

NBER WORKING PAPER SERIES

WHY IS THE MENTAL HEALTH OF  
THE YOUNGEST AMERICAN WORKERS IN DECLINE?

David G. Blanchflower  
Alex Bryson

Working Paper 34696  
<http://www.nber.org/papers/w34696>

NATIONAL BUREAU OF ECONOMIC RESEARCH  
1050 Massachusetts Avenue  
Cambridge, MA 02138  
January 2026

We thank Alan J. Cui for helpful research assistance. The views expressed herein are those of the authors and do not necessarily reflect the views of the National Bureau of Economic Research.

At least one co-author has disclosed additional relationships of potential relevance for this research. Further information is available online at <http://www.nber.org/papers/w34696>

NBER working papers are circulated for discussion and comment purposes. They have not been peer-reviewed or been subject to the review by the NBER Board of Directors that accompanies official NBER publications.

© 2026 by David G. Blanchflower and Alex Bryson. All rights reserved. Short sections of text, not to exceed two paragraphs, may be quoted without explicit permission provided that full credit, including © notice, is given to the source.

Why is the Mental Health of the Youngest American Workers in Decline?

David G. Blanchflower and Alex Bryson

NBER Working Paper No. 34696

January 2026

JEL No. I31, J28

### **ABSTRACT**

The worsening mental health of young workers in the United States drives the disappearance of the U-shape in wellbeing and the hump-shape in illbeing in the last decade. Illbeing declines in age among workers but is hump-shaped among non-workers across all US states. This has been the case for some time and is apparent in our analyses of two large US datasets with long time runs - the Behavioral Risk Survey System 1993-2025 and the National Health Interview Survey of 1997-2024. Although the mental health of workers and non-workers has been declining it has been deteriorating most quickly among young workers, leading to a steepening in the age gradient of mental illbeing for workers. Improvements in worker wellbeing (and declines in worker illbeing) with age are mirrored in age differences in reported working conditions in the American Job Quality Survey of 2025: six measures of job quality rise with age. Declines in mental health are most pronounced among the youngest workers ages 18-22 who are likely drawn from lower socio-economic classes and report the greatest difficulties making ends meet.

David G. Blanchflower  
Dartmouth College  
Department of Economics  
and Adam Smith School of Business,  
University of Glasgow  
and also NBER  
blanchflower@dartmouth.edu

Alex Bryson  
University College London  
a.bryson@ucl.ac.uk

An online appendix is available at <http://www.nber.org/data-appendix/w34696>

## ***1. Introduction<sup>1</sup>***

In the forty-year period from around 1980 through around 2020 there was overwhelming evidence from a literature of over 625 published papers that there was a U-shape in age in wellbeing and a hump-shape in illbeing (Blanchflower, Graham and Piper, 2023). The U-shape existed in wellbeing on many measures including life satisfaction and happiness in 145 countries (Blanchflower, 2021).

Analogously hump shapes in unhappiness existed in many countries (Blanchflower, 2020). That is to say that the young were particularly happy and there was a mid-life crisis such that those around age fifty were the least happy. However, there is mounting evidence that this empirical regularity has changed in a process that began over a decade ago.

The evidence for change is most compelling in English-speaking countries including the United States. Blanchflower, Bryson and Xu (2024), for example, first showed that for the United States and the United Kingdom the mental health of the young started to deteriorate from around 2013 or so, well before COVID and its associated lockdowns in 2020. COVID did not cause the crisis but exacerbated it. Twenge and Blanchflower (2024) report comparable evidence for six English speaking countries.

In seeking to explain the phenomenon, analysts have emphasized the damaging impact of social media on young people's mental health (Haidt 2024; Twenge, 2023), in part because its spread appears to have coincided with the changes in the age profile of illbeing, and because there is growing compelling evidence of a causal impact of social media on young people's mental health including from experimental studies (Pugno 2025).

These early papers overlooked the potential impact that paid work might be having on individuals' wellbeing. But in a recent paper Blanchflower and Bryson (2025) showed the change in the age profile of mental ill-health in the United States was driven primarily by a deterioration in the wellbeing of young workers under the age of 25, especially females. The paper indicated that the illbeing of non-workers continued to be hump-shaped, whereas declining illbeing of workers with age – which had always been a feature – became more pronounced recently. In seeking to establish what, if anything, may have changed in the nature of work to lead young workers to feel greater despair recently, the authors examined the pay of young people relative to older workers. But this had remained stable over time, suggesting this was not the primary driver of the change.

Other factors might be at play. Feiveson (2024) has noted, the relative prices of housing and childcare have risen, making it increasingly tough for young people and young families to make ends meet and get on the housing ladder. Twenge (2023a) has documented that young people are more anxious and depressed than earlier generations, prefer experiences over material possessions, date less, have less sex, say they want children less sleep less and have fewer friends. They are less likely as high school students to have had a job or a driver's license.

Selection into employment may have also changed over time, perhaps with young people with mental health problems having a greater probability of being in employment than in the past. Certainly, it is the case that employment rates of those aged under-25 rose over the period in

---

<sup>1</sup> By 'youngest' we mean ages 18-22.

question. According to the Bureau of Labor Statistics (<https://data.bls.gov/PDQWeb/ln>) the employment rate for those ages 16 to 24 rose over the period 2010-2025 as follows - 2010=45.0%; 2011=45.5%; 2012=46.0%; 2013=46.5%; 2014=47.7%; 2015=48.6%; 2016=49.4%; 2017=50.3%; 2018=50.5%; 2019=51.2%; 2020=46.0%; 2021=50.1%; 2022=51.1%; 2023=51.8%; 2024=50.9%; 2025=50.1%. For ages 18-19 it rose from 37.2% in 2010 to 41.0% in November 2025. With employment rates rising among the young, it is feasible that young people with poor mental health may be increasingly likely to be employed rather than non-employed.<sup>2</sup>

Difficulties obtaining a ‘good’ job may vary with cohort size. A large cohort tends to make it harder to assimilate into the labor market (Ochsen, 2021, and Korenman and Neumark, 2000). However, the size of the youth cohort in the United States is not especially large, according to the Census International Database. In 2025 there were 21,964,688 individuals in the age 18-22 cohort which is smaller than the five-year cohorts (i.e. ages 23-27; 28-32; 33-37; 38-42) that preceded it.

There are at least two other possible reasons for the declining mental health of young workers. One is that non-pecuniary job quality has deteriorated over time in the jobs that young people are most likely to perform. We are unable to examine change in non-pecuniary job quality over time, but we can examine perceptions of job quality in 2025. The second is that young people’s orientation to the same work has changed. Certainly, some have put forward the idea that young people’s motivation and commitment to paid employment has changed over time, suggesting they derive less utility from it than they may have done in the past (Twenge, 2023). If so, this may impact their mental health.

