)	+.0390 (64.58)	.0185 (21.02)
+country & year	+.0533 (100.46)	+.0242 (40.47)	+.0512 (88.82)	+.0381 (59.74)	.0217 (24.76)
+ age & education	+.0491 (91.23)	+.0230 (37.98)	+.0460 (79.74)	+.0363 (59.21)	.0185 (19.66)
+labor force status	+.0454 (76.06)	+.0366 (55.11)	+.0438 (68.12)	+.0389 (56.74)	.0125 (8.51)
N	2,486,319	2,382,850	2,492,070	2,489,700	603,773

b) US Daily Tracker, 2008-2017

	Cantril	Happy	Future life	Enjoy	Rested
No controls	+.1763 (72.10)	+.0036 (9.18)	+.0746 (122.70)	-.0083 (19.40)	-.0533 (83.88)
+state & year	+.1788 (73.31)	+.0038 (9.39)	+.0798 (27.42)	-.0082 (19.18)	-.0532 (83.75)
& age & education	+.1676 (68.97)	+.0046 (11.41)	+.2264 (80.93)	-.0097 (22.40)	-.0666 (104.33)
+labor force status	+.2152 (76.86)	+.0115 (23.85)	+.2787 (85.62)	-.0024 (4.64)	-.0634 (78.71)
N	2,575,018	2,471,327	2,461,118	2,630,634	1,941,025

	Sad	Stress	Pain	Worry	Depress
No controls	+.0579 122.70)	+.0367 (75.47)	+.0407 (77.36)	+.0421 (75.47)	.0825 (169.17)
+state & year	+.0576 (122.32)	+.0422 (75.58)	+.0405 (77.03)	+.0422 (75.58)	.0821 (168.60)
& age & education	+.0568 (119.38)	+.0369 (62.33)	+.0315 (59.98)	+.0542 (96.58)	.0837 (170.03)
+labor force status	+.0451 (79.71)	+.0646 (93.49)	+.0129 (19.89)	+.0478 (72.54)	.0669 (125.09)
N	2,474,473	2,634,329	2,634,245	2,634,628	2,278,145

LF status only available from 2010. Depress only available in GWP 2005-2011 with labor force status n=214,572. N refers to no controls sample size. Rested in USDT in 2008-2013 waves only. T-statistics in parentheses.

Means	World Poll		Daily Tracker	
	Male	Female	Male	Female
Depress	.125	.144	.122	.204
Sadness	.205	.256	.137	.195
Stress	.317	.336	.345	.381
Worry	.354	.391	.268	.311
Pain	.278	.325	.220	.260
Enjoy	.703	.700	.863	.855
Cantril	5.46	5.57	6.93	7.11
Happy	.701	.708	.886	.889
Rested	.689	.670	.757	.704
Future life	6.80	6.88	7.50	7.58

Table 11. Time series estimates of female effects using Cantril and enjoy - Gallup World Poll and US Daily Tracker

a) World Poll	Cantril	Enjoy	N	Adjusted R^2
2005	+.1856 (7.67)	-.0041 (0.80)	27,385	.1697
2006	+.0253 (2.00)	-.0074 (2.57)	93,859	.2292
2007	+.0594 (5.07)	-.0027 (0.99)	110,270	.2099
2008	+.0381 (3.49)	-.0084 (3.21)	119,763	.2606
2009	+.0463 (4.36)	-.0126 (5.18)	136,539	.1966
2010	+.0285 (2.89)	-.0091 (3.98)	154,664	.2298
2011	+.0331 (3.66)	-.0090 (4.32)	188,195	.2391
2012	+.0712 (8.43)	-.0064 (3.40)	223,543	.2309
2013	+.0484 (4.44)	-.0100 (4.20)	142,115	.2323
2014	+.0827 (8.46)	-.0092 (3.93)	182,598	.2386
2015	+.0651 (5.82)	-.0106 (4.56)	151,101	.1974
2016	+.0650 (5.78)	-.0103 (4.41)	149,485	.2161
2017	+.0902 (7.71)	-.0058 (2.45)	150,335	.2070
2018	+.1215 (10.11)	-.0066 (2.81)	148,628	.1809
2019	+.1549 (12.67)	-.0060 (2.63)	159,720	.1634
2020	+.1369 (10.81)	-.0073 (2.89)	124,667	.2002
2021	+.0726 (5.72)	-.0136 (5.59)	134,377	.1870
2022	+.1246 (9.938)	-.0085 (3.57)	143,897	.2061
All	+.0744 (27.43)	-.0086 (15.00)	2,481,594	.1858