In this paper we examine individual level data from two major surveys for the United States - the Behavioral Risk Survey System (BRFSS) data 1993-2025 ([https://www.cdc.gov/brfss/annual\\_data/annual\\_data.htm](https://www.cdc.gov/brfss/annual_data/annual_data.htm)) and the National Health Interview Survey (NHIS) 1997-2024 (<https://www.cdc.gov/nchs/nhis/index.html>) to shed further light on trends in wellbeing and illbeing among workers and non-workers in the United States by age. We match in local labor market data from MSAs for 2013-2023 ([https://www.cdc.gov/brfss/smart/Smart\\_data.htm](https://www.cdc.gov/brfss/smart/Smart_data.htm)) to establish what role, if any, is played by local unemployment. And we also make use of data from the American Job Quality Study of 2025 (<https://www.gallup.com/analytics/691241/american-job-quality-study.aspx>) to examine age patterns in perceived job quality at the end of the period to see if there is any evidence consistent with younger people facing lower job quality.

We come to the following conclusions:

- a) The rise in illbeing and fall in wellbeing is especially large for the *youngest* workers aged 18-22 over the last decade.
- b) Among workers, illbeing slopes down in age while wellbeing slopes upwards.

---

<sup>2</sup> The youth unemployment rate is especially volatile, rising especially fast in slumps and declining fast in booms (Freeman and Wise, 1981). There is recent evidence of slowing in 2025, with the number of unemployed increasing, by nearly a million, from January to November 2025. According to the Bureau of Labor Statistics the unemployment rate for ages 16-24 in the United States rose from 9.9% in May 2007 to a peak of 19.5% in April 2010 before falling sharply. It averaged 9.8% for the period 2015-2025. It has risen in 2025 from 9.0% in January to 10.6% in November. However, as we shall see, local unemployment rates are not strongly correlated with the mental ill-health of the young.

- c) Among non-workers, wellbeing is U-shaped in age and illbeing is hump shaped in age.
- d) In 2020-2025, across all 50 states and 10 major cities despair declined in age for workers and is broadly hump-shaped for non-workers. This is not the case for the District of Columbia.
- e) The broad pattern of illbeing being hump-shaped for non-workers and downward sloping for workers has remained largely unchanged over time. What has changed is the steepening of the gradient of the illbeing\*age slope for workers. This has resulted in the overall hump-shape documented in the past being replaced by a downward slope, driven by what has happened to young workers.
- f) Both workers and non-workers have seen increases in illbeing over time.
- g) State level and country level unemployment rates are positively correlated with the illbeing levels of non-workers but not workers.
- h) In 2025 perceptions of job quality captured across six different dimensions are lowest among the young.

The remainder of the paper is set out as follows. Section Two describes our data and estimation methods. Section Three reports results, and Section Four concludes.

## **2. Data and Estimation**

We begin by describing the main data sets used in the analysis, then briefly explain our analytical approach to the data.

### **2.1. National Health Interview Survey (NHIS), 1997-2024,**

The survey is conducted by the Centers for Disease Control and Prevention (CDC).<sup>3</sup> It is a probability sample that randomly selects participants from the U.S. population and is typically conducted face-to-face using computer-assisted personal interviewing (CAPI) which presents questions on computer screens to each interviewer.<sup>4</sup> The instrument guides the interviewer through the questionnaire, automatically routing the interviewer to appropriate questions based on answers to previous questions.<sup>5</sup>

The survey includes a Kessler-6 multi-item measure of mental distress, including symptoms of sadness and worthlessness.<sup>6</sup> In our analyses we use the combined Kessler negative affect score as a dependent variable. This scale, developed by Ronald C. Kessler and known as the Kessler 6 Scale (K6), asks about six manifestations of nonspecific psychological distress. Kessler recommends scoring the scale by assigning 0 to 4 points for each of the six questions, based on the reported frequency of the range.<sup>7</sup>

---

<sup>3</sup> <https://www.cdc.gov/nchs/nhis/index.html>

<sup>4</sup> There were 864 interviewers in 2023.

<sup>5</sup> Zajacova Grol-Prokopczyk and Nahin (2026) is a recent study that used these NHIS data to study pain.

<sup>6</sup> Participants were asked, “During the PAST 30 DAYS, how often did you feel ... Q1. so sad that nothing could cheer you up, Q2. nervous, Q3. restless or fidgety, Q4. hopeless, Q5. that everything was an effort, Q6. worthless. Response choices were recoded as: “all of the time” = 4, “most of the time” = 3, “some of the time” = 2, “little of the time” = 1, and “none of the time” = 0. The possible range of scores on the K6 was 0–24. Scores of 13 and over indicate serious mental distress and scores of 5 and over indicate moderate or serious mental distress.

<sup>7</sup> In Blanchflower and Bryson (2025) also examined Kessler scores in the National Survey of Drug Use and Health 2008-2023. Response choices were coded as 4 (all of the time), 3 (most of the time), 2 (some of the time), 1 (little of

The range for summed responses on the K6 Scale is thus 0 to 24, with 0 suggesting the lowest level of nonspecific psychological distress, and 24 suggesting the highest level of nonspecific psychological distress. According to the scoring criteria proposed by Kessler, persons with a score of 13 or greater are likely to be experiencing severe mental illness. This question was asked in annual surveys from 1997-2018, 2021 and 2024.

We also examine a question relating to the frequency of feelings about depression –  
*Q7. How often do you feel depressed? Would you say daily (=5), weekly (=4), monthly (=3), a few times a year (=2), or never?*

This question was asked from 2010-2022 and 2024.

We also examine two further questions which were only available in the 2024 survey – one on life satisfaction, the other on loneliness:

*Q8. "In general, how satisfied are you with your life? Are you very satisfied (=4), satisfied, (=3) dissatisfied (=2), or very dissatisfied (=1)?*

*Q9. How often do you feel lonely? Would you say always (=5), usually (=4), sometimes (=3), rarely (=2), or never (=1)?*

By way of background, there is a big rise in illbeing of young workers on both the Kessler and depression scores, from the period 1993-2021 and the most recent 2024 survey, as shown below with weights imposed. There is little evidence of any change for older age groups as the table below illustrates.

	Kessler		Depressive frequency	
	1993-2021	2024	2010-2022	2024
18-22	2.67	3.61	1.84	1.93
23-29	2.44	3.53	1.78	1.97
30-39	2.25	2.84	1.67	1.77
40-49	2.10	2.33	1.61	1.66
50-59	1.95	1.84	1.59	1.62
60-69	1.63	1.62	1.53	1.54

Consistently using four measures – Kessler, depression, life satisfaction and loneliness - in the NHIS we see that wellbeing now rises in age, driven by the declining wellbeing of young workers. This is consistent with evidence reported below from the BRFSS for the period 1993-2025, on despair as well as on life satisfaction, depression and loneliness.

---

the time), and 0 (none of the time). The possible range of scores was 0–24. Scores of 13 and over were coded by the survey administrators as indicative of serious psychological distress. Following [Twenge et al. \(2019\)](#) we relied on this dichotomous variable in our analyses. Psychological distress declines in age, in these data since 2008. The authors showed a rise in psychological distress especially for ages 18–19 and 20–21. We extend those estimates and confirm they rose especially for workers.

## 2.2. Behavioral Risk Factor Surveillance Survey (BRFSS), 1993-2025

The BRFSS is the nation's premier system of health-related telephone surveys (CATI) that collect state data about U.S. residents regarding their health-related risk behaviors, chronic health conditions, and use of preventive services. The CDC survey is conducted monthly over landline telephones and cellular telephones with a standardized questionnaire and technical and methodologic assistance from CDC. BRFSS is used to collect prevalence data among adult U.S. residents regarding their risk behaviors and preventive health practices that can affect their health status. The BRFSS questionnaire is comprised of an annual standard core, a biannual rotating core, optional modules, and state-added questions.<sup>8</sup>

We have two sets of individual level BRFSS data. The first is a time series of cross sections of the annual data available yearly from 1993-2025 across 33 surveys, with a total of 10,863,992 observations with 19,553 observations in the 2024 survey for 2025.<sup>9</sup> The second also contains a time series of cross-sections at the county level from eleven surveys 2013-2023 (n= 2,532,439).<sup>10</sup> We map on unemployment rates by state and year in the first case and MSA and year respectively in the second.

Later we focus on those age 18-22 of which there are 426,016 in the total BRFSS sample and 93,900 for the period 2020-2025. In this later period the (weighted) labor market status of these ages 18-22 was as follows employee 42% (40%); self-employed; 5% (4%); unemployed 8% (9%); homemaker 2% (2%); student 39% (43%); unable to work 2% (2%) and other 2% (1%). The numbers in parenthesis refer to the period 2012-2019 which are broadly comparable to those for the later period.

BRFSS includes a 4-step life satisfaction question, which was asked in full sample years of 2005-2010 and in 2022-2025. The question is:

Q10. *"In general, how satisfied are you with your life? Very satisfied (=4), satisfied (=3), Dissatisfied (=2) and very dissatisfied (=1)."*<sup>11</sup>

The full sample included questions from 2005-2010 and then only a subset of states from 2011-2017. The question wasn't asked from 2018-2021 and then from 2022-2025 in a slightly different and for a subset of states each year. As we shall see, there was a sharp drop in life satisfaction in the most recent years especially for young workers.

---

<sup>8</sup> [https://www.cdc.gov/brfss/data\\_documentation/pdf/UserguideJune2013.pdf](https://www.cdc.gov/brfss/data_documentation/pdf/UserguideJune2013.pdf). Life satisfaction from 2011-2020 was included as a state question in only a few states.

<sup>9</sup> Sample sizes are 1993=101,783; 1994=105,390; 1995=113,509; 1996=123,579; 1997=134,885; 1998=148,684; 1999=159,022; 2000=182,592; 2001=210,852; 2002=245,396; 2003=263,033; 2004=301,860; 2005=353,068; 2006=351,479; 2007=427,567; 2008=410,725; 2009=428,924; 2010=444,563; 2011=502,262; 2012=470,590; 2013=489,646; 2014=465,523; 2015=435,361; 2016=483,233; 2017=466,307; 2018=430,153; 2019=418,580; 2020=408,476; 2021=427,317; 2022=442,981; 2023=433,671; 2024=463,428 and 2025= 19,553.

<sup>10</sup> 2013=256,376; 2014=243,594; 2015=229,135; 2016=249,118; 2017=230,989; 2018=221,704; 2019=210,886; 2020=195,521; 2021=227,917; 2022=237,850 and 2023=229,349.

<sup>11</sup> Recently these data were examined by Twenge and Blanchflower (2025), but not by labor market status. See also Blanchflower and Graham (2023).

In the years 2006-2025 respondents were asked to report whether they have ever been told they had a depressive disorder. The question is a simple one:

Q11. "Ever told) (you had) a depressive disorder (including depression, major depression, dysthymia, or minor depression)?"<sup>12</sup> We call this variable *depression*.

Overall, there are 6,629,766 observations from 2006-2025. We note below that depression rose over time and especially so for those age 18-22. They had lower rates than overall in the years through 2017 but after that had higher rates. Depression rates for young workers were lower than the overall rate through 2016 but then became higher.

In the 2023 and 2024 surveys, which contained a few thousand observations in 2025, the BRFSS included for the first time a loneliness measure into the survey.<sup>13</sup> The question was as follows:

Q12. *Lonely. How often do you feel lonely? 5=always; 4=usually; 3=sometimes; 2=rarely; 1=never.*

Following Blanchflower and Oswald (2023) we also examine *despair*, or what they called *extreme distress*, which is measured as those who gave the answer of exactly 30 to the BRFSS question:

Q13. "Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?".

We examine despair over the period 1993-2025, noting that, overall, it has increased from 3.6% in 1993 to 6.7% in 2024/5, 2.9% to 7.0% in 2024/5 for those age < 25 and for age < 25 females rose from 3.2% to 8.4%. Blanchflower and Bryson (2025) also examined these data and showed the important role played by young workers.

To explore the age profile of how workers are doing at present we rely on three questions asked in 2022-2025 on how well the workers were coping with daily life. Those questions are:

Q12. *Food. During the past 12 months how often did the food that you bought not last, and you didn't have money to get more? 5=always; 4=usually; 3=sometimes; 2=rarely; 1=never*

Q13. *Lost. In the past 12 months have you lost employment or had hours reduced? Yes/No?*

Q14. *Transport. During the past 12 months has a lack of reliable transportation kept you from medical appointments, meetings, work, or from getting things needed for daily living? Yes/No?*

### **2.3: The American Job Quality Study of 2025**

The American Job Quality Study of 2025 was conducted by Jobs for the Future in partnership with Gallup, the Families and Workers Fund, and the W.E. Upjohn Institute for Employment Research. They survey over 18,0900 workers aged 18-75 (<https://www.jff.org/idea/the-american-job-quality-study/>) in what is described as a 'nationally representative survey'. The survey contains

---

<sup>12</sup> There are also 17 observations in 2009 and 852 in 2007.

<sup>13</sup> The distribution by years was as follows - 2023=102,270; 2024=103,455; 2025=3,876.

questions on job satisfaction and other wellbeing measures including life satisfaction, happiness, worthwhileness and anxiety.

We also had access to information on a number of aspects of jobs. These included the following 5-step variables coded from completely disagree=1 to completely agree=5.

*Q22. Freedom. "You have the freedom to decide how you do your work?"*

*Q23. Fast. "Your job requires that you work very fast?"*

*Q24. Belong. "You feel like you belong at work?"*

*Q25. Safety. "You feel physically safe at work?"*

*Q26. Fair. "You are paid fairly for the work you do?"*

## **2.4: Analytical Methods**

First, we present descriptive findings in chart form identifying variance in wellbeing, illbeing and job quality by age and, where possible, time. We then turn to regression techniques to examine correlates of illbeing and wellbeing to isolate the association with paid work status and to examine what role, if any, local labor market conditions have played.