b) US Daily Tracker				
2008	+.0602 (8.74)	-.0155 (13.13)	352,509	.0040
2009	+.1650 (23.28)	-.0111 (9.33)	352,722	.0032
2010	+.2034 (30.97)	-.0092 (7.80)	351,211	.0043
2011	+.2253 (34.48)	-.0081 (6.84)	351,874	.0047
2012	+.2636 (40.52)	-.0056 (4.81)	351,731	.0058
2013	+.2081 (22.31)	-.0073 (4.38)	177,132	.0038
2014	+.1963 (20.79)	-.0012 (0.73)	175,788	.0040
2015	+.1578 (17.00)	-.0038 (2.29)	176,486	.0029
2016	+.1826 (19.90)	-.0054 (3.34)	176,437	.0036
2017	+.0888 (9.27)	-.0071 (4.09)	159,817	.0016
All	+.1788 (73.31)	-.0082 (19.18)	2,575,018	.0083

With country/state controls and year dummies for the overall equations. Sample size and R2 relate to Cantril. T-statistics in parentheses.

Table 12. Full controls. US Daily Tracker

	Enjoy	Happy	Worry
Female	**-.0026 (5.02)**	**+.0112 (23.12)**	**+.0476 (72.25)**
Age	-.0072 (92.20)	-.0069 (92.92)	.0100 (98.99)
Age squared	.0001 (104.00)	.0001 (98.73)	-.0001 (127.79)
#children	.0038 (14.56)	.0073 (29.26)	.0020 (6.01)
Self-employed FT	.0205 (17.41)	.0099 (8.74)	.0573 (37.54)
PT, Does Not Want FT	.0254 (24.99)	.0112 (11.55)	-.0131 (9.93)
Unemployed	-.0613 (46.17)	-.0709 (56.91)	.1772 (3.10)
PT wants FT	-.0307 (25.30)	-.0372 (32.33)	.1201 (76.52)
Not in Work Force	-.0467 (67.16)	-.0510 (77.29)	.0619 (68.70)
High school diploma	.0776 (65.27)	.0612 (54.22)	-.0725 (47.17)
Tech/Voc school	.0823 (55.46)	.0657 (47.06)	-.0597 (31.12)
Some college	.0973 (83.05)	.0763 (68.62)	-.0704 (46.48)
College graduate	.1193 (99.99)	.0936 (82.61)	-.0876 (56.79)
Postgraduate	.1304 (7.08)	.0994 (86.00)	-.0904 (57.45)
2010	-.0062 (2.27)	-.0006 (0.24)	-.0023 (0.66)
2011	-.0092 (3.36)	-.0013 (0.53)	.0026 (0.74)
2012	-.0044 (1.62)	.0036 (1.45)	-.0008 (0.21)
2013	-.0104 (3.74)	-.0030 (1.20)	-.0070 (1.95)
2014	-.0044 (1.59)	.0006 (0.25)	-.0149 (4.13)
2015	-.0040 (1.45)	.0011 (0.42)	-.0168 (4.67)
2016	-.0041 (1.49)	.0044 (1.74)	-.0173 (4.80)
2017	-.0085 (3.05)	.0177 (2.09)	.0103 (2.85)
AL	-.0252 (5.15)	-.0158 (3.40)	.0218 (3.44)
AR	-.0285 (5.59)	-.0197 (4.08)	.0260 (3.93)
AZ	-.0207 (4.30)	-.0138 (3.05)	.0294 (4.72)
CA	-.0297 (6.48)	-.0242 (5.59)	.0458 (7.71)
CO	-.0203 (4.19)	-.0146 (3.18)	.0261 (4.16)
CT	-.0394 (7.74)	-.0289 (6.02)	.0483 (7.34)
DC	-.0313 (4.53)	-.0302 (4.58)	.0463 (5.17)
DE	-.0292 (4.53)	-.0180 (2.97)	.0216 (2.60)
FL	-.0329 (7.09)	-.0267 (6.09)	.0349 (5.81)
GA	-.0195 (4.11)	-.0152 (3.39)	.0090 (1.47)
HI	.0047 (0.74)	.0015 (0.24)	-.0043 (0.52)
IA	-.0078 (1.56)	-.0056 (1.17)	.0011 (0.18)
ID	-.0134 (2.49)	-.0025 (0.50)	.0448 (6.42)
IL	-.0229 (4.84)	-.0203 (4.55)	.0323 (5.28)
IN	-.0258 (5.37)	-.0222 (4.87)	.0272 (4.36)
KS	-.0153 (2.97)	-.0125 (2.58)	.0134 (2.01)
KY	-.037 (17.53)	-.0299 (6.42)	.0583 (9.12)
LA	-.0238 (4.78)	-.0131 (2.78)	.0249 (3.86)

MA	-.0434 (8.97)	-.0325 (7.10)	.0612 (9.77)
MD	-.0354 (7.26)	-.0299 (6.49)	.0302 (4.78)
ME	-.0250 (4.54)	-.0190 (3.67)	.0286 (4.02)
MI	-.0234 (4.93)	-.0183 (4.07)	.0206 (3.35)
MN	-.0060 (1.23)	-.0018 (0.40)	-.0058 (0.93)
MO	-.0227 (4.68)	-.0190 (4.14)	.0219 (3.49)
MS	-.0189 (3.63)	-.0117 (2.39)	.0134 (1.98)
MT	-.0110 (1.99)	-.0031 (0.60)	.0255 (3.56)
NC	-.0190 (4.02)	-.0122 (2.73)	.0194 (3.18)
ND	-.0043 (0.67)	.0026 (0.43)	-.0114 (1.37)
NE	-.0105 (1.97)	-.0045 (0.90)	.0072 (1.04)
NH	-.0303 (5.28)	-.0200 (3.68)	.0400 (5.38)
NJ	-.0472 (9.86)	-.0353 (7.81)	.0568 (9.17)
NM	-.0203 (3.86)	-.0202 (4.04)	.0302 (4.42)
NV	-.0300 (5.66)	-.0273 (5.43)	.0349 (5.09)
NY	-.0477 (1.26)	-.0406 (9.24)	.0531 (8.84)
OH	-.0292 (6.21)	-.0227 (5.10)	.0346 (5.67)
OK	-.0269 (5.44)	-.0197 (4.22)	.0255 (3.98)
OR	-.0161 (3.28)	-.0093 (2.01)	.0399 (6.29)
PA	-.0284 (6.10)	-.0225 (5.12)	.0274 (4.54)
RI	-.0402 (6.51)	-.0342 (5.87)	.0477 (5.98)
SC	-.0168 (3.39)	-.0070 (1.50)	.0068 (1.07)
SD	-.0098 (1.56)	.0020 (0.34)	-.0077 (0.95)
TN	-.0250 (5.21)	-.0159 (3.50)	.0294 (4.73)
TX	-.0206 (4.47)	-.0151 (3.45)	.0220 (3.69)
UT	-.0083 (1.65)	.0013 (0.28)	.0627 (9.56)
VA	-.0247 (5.20)	-.0181 (4.03)	.0197 (3.21)
VT	-.0281 (4.47)	-.0238 (4.02)	.0346 (4.26)
WA	-.0179 (3.75)	-.0131 (2.90)	.0308 (5.00)
WI	-.0153 (3.18)	-.0089 (1.95)	.0102 (1.63)
WV	-.0433 (8.01)	-.0350 (6.88)	.0628 (8.98)
WY	-.0135 (2.12)	-.0100 (1.67)	.0217 (2.64
_cons	.9476	.9885	.1360
Adjusted R^2	.0192	.0177	.0338
N	1,907,103	1,750,773	1,909,525