## **3. Results**

### **3.1: Descriptive Findings**

We start with the National Health Interview Surveys. In **Chart 1a** we report Kessler scores (0-24) for workers (n=413,245) and for non-workers (n=272,395) and overall, for 1997-2021. The age distribution is hump-shaped for non-workers and declining for workers. The overall distribution peaks at age 53 at 2.82. **Chart 1b** using the smaller 2024 data file (n=31,274) which has a higher mean of 2.67 and shows that the overall distribution slopes down in age more precipitously than in **Chart 1a** due to a big rise in the Kessler score for young workers. Similar patterns are seen for depression plotted in **Charts 1c and 1d**. Sample sizes are 251,972 in the earlier surveys and 31,990 in the 2024 survey. The not-working data sample size in the 2024 survey is rather small and the plots are rather noisy.

In **Chart 1e** we plot life satisfaction by age, separately for workers and non-workers. Sample sizes are n=17,956 for workers and 13,231 for non-workers. Life satisfaction rises in age for workers and is U-shaped for non-workers and the overall distribution slopes up. Conversely in **Chart 1f** we show that loneliness declines in age overall and for workers.

Thus, across four measures – Kessler, depression, life satisfaction and loneliness - in the NHIS we see that wellbeing (illbeing) now rises (falls) in age, driven by the declining wellbeing of young workers. This is consistent with evidence reported below from the BRFSS for the period 1993-2025, on despair as well as on life satisfaction, depression and loneliness.

Turning to evidence from the BRFSS, **Chart 2a** starts with a plot of life satisfaction for the period 2005-10 and sample size is 2,307,557 and then from 2020-2025 (n= 677,748). These are the main years life satisfaction is available.<sup>14</sup> It shows that in the earlier period there is an initial hump-

---

<sup>14</sup> Sample sizes are 2005=337,546; 2006 =337,479; 2007 =408,334; 2008 =396,736; 2009 =402,768; 2010 = 424,694; 2022 =236,852; 2023 =222,932; 2024 =210,690 and 2025=7,274

shape and then a low at around age fifty. In the later period the function initially declines from age 18-20 and then rises steadily with a flattening in the fifties before rising again.

**Chart 2b** breaks the two lines above according to labor market status. We report life satisfaction by age for workers and non-workers in the early and recent periods. A number of factors stand out. First, the patterns for non-workers differ from those of workers in both periods. Second there is an obvious U-shape for non-workers in the first period but in the second period the life satisfaction of non-workers below age fifty falls substantially. Third there is a sharp drop also in life satisfaction of workers from around age 44. Fourth, whether one is a worker or non-worker, there is little change over time in the life satisfaction of those aged fifty and over.

**Chart 3a** plots the overall distribution of depression for the period 2006-2019 which is hump shaped and then for the period 2020-2025 which slopes down in age. **Chart 3b** plots separate rates for workers and non-workers for the two periods and shows a hump-shape for non-workers and a downward slope for workers. Over time the two functions rise but especially so for young workers. This has the effect of driving the overall depression by age measure from hump shaped to downward sloping in the later period.

The decline in the U-shape is largely driven by changes in the percentage of workers who are in despair. There is little difference over time in the proportion working by age between the two periods.<sup>15</sup> The overall estimate is simply a calculation of the (% working\*rate of despair for workers) plus (% not working)\*(non-worker despair rate)). As an example, if we compare the changes over time in the overall estimates for 18 versus 40-year-olds.

In the case of 18-year-olds in 2006-2019 the overall estimate is  $(.317*.152) + (.683*.143) = .146$ . For the years  $\geq 2020$  it is  $(.35*.234) + (.6505*.213) = .220$ .

For 40-year-olds in 2006-2019 the overall estimate is  $(.771*.124) + (.229*.284) = .161$ . For the years  $\geq 2020$  it is  $(.775*.218) + (.225*.298) = .190$ .

So, in 2006-2019 those age 40 had higher depression rates (.16 versus .15) than those age 18. But by 2020-2025 they had lower depression rates (.19 versus .22).

To show this more concretely across the whole age distribution **Chart 3c** shows the age profile of depression (a) as it exists in the period 2017-2025 (red line) and (b) the counterfactual age profile of depression if employment rates by age are held constant at their 2009-2016 values. The lines are almost identical, confirming that changes in the employment probabilities of individuals by age play no meaningful role in driving the change in the age profile of mental ill-health. Instead, there is a change in the propensity for mental ill-health by age within the work and non-work subpopulations.<sup>16</sup>

---

<sup>15</sup> For example, the work percentages for the two periods by selected ages were as follows with the 2006-19 rates first and the rate for 2020-2025 in parentheses. Age 20=44.9% (48.6%); 25=69.7% (71.8%); 30=75.0% (77.0%); 35=75.8% (78.3%); 40=77.1% (77.5%); 45=76.9% (78.5%); 50=74.4% (74.9%); 55=68.7% (69.9%); 60=56.3% (59.7%); 65=32.2% (35.5%) and 70=17.5% (18.5%).

<sup>16</sup> Full details of the calculations behind **Chart 3c** are contained in the **Supplementary Appendix**.

In the 2023 and 2024 surveys, which contained a few thousand observations in 2025, the BRFSS included for the first time a loneliness measure into the survey. The question was as follows.<sup>17</sup>

*Q12. Lonely. How often do you feel lonely? 5=always; 4=usually; 3=sometimes; 2=rarely; 1=never.*

The youngest age group reported the highest levels of loneliness -18-22=2.43; 23-29=2.36; 30-39=2.15; 40-49=2.02; 50-59=1.95; 60-69=1.89; 70-79=1.82 and 80+=1.84. In **Chart 4** we plot the age distribution overall which - as with depression - slopes down in age, a trend which is apparent for workers and non-workers alike.

So, for life satisfaction, depression and loneliness, wellbeing rises in age overall and especially so for workers.

Following Blanchflower and Oswald (2023) we derive a measure of *despair*, or what they called *extreme distress*, which is measured as those who gave the answer of exactly 30 to the BRFSS question.

*Q13. “Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?”*

We examine despair over the period 1993-2025, noting that, overall, it has increased from 3.6% in 1993 to 6.7% in 2024/5, 2.9% to 7.0% in 2024/5 for those age < 25 and for age < 25 females rose from 3.2% to 8.4%. Blanchflower and Bryson (2025) also examined these data and showed the important role played by young workers.

**Chart 5a** shows the change in the relationship between age and despair over time in the United States updating the analyses undertaken by Blanchflower, Bryson and Xu (2025) through to 2025. It shows the hump-shape in age now replaced by a downward slope in age. Prime age adults no longer have the highest levels of despair. Now the young do. So, for example in the plot 1993-2020 the peak level of despair was .069 – or 6.9% - for age 53. In the most recent period, the peak level of despair is .089 (8.9%) at age 23. There has been little change in despair on the right-hand side of the age distribution above age 50 but a significant upward rise for all younger ages and especially those under age 23.