Excluded categories AK, less than high school, employee FT. T-statistics in parentheses.

Table 13. Full controls. Gallup World Poll, 2008-2013

	Enjoy	Happy	Worry
Female	**-.0019 (1.68)**	**+.0146 (12.41)**	**+.0308 (25.08)**
Age	-.0063 (41.23)	-.0063 (41.82)	.0079 (48.41)
Age squared * 100	.0041 (24.83)	.0043 (26.53)	-.0001 (39.89)
Children age <15 present	.0002 (2.40)	.0001 (1.72)	.0003 (3.11)
Self-employed FT	.0098 (4.92)	.0154 (7.89)	.0087 (4.15)
PT, Does Not Want FT	.0099 (4.11)	.0117 (4.98)	-.0110 (4.34)
Unemployed	-.0739 (28.74)	-.0841 (33.32)	.1109 (40.81)
PT wants FT	-.0223 (8.96)	-.0218 (8.90)	.0463 (17.64)
Not in Work Force	-.0084 (5.37)	-.0069 (4.46)	-.0022 (1.33)
Secondary completed	.0628 (44.71)	.0538 (3.95)	-.0397 (26.66)
College	.0992 (50.56)	.0844 (43.84)	-.0533 (25.74)
2010	-.0008 (0.42)	.0109 (5.70)	-.0079 (3.79)
2011	-.0122 (6.49)	-.0066 (3.58)	.0098 (5.03)
2012	-.0139 (7.62)	-.0018 (1.01)	.0290 (15.22)
2013	.0397 (5.98)	.0354 (5.45)	.0458 (6,62)
_cons	.8555	.8431	.1401
Adjusted R^2	.0767	.0973	.0626
N	624,518	632,448	611,520

Also includes 153 country dummies.
Excluded categories AK, less than high school, employee FT. T-statistics in parentheses.
Sample consists of years happiness available.

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Chart 1. Life satisfaction by gender in Eurobarometers, 1991-2022
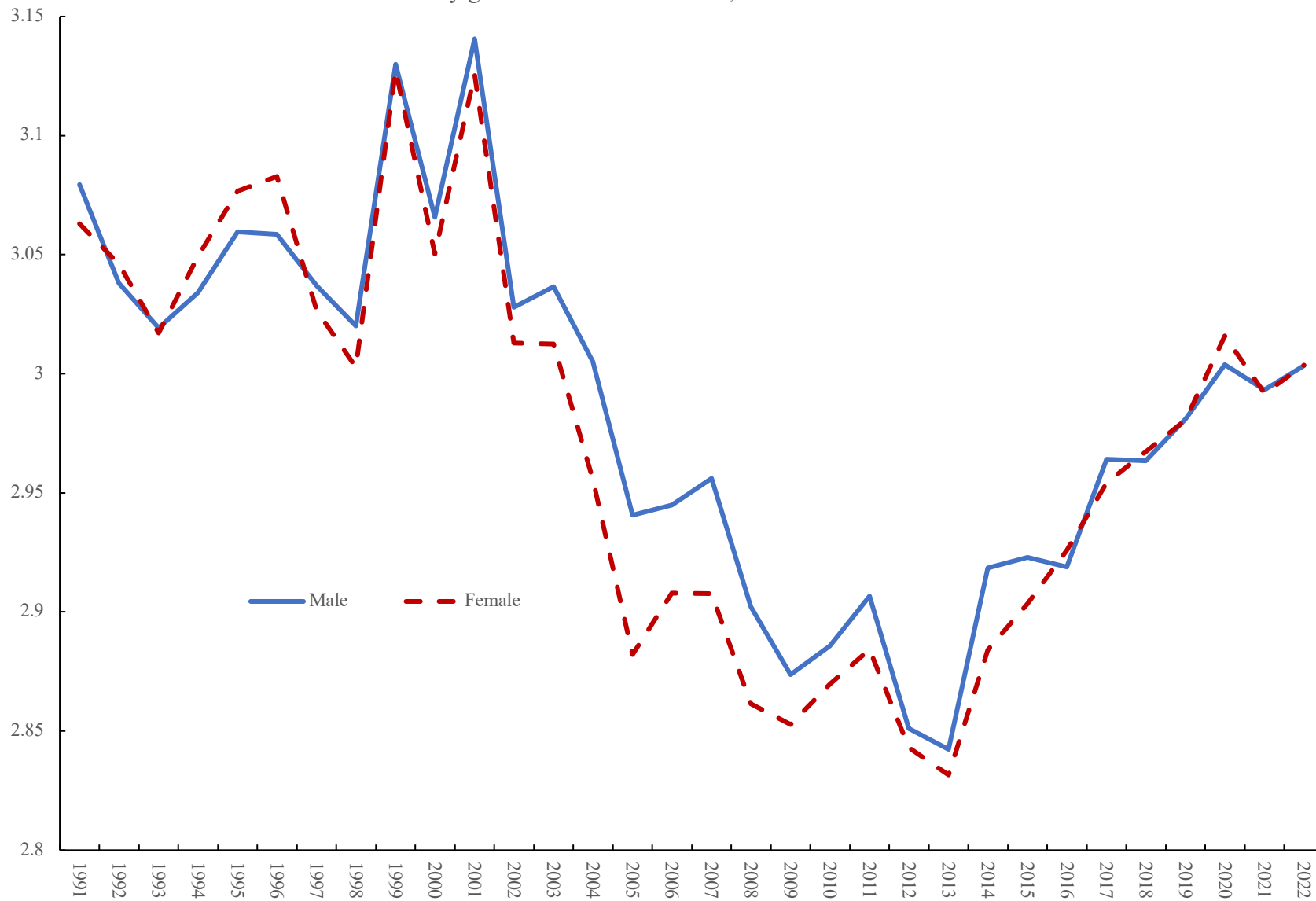