As noted by Blanchflower and Bryson (2025) this is driven by a rapid rise in despair levels of young workers age under 25. Below we show for the first time the rise in despair of the young is in fact primarily driven by workers under the age of 23.

**Table 1** shows the distribution of despair by single year of age for the twelve single year of age groups under thirty, overall and then separately for workers and non-workers, for four time periods. In 1993-2009 despair rises in age through age 23 and then declines and is higher for non-workers for ages 20-29. In the second period 2010-2015 despair broadly rises in age and is higher for non-workers from age 22 onwards. The third period 2016-2020 shows some changes; despair is now

---

<sup>17</sup> The distribution by years was as follows - 2023=102,270; 2024=103,455; 2025=3,876.

higher for workers ages 18-21 than it is for non-workers while the reverse is true for those age 22-29. In the latest period despair for workers is again higher than for non-workers ages 18-22.

Going forward in light of this evidence we focus especially on those age 18-22 and separate them from those age 23-29. This is different from what was done in Blanchflower and Bryson (2025) that focused on those aged under-25.

It is not obvious why despair among workers ages 18-22 rose above that of those age 18-22 who were not working from around 2016.

Of note also is that the change in the overall shape from a hump to a downward slope does not appear to be driven by different weights of the two labor market conditions. From the BRFSS file it is apparent that there is little change in the overall employment rate, which was 54% in 1993, 40% in 2009, rising to 48.6% in 2024.

**Charts 6a-6d** show changes in the overall shape of the age\*despair distribution in the BRFSS for four time periods i) 1993-2009 ii) 2010-2015 iii) 2016-2020 and iv) 2020-2025. Separate plots are presented for workers and non-workers. We plot despair in each case on the same scale of 0 to 0.2 for ease of comparison which shows the share of individuals in despair.

**Chart 6a** shows the plots for the period 1993-2009 and shows that there is an obvious hump-shape for non-workers with a peak in the former case at aged 48, of 14.3%. The overall distribution is also hump shaped with a peak at age 49 of 5.6%. Despair declines in age for workers with the highest observed rate of 4.3% for workers aged 21.

**Chart 6b** looks similar with an overall hump-shape with a slightly higher peak than in the prior period of 7% at age 49. The non-workers peak is also higher at 16.4% at age 46. The worker peak is now 5.2% at age 21.

**Chart 6c** for the period 2016-2020 shows a much flatter overall distribution with a peak of 7.1% at age 36. The peak of the non-worker distribution is largely unchanged at 17% for age 46. The worker distribution is now steeper, with a peak of 7.7% at age 19.

Finally **Chart 6d** for 2021-2025 has an overall distribution that declines in age, with the highest rate of 8.9% at age 23. The non-work distribution is little changed with a peak rate of 17.7% at age 45. In contrast the worker distribution now peaks at 9.1% at age 20. In the later period the transformation of a hump-shape in age to a downward slope is completed.

**Appendix A Charts 1-51** document these overall patterns for each individual state for the period 2020-2025 using the state level BRFSS data. In every case they slope down in age. **Appendix A Charts 52-61** contains ten charts covering ten of the largest MSAs, each with sample sizes of over 30000. They also confirm despair declines in age for workers and is hump-shaped for non-workers across all states and the ten largest MSAs.

**Chart 7a and 7b** show changes in despair over time for non-workers and workers. The rise is especially marked in the later period among young workers.

**Chart 8** shows that the driver of the change observed in the age/despair relation is driven by those age 18-22. The chart plots the difference between despair rates for workers and non-workers. For all age groups other than the youngest in all years the relation was negative, that is, that despair rates of workers, was lower than of non-workers. In the period 1994-2003 there was a positive difference, which was broadly flat, with some noise, through 2015, which then rose sharply.

**Chart 9** shows the importance of education. The rise in despair for those workers ages 18-22 is most apparent among those without a college education. In the years 2021-2025 52% (weighted) of ages 18-22 had a high school diploma with a further 11% who were dropouts. In the same years those ages 23-29 29% were high school graduates, 8% were dropouts, 28% had some college and 35% had 4 years + of college. **Chart 9** shows the rise in despair is particularly pronounced for the least educated workers, covering high school dropouts and graduates, and more than it is for less educated non-workers

**Charts 10a-10c** explores differences for the three age groups on how despair responds over time for workers and non-workers by level of education. We compare the ‘less educated’ who have no college education (those who graduated or dropped out of high school) with ‘college’ educated which includes all those with at least some college or a BA or higher degree. Relatively few 18–22-year-olds have some college. For example, in the period 2018-2025, approximately 58% of those age 18-22 were classified as high school graduates and below versus 39% of the 23-29 age group.

**Chart 10a** shows for the age group 18-22 the steady upward trend in despair for all four groups from around 2014 but especially so for the low educated workers followed by the low educated non-workers. **Chart 10b** performs a similar exercise for ages 23-29. Of note here is the especially high levels of despair of less educated non-workers. **Chart 10c** for ages 30+ shows a steady rise for all four groups, with less educated non-workers exhibiting the highest levels of despair. The time paths of despair of the less educated and college educated workers track each other more closely for the older two age groups than is the case for age 18-22.

### ***3.2 Econometric Analysis***

We now turn to examine the extent to which changes in the labor market have impacted the four measures we identified above – life satisfaction, depression, loneliness and despair. In particular we focus on whether an individual is a worker or not. We also examine the impact of the unemployment rate at both the state and county levels on the longest time series we have for despair and find little evidence it has a major impact.<sup>18</sup> In part this may not be a surprise in the period we examine where the unemployment rate fell from a peak of 10% in 2009 and fell steadily for the next fifteen years, being below 5% for the entire period from October 2016 through April 2020 when COVID hit. It was then below 5% again for the period from September 2021 through the latest available data the time of writing of 4.6% in November 2025. But young workers rather than older workers or non-workers have taken the strain.

---

<sup>18</sup> There is an existing literature on the impact of macro-economic variables on wellbeing variables such as Cantril's life evaluation, worry and pain (El Jahl, MacCulloch and Shafiee (2022) and (Macchia and Oswald, 2025, 2021).

In the econometric analysis that follows we find very consistent results in all four of the variables we examine. The various tables show the midlife crisis has disappeared – in both life satisfaction, depression and despair – and has been replaced with a declining function in age in illbeing and a rising-function in age in wellbeing. Declining loneliness in age is also found.

Part a) of **Table 2** uses the National Health Interview Survey, 1993-2024 and regresses the Kessler score on age, gender, race, education, region and year. It shows that the Kessler score declines in age for workers and is-hump-shaped for non-workers in both periods. The decline in the Kessler score for workers with age is much more pronounced by 2024 (right-hand side of table) compared to the years until 2021.

Part b) of Table 2 finds similarly for the depression frequency variable.