Chart 2. GSS Happiness and satisfaction with financial situation by gender, 1972-2021
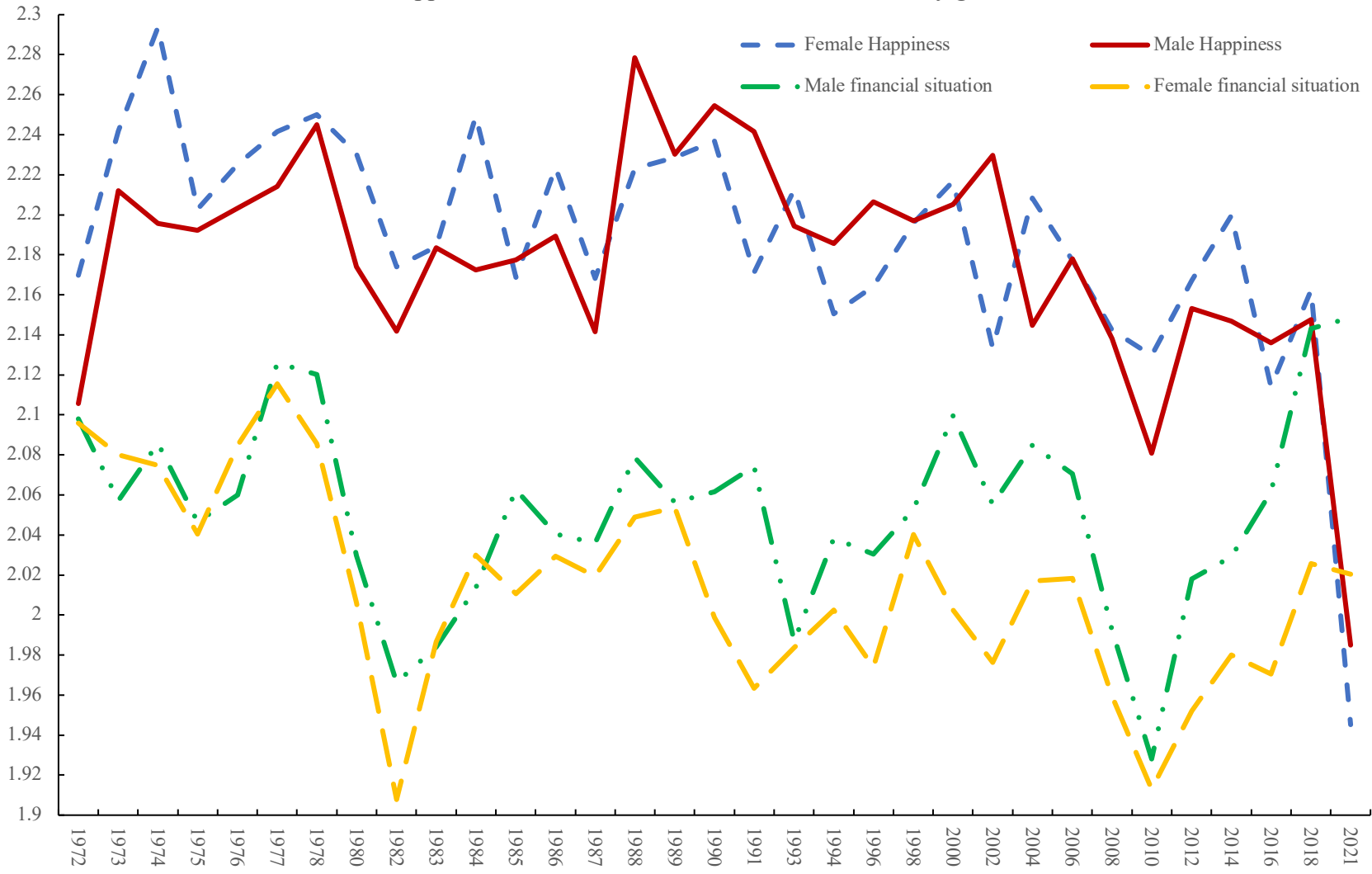
Appendix Table 1. Suicide rates /100,000 for 2020

	Men	Women
European Union - 27	16.85	4.48
Belgium	23.16	8.11
Bulgaria	14.14	3.07
Czechia	20.50	3.92
Denmark	14.93	5.58
Germany	16.60	4.84
Estonia	29.32	6.31
Ireland	14.18	5.20
Greece	6.86	1.51
Spain	12.46	3.91
France	21.84	6.38
Croatia	22.89	5.51
Italy	9.38	2.29
Cyprus	5.36	1.64
Latvia	29.93	4.74
Lithuania	38.00	8.02
Luxembourg	16.66	4.43
Hungary	30.39	7.18
Malta	5.06	2.72
Netherlands	14.51	6.65
Austria	19.89	4.91
Poland	21.95	3.01
Portugal	14.90	3.37
Romania	16.64	2.38
Slovenia	29.70	6.19
Slovakia	13.09	1.78
Finland	19.55	6.85
Sweden	17.30	6.73
Iceland	16.21	8.53
Liechtenstein	22.59	9.44
Norway	17.50	6.47
Switzerland	16.95	6.23
Serbia	21.15	5.58

Source: Eurostat
https://ec.europa.eu/eurostat/databrowser/view/tps00122/default/table?lang=en

Appendix Table 2. 167 country regressions using Gallup World Poll, 2005-2021 controls=wave age and its square - 0=insignificant +=significantly positive -=significantly negative (t>1.65)

	Cantril	Enjoy	Well rested	Pain	Sad	Worry
All	+	-	-	+	+	+
Afghanistan	0	-	-	+	+	+
Albania	+	0	-	+	+	+
Algeria	+	+	+	+	+	-
Angola	+	0	+	0	+	0
Argentina	+	0	-	+	+	+
Armenia	0	-	-	+	+	+
Australia	+	0	-	+	+	+
Austria	+	-	-	+	+	+
Azerbaijan	0	+	+	-	+	+
Bahrain	+	-	-	+	+	+
Bangladesh	+	0	+	+	+	+
Belarus	0	-	+	+	+	+
Belgium	0	-	-	+	+	+
Belize	0	-	-	0	0	0
Benin	-	-	0	0	+	+
Bhutan	0	0	+	+	+	+
Bolivia	-	-	-	+	+	+
Bosnia Herzegovina	0	0	-	+	+	+
Botswana	-	0	+	+	+	0
Brazil	+	-	-	+	+	+
Bulgaria	-	0	-	+	+	+
Burkina Faso	0	0	+	+	+	0
Burundi	-	0	0	+	+	+
Cambodia	-	-	-	+	0	0
Cameroon	+	0	0	+	+	-
Canada	+	-	-	+	+	+
Central African Republic	0	-	0	0	+	0
Chad	-	-	-	+	+	+
Chile	0	-	-	+	+	+
China	+	+	-	+	+	-
Colombia	+	-	-	+	+	+
Comoros	+	-	0	+	+	+
Congo Brazzaville	0	-	0	+	+	+
Congo Kinshasa	0	0	0	+	+	+
Costa Rica	+	-	-	+	+	+
Croatia	0	0	-	+	+	+
Cuba	0	0	0	+	+	+
Cyprus	+	-	-	+	+	+
Czech Republic	0	+	-	0	+	+
Denmark	+	+	-	+	+	+
Djibouti	0	0	0	0	0	0
Dominican Republic	+	-	-	+	+	+

Country						
Ecuador	-	-	-	+	+	+
Egypt	+	0	0	+	+	+
El Salvador	+	-	-	+	+	+
Estonia	+	+	-	+	+	+
Eswatini	+	0	0	+	0	+
Ethiopia	+	-	0	+	+	0
Finland	+	+	-	+	+	+
France	0	0	-	+	+	+
Gabon	0	-	-	+	+	+
Gambia	+	0	0	+	0	-
Georgia	0	-	-	+	+	+
Germany	0	-	-	+	+	+
Ghana	-	-	0	+	+	+
Greece	0	-	-	+	+	+
Guatemala	+	-	-	+	+	+
Guinea	0	-	0	+	+	0
Guyana	0	0	0	0	0	0
Haiti	0	-	-	+	+	0
Honduras	+	-	0	+	+	+
Hong Kong	+	0	-	+	+	0
Hungary	-	0	-	+	+	+
Iceland	+	+	-	+	+	+
India	-	-	+	+	+	+
Indonesia	+	+	+	0	+	0
Iran	+	+	+	+	+	+
Iraq	+	-	0	+	+	+
Ireland	+	0	-	0	+	+
Israel	-	0	-	+	+	+
Italy	-	0	-	+	+	+
Ivory Coast	+	0	0	0	+	0
Jamaica	0	-	-	+	+	+
Japan	+	+	-	+	+	0
Jordan	+	0	+	+	+	0
Kazakhstan	-	0	-	+	+	+
Kenya	+	0	0	+	+	0
Kosovo	+	0	-	+	+	+
Kuwait	+	0	0	+	+	+
Kyrgyzstan	0	0	-	+	+	+
Laos	0	+	0	0	+	+
Latvia	+	+	-	+	+	+
Lebanon	+	-	0	+	+	+
Lesotho	+	0	0	+	0	0
Liberia	-	0	+	0	+	+
Libya	+	-	-	+	+	+
Lithuania	0	+	-	0	+	+
Luxembourg	-	0	-	+	+	+