**Table 3** reports regression results for the BRFSS for life satisfaction for the periods 2005-2017 and 2022-2025, for depression from 2005-2019 and from 2020-2025 and for loneliness.

Columns 1 and 2 in Part a) show life satisfaction of workers is fairly flat in age in the period to 2017 but there is a pronounced upward trend in age from 2018. By contrast life satisfaction is higher for under-22s who are not working than it is for other groups under the age of 60. This is true in both periods.

In Part b) depression is declining with age among workers through to 2017, but the age slope is much more pronounced from 2018. In contrast, depression is hump-shaped in age for non-workers in both periods.

Part c) estimates loneliness equations for 2023-2025. Among workers loneliness is declining in age. This is also the case for non-workers, though the slope is not so steep.

**Table 4** reports separate worker and non-worker estimates of despair using the BRFSS with controls for age, gender, education, race, year and state. We also interact the two youngest age groups with whether the respondent was a high school dropout or a high school graduate or not. Estimates are run for three time periods – 1993-2009, 2010-2020 and 2021-2025. We experiment later with other recent time periods such as 2018-2025 and the results are essentially the same. Here our interest is in the post-COVID period. The excluded category is age 18-22. Equations also include the log of the state\*year unemployment rate. The unemployment rate is significantly negative for non-workers in the first and last periods, which is unexpected. It is only significant for workers in the last period where higher state level unemployment is associated with lower worker despair.

There is clear evidence of hump shapes in each of the three non-worker equations with a maximum in the mid-40s in each case. There is also a hump shape among workers in the first period, also with a peak in the forties. For workers in the second and third period the hump-shape has gone. Despair now declines in age as the wellbeing of young workers increasingly dominates that of young non-workers.

But what is particularly notable is the positive and statistically significant correlation between despair and the two interaction terms in all but one of the estimates. Furthermore, the size of these coefficients has risen over time in both the worker and non-worker equations indicating that despair among these less educated young people has been rising over time, whether they are working or not.

The bottom half of **Table 4** uses data for non-workers from 2018-2025 and separates them out into five non-working labor market statuses. In all cases except for homeworkers, there are hump shapes in age. The two interaction terms are strongly positive for the unemployed, with the biggest coefficient for the age 18-22 grouping.

**Table 5** explores the impact of the unemployment rate on despair using data at the level of the MSA data for 2013-2023, with the same controls as in **Table 4**. Separate data sets are available from the CDC that identify MSA which is what we use here from 2013-2023. The local unemployment rate is not significantly correlated with despair in either period for workers or non-workers (although it's weakly positive for non-workers in the earlier period).

**Table 6** now explores in more detail differences by age as well as the importance of work and education. Part a) uses the MSA data file again, for 2013-2023 for three age groups 18-22; 23-29 and 30+. Being in paid work has a significant and positive coefficient for the youngest age group and is significantly negative for the other groups. The unemployment rate is weakly significant and negative for ages 23-29. In all cases despair is higher for the least educated.

Part b) of the table uses the same controls with the state unemployment rate for 1993-2017 while part c) does the same for 2008-2025. The unemployment rate is significantly positive for age 30+ in the later period. Again, work is positively related to despair for age 18-22 and negative for the other groups again in both time periods.

Part d) of the table now reports separate regressions by single year of age from 18-25 and then for ages 26-29 and 30+. We now include an interaction term with work (work\*new) where new is a (1,0) dummy for the 2013-2025 period. We choose 2013 as the starting point of the changes in wellbeing in the US as suggested to us by Jean Twenge from her work. We also include work dummies as well as controls for being a high school dropout or graduate. The main findings are as follows

- a) The work variable is significantly positive for age 18, insignificant for ages 19-21 and then significantly negative for the six older age groups.
- b) The recent work interaction term is significantly positive for ages 18-22 and insignificant after that but weakly significant and positive for age 30+.
- c) In all cases despair is higher among the least educated and especially so for dropouts that have the larger coefficient – for example among age 18-22s the former is .0556 versus .0246 for graduates.

Age, work and education matter. Work effects are greater for the youngest more recently.

A big question is why has the mental health of young, especially that of less educated workers, been declining? One possibility is that their job quality has been deteriorating.

There is evidence that they are still disproportionately underemployed, but the differences compared to older age groups that existed in past years have declined. Over time average usual hours of young workers in the MORG files of the CPS have risen over time, whereas, for those over the age of twenty-three they have remained roughly constant.<sup>19</sup> There is also evidence from the MORG files as reported in **Table 7** that relative wages of the young have risen.

In Blanchflower and Bryson (2025) we noted that there was a decline in job satisfaction of the young from the General Social Surveys of 2021, 2022 and 2024. A new survey from the Conference Board in 2025 showed a striking 15-point gap in job satisfaction between the oldest and youngest generations.<sup>20</sup> The report showed job satisfaction rates were 63% for age 55+, 60% for age 25-54 and 49% for ages 18-24 in 2021. By 2025 the rates were 72%, 68% and 57% respectively. A recent study from UC San Diego (Ahlquist, Grumbach and Thai, 2023) found younger workers, defined as those 30 and under, are less attached to their employer; they are more willing to leave their current position and more likely to have quit a job in the past compared to workers over 30; report more problems at work; are less likely to turn to formal channels (managers, human resources) to address workplace problems; nevertheless, younger workers are more satisfied with their level of voice at work, although this likely reflects lowered expectations are more “union-curious” but less sure of unions’ ability to improve worker voice; are more concerned about targeted employer retaliation.

The authors argue "*(T)aken together, the findings suggest that, compared to older workers, younger workers are less attached to their jobs, less confident about their employer's commitment to them, and more unsure about what to do when they face problems at work. Once the problems facing young workers get back to management or HR, it is likely too late.*"

Fears of being replaced by AI are strong among young workers. In a survey conducted by the American Psychological Association, called 2024 Work in America Survey – Psychological Safety in the Changing Workplace - workers were asked to respond to the question "I worry that artificial intelligence (AI) may make some or all of my job duties obsolete in the future" 48% of age 18-24 agreed or strongly agreed versus 45% for ages 26-43; 40% for ages 44-57; 30% for both ages 58-64 and 65+.<sup>21</sup>

We have data in the BRFSS for the period 2022-2025 on three aspects of how *workers* are doing in their jobs. The questions are as follows

*Q14. Food. "During the past 12 months how often did the food that you bought not last, and you didn't have money to get more? 5=always; 4=usually; 3=sometimes; 2=rarely; 1=never".<sup>22</sup>*

---

<sup>19</sup> Usual hours in the MORGs were as follows for those age 18-22 with those age 23+ in parentheses 2012 28.4 (39.5); 2016=28.9 (39.6) 2020=29.8 (39.7) and 2024=29.2 (39.3).

<sup>20</sup> <https://www.conference-board.org/topics/job-satisfaction/press/job-satisfaction-2025>

<sup>21</sup> [www.apa.org/pubs/reports/work-in-america/2024/2024-work-in-america-report.pdf](http://www.apa.org/pubs/reports/work-in-america/2024/2024-work-in-america-report.pdf)

<sup>22</sup> Sample sizes are 2022=119,035; 2023=109,460; 2024=103130; 2025=3,864.

*Q15. Lost. "In the past 12 months have you lost employment or had hours reduced? Yes/No?"<sup>23</sup>*

*Q16. Transport. "During the past 12 months has a lack of reliable transportation kept you from medical appointments, meetings, work, or from getting things needed for daily living? Yes/No?"<sup>24</sup>*

We do not have prior data to allow us to identify how much this has changed over time. As we report in [Table 8](#), in every case the young report having the greatest problems and the functions slope down in age. The young are more likely to report they have lost employment or hours in the last year and have struggled to buy food. A lack of decent transport services also seems to be a problem.

Using the American Job Quality Survey 2025 we can contribute to the evidence with analyses of worker perceptions of their job quality.<sup>25</sup> This is the first year the survey was run so we have no time-series. However, we can establish age patterns both perceived job quality and overall wellbeing for 2025. [Chart 11a](#) uses weighted data and shows that life satisfaction, happiness, job satisfaction, feeling worthwhile and not feeling anxious all rose with age.

We also had access to information on a number of aspects of jobs. These included the following 5-step variables coded from completely disagree=1 to completely agree=5.

*Q22. Freedom. You have the freedom to decide how you do your work?*

*Q23. Fast. Your job requires that you work very fast?*

*Q24. Belong. You feel like you belong at work?*

*Q25. Safety. You feel physically safe at work?*

*Q26. Fair. You are paid fairly for the work you do?*

We plot each of these in [Charts 11b-11f](#). In the cases of freedom, safety, belong and fair treatment they all rise in age, whereas fast declines in age.

These age patterns are robust in regression analyses which control for gender, migrant status, race, being an employee and union membership ([Table 9](#)). The age profiles are consistent with the charts and rise in age for all except for views on job speed which improves with age.

Young workers seem dissatisfied with all of these aspects of their jobs and especially freedom to decide how they do their work. We were able to show using AJQS 2025 that young workers attitudes to work were significantly more pessimistic than older groups. The evidence from the BRFSS on not being able to afford food and having lost employment or hours lends further weight to the proposition that the young who are in work are struggling both in the workplace and with their daily lives, and more so than older workers. It is unclear how much this has changed over time as we don't have these data over time.

#### **4. Conclusions**

We have established that the changing age profiles of wellbeing and illbeing in the United States are driven primarily by declining mental health among young workers, and especially the youngest

---

<sup>23</sup> Sample sizes are 2022=119,388; 2023=109,771; 2024=103,440; 2025=3,876.

<sup>24</sup> Sample sizes are 2022=118,805; 2023=109,177; 2024=102,839; 2025=3,848.

<sup>25</sup> <https://www.gallup.com/analytics/691241/american-job-quality-study.aspx>

workers. This is apparent across two large, well-regarded data sets and across multiple measures of wellbeing and illbeing. We have examined why this might be the case and have amassed evidence which dismisses some possible reasons and focuses attention on others.

The first potential contributor is that the young face jobs that are of poorer quality than those undertaken by older workers, and that there may have been a decline in the non-pecuniary job quality for the young compared to that of older workers. It is certainly possible that changes in job quality have the power to impact overall wellbeing: Green et al. (2024) argue that job quality is on a par with health as a key determinant of subjective wellbeing, so changes in that job quality can be expected to impact workers' general mental health. We have been able to show that by the end of the period we study the young do perceive their jobs to be of poorer quality than older workers across a range of dimensions, and they also exhibit greater problems in daily life in relation to job stability and making ends meet.

Under this model, the concern is that the young have what David Graeber (2019) termed bullshit jobs, and that these jobs have deteriorated over time. We have no direct evidence of this for the United States, but Feiveson (2023; 2024) has speculated that the young have been most adversely impacted by the growth in insecure 'gig' jobs which offer little by way of career progression, and by the decline in worker bargaining power.

The decline in youth mental health does not appear to be especially driven by the labor market itself, which is traditionally where declines in youth wellbeing have come from. This was well documented in the 1980s (Freeman and Wise, 1981) as youth unemployment rose and especially among disadvantaged groups (Freeman and Holtzer, 1986). The story doesn't seem to be driven by a large cohort, or declining relative (to older age group) wages.

A second possibility – one which is difficult to test with our data – is that new generations of workers have a different orientation to the same work than previous generations. This narrative focuses on Gen Z being different.<sup>26</sup> Twenge (2023b) analyzed data from the Monitoring the Future Survey of 12<sup>th</sup> graders, who are mostly age 18, and found that work attitudes have sharply declined on a number of measures especially since 2020. Of particular note though is the sharp decline observed since around 2012 in the proportion who say they expect their chosen work to be extremely satisfying from around 40% to 20% in 2022.

There are various mechanisms at play which might induce a reorientation of young people in terms of their work motivations. One is time-variance in the value of leisure time: recent studies note that the price of leisure has fallen due to technological changes pushing down the price of items that young people in particular use in their leisure time, such as gaming devices (Kopytov et al, 2023). In addition, by pushing up the quality of leisure time, these trends raise the relative cost of time in employment.

Technology may also play a part in raising the relative cost of paid employment through labor intensification. Evidence from task-based studies of work, and social surveys in which workers report on the nature of job tasks, indicates there has been a growth in job demands and a reduction in worker job control in the United Kingdom (Green et al., 2022) which, presumably, is mirrored

---

<sup>26</sup> Twenge (2023a) defines Gen Z as being born between 1995 and 2012.

in the United States. These trends may have been exacerbated by the experience of the COVID lockdown although, according to the US survey Monitoring the Future, the percent of 8<sup>th</sup>, 10<sup>th</sup> and 12<sup>th</sup> grade students who felt lonely started rising steadily from around 2007.

A third possibility is that selection into employment has changed in recent years such that young people with poor mental health are more likely to be entering employment early in life now than in the past. Overall employment rates have risen for the young in the last decade or so. If those ‘additional’ workers are drawn from the ranks of people who might previously have found difficulty entering employment due to mental health issues, this may play a role in our findings. Even if the employment rate had remained constant there may have been compositional changes in the young employed according to their underlying mental health. If so, it’s possible that selection into employment by mental health status has changed over time for the young, rather than the experience of employment affecting their mental health. However, the evidence does not suggest that there have been dramatic rises in employment rates of either dropouts or high school graduates over the last decade.<sup>27</sup>

Whatever the causes, the mental health of those ages 18 and older we look at in the years from around 2013 had started to deteriorate when they were in high school. The evidence is that the deterioration in their mental health as a child has subsequently impacted their mental health as a young adult. It inevitably compromised their ability to make a successful transition from school to work. The youngest workers, especially those without any college are hardest hit, and we don't know why.

---

<sup>27</sup> For example, using the MORG data we see that weighted employment rates for dropouts averaged 32.9% for the period 2009-2013 compared with 35.0% for the period 2020-2024. The equivalent rates for high school graduates was 53.1% and 52.2% respectively.

## References

Ahlquist JS, Grumbach JM and Thai E (2023), 'Voice on the Job for young workers', July, UC San Diego School of Global Policy and Strategy. <https://ccgt.ucsd.edu/files/2023-report-agt.pdf>

Blanchflower DG (2025), 'Declining youth wellbeing in 167 UN Countries. does survey mode, or question matter?', NBER Working Paper #33415, January. <https://doi.org/10.3386/w33415>

Blanchflower DG (2021), 'Is happiness U-shaped everywhere? Age and subjective wellbeing in 145 countries', *Journal of Population Economics*, 34: 575-624. <https://doi.org/10.1007/s00148-020-00797-z>

Blanchflower DG (2020), 'Unhappiness and age', *Journal of Economic Behavior and Organization*, 176: 461-488. <https://doi.org/10.1016/j.jebo.2020.04.022>

Blanchflower DG and Bryson AJ (2025), 'Rising young worker despair in the United States', *SSM - Population Health*, <https://doi.org/10.1016/j.ssmph.2025.101881>

Blanchflower DG, Bryson AJ and Xu X (2025), 'The declining mental health of the young and the global disappearance of the hump shape in age in unhappiness', *Plos One*. <https://doi.org/10.1371/journal.pone.0327858>

Blanchflower DG and Freeman RB (editors) (2000), *The Youth Employment Crisis*, University of Chicago Press and NBER.

Blanchflower DG and Graham C (2023), 'Happiness and aging in the United States', Chapter 33 in *Handbook of the Economics of Ageing*, edited by David Bloom, Alfonso Sousa-Poza and Uwe Sunde, Routledge. <https://doi.org/10.4324/9781003150398>

Blanchflower DG, Graham C and Piper A (2023), 'Happiness and age – resolving the debate', *National Institute Economic Review*, 16(6). <https://doi.org/10.1017/nie.2023.1>

Blanchflower, DG and Oswald AJ (2023), 'Trends in extreme distress in the United States, 1993–2019', *American Journal of Public Health*, 110: 1538-1544. <https://doi.org/10.2105/AJPH.2020.305811>

El-Jahel L, MacCulloch R and Shafiee H (2022), 'How does monetary policy affect welfare? Some new estimates using data on life evaluation and emotional wellbeing', *Journal of Money Credit and Banking*, 55(8): 2001-2025. <https://doi.org/10.1111/jmcb.13000>

Feiveson, L. (2023), 'Labor unions and the US Economy', US Treasury, August 28, <https://home.treasury.gov/news/featured-stories/labor-unions-and-the-us-economy>

Feiveson, L (2024), 'How does the well-being of young adults compare to their parents?', US Treasury, December 18. <https://home.treasury.gov/news/featured-stories/how-does-the-well-being-of-young-adults-compare-to-their-parents>

Freeman RB and Holzer, H (editors) (1986), *The Black Youth Employment Crisis*. University of Chicago Press and NBER.

Freeman RB and Wise D editors (1981), *The Youth Labor Market*, University of Chicago Press and NBER.

Graeber, D. (2019), *Bullshit Jobs: A Theory*, Simon and Schuster.

Green F, Lee S, Zou M and Zhou Y (2024), 'Work and life: the relative importance of job quality for general well-being, and implications for social surveys', *Socio-Economic Review*, 22, 2: 835-857

Green F, Felstead A, Gallie D and Henseke G (2022), 'Working still harder', *Industrial and Labor Relations Review*, 75, 2: 458-487.

Haidt J (2024), *The Anxious Generation*, Penguin Random House.

Kopytov A, Roussanov N and Taschereau-Dumouchel M (2023), 'Cheap thrills: the price of leisure and the global decline in work hours', *Journal of Political Economy Macroeconomics*, 1, 1: 80-118.

Korenman S and Neumark D (2000), 'Cohort crowding and youth labor markets', in D. Blanchflower, R.B. Freeman (Eds.), *A Cross-National Analysis, Youth Unemployment and Joblessness in Advanced Countries*, University of Chicago Press: 57-105.

Macchia L and Oswald AJ (2025), 'National worry and the psychological value of social spending', *The Review of Income and Wealth*, 71(4). <https://doi.org/10.1111/roiw.70039>

Macchia L and Oswald AJ (2021), 'Physical pain, gender, and the state of the economy in 146 nations', *Social Science and Medicine*: 287. <https://doi.org/10.1016/j.socscimed.2021.114332> . .

Ochsen C (2021), 'Age cohort effects on unemployment in the USA: Evidence from the regional level', *Papers in Regional Science*, 100(4); 1025-1054. <https://doi.org/10.1111/pirs.12599>.

Oxenham AF, Braune T, van Sluijs E, Fairbrother H Martin A and Winpenny EM (2025), 'New job, new habits? A multilevel interrupted time series analysis of changes in diet, physical activity and sleep among young adults starting work for the first time', *International Journal of Behavioral Nutrition and Physical Activity*, 22(10). <https://doi.org/10.1186/s12966-024-01682-8>

Pugno M (2025), 'Does social media harm young people's wellbeing? A suggestion from economic research', *Academia Mental Health and Wellbeing*, 2(1) <https://doi.org/10.20935/MHealthWellB7581>

Twenge, J (2023a), *Generations: The Real Differences Between Gen Z, Millennials, Gen X, Boomers, and Silents—and What They Mean for America's Future*, Atria Books.

Twenge (2023b) 'Gen Z really does have a work ethic problem', Generation Tech. November 15<sup>th</sup> 2023. <https://www.generationtechblog.com/p/gen-z-really-does-have-a-work-ethic>

Twenge, JM, and Blanchflower DG (2025). 'Declining life satisfaction and happiness among young adults in six English speaking countries', NBER Working Paper #33490, February. <https://doi.org/10.3386/w33490>

Twenge JM, Cooper AB, Joiner TE, Duffy ME and Binau SG (2019), 'Age, period, and cohort trends in mood disorder indicators and suicide-related outcomes in a nationally representative dataset, 2005–2017', *Journal of Abnormal Psychology*, 128 (3):185-199. <https://doi.org/10.1037/abn0000410>

Zablotsky B, Arockiaraj B, Haile G and Ng AE (2024), 'Daily screen time among teenagers: United States, July 2021–December 2023', NCHS Data Brief No. 513, October. <https://www.cdc.gov/nchs/products/databriefs/db513.htm>

Zajacova A; Grol-Prokopczyk H, Nahin RL (2026), 'Pain among US adults before, during, and after the COVID-19 pandemic: a study using the 2019 to 2023 National Health Interview Survey. *Pain*,167(1): 142-149. <https://doi.org/10.1097/j.pain.0000000000003764>

Table 1. Distribution of Despair by age, BRFSS 1993-2025

	1993-2009			2010-2015		
	All	Non work	Work