Madagascar	0	-	0	+	+	+
Malawi	-	-	0	+	0	+
Malaysia	+	+	0	0	+	+
Mali	0	-	0	+	+	0
Malta	-	-	-	+	+	+
Mauritania	-	0	+	-	0	0
Mauritius	+	-	-	+	+	+
Mexico	0	0	-	+	+	+
Moldova	0	+	-	+	+	+
Mongolia	+	+	0	+	+	+
Montenegro	+	-	-	+	+	+
Morocco	+	-	0	+	+	+
Mozambique	-	-	0	+	+	-
Myanmar	+	0	+	+	+	+
Nagorno Karabakh	0	-	-	0	+	+
Namibia	0	-	0	0	+	0
Nepal	+	0	+	0	0	+
Netherlands	0	-	-	+	+	+
New Zealand	+	-	-	0	+	+
Nicaragua	+	-	-	+	+	+
Niger	+	0	+	0	0	0
Nigeria	0	0	+	0	0	-
North Macedonia	0	-	-	+	+	+
Northern Cyprus	+	-	-	0	+	+
Norway	+	+	-	+	+	+
Oman	0	0	0	+	+	+
Pakistan	+	-	+	+	+	+
Palestine	+	+	+	+	+	+
Panama	0	-	-	+	+	+
Paraguay	+	0	0	+	+	+
Peru	0	-	-	+	+	+
Philippines	+	0	-	0	+	+
Poland	0	+	-	+	+	+
Portugal	-	-	-	+	+	+
Puerto Rico	0	0	-	0	+	+
Qatar	+	0	0	+	+	+
Romania	0	-	-	+	+	+
Russia	+	0	-	+	+	+
Rwanda	-	-	0	+	+	+
Saudi Arabia	+	0	+	+	+	+
Senegal	+	0	+	0	+	0
Serbia	0	0	-	+	+	+
Sierra Leone	0	0	0	0	0	0
Singapore	+	+	-	+	0	0
Slovakia	0	+	-	+	+	+
Slovenia	0	-	0	+	+	+

Somalia	0	0	+	+	0	+
Somaliland	-	-	0	+	+	+
South Africa	0	-	0	+	+	+
South Korea	+	+	-	+	+	+
South Sudan	-	0	0	+	+	+
Spain	0	-	-	+	+	+
Sri Lanka	+	0	+	+	+	+
Sudan	+	+	+	0	0	-
Suriname	0	0	0	0	0	0
Sweden	+	+	-	+	+	+
Switzerland	0	0	-	+	+	+
Syria	+	0	0	0	0	0
Taiwan	+	+	-	+	+	0
Tajikistan	-	-	-	+	+	+
Tanzania	0	-	0	+	+	+
Thailand	+	0	-	+	+	+
Togo	-	0	+	0	+	0
Trinidad and Tobago	+	0	0	+	+	+
Tunisia	+	0	+	+	+	+
Turkey	+	-	-	+	+	+
Turkmenistan	+	0	+	0	0	0
Uganda	0	-	0	+	+	+
Ukraine	-	0	-	+	+	+
United Arab Emirates	+	-	-	+	+	+
United Kingdom	+	0	-	+	+	+
United States	+	-	-	+	+	+
Uruguay	+	-	-	+	+	+
Uzbekistan	+	-	-	+	+	+
Venezuela	+	-	-	+	+	+
Vietnam	0	-	-	+	+	+

Summary	Zeroes	+	-
Cantril	57	82	28
Enjoy	66	27	74
Well rested	46	27	70
Pain	30	135	2
Sad	20	147	-
Worry	31	128	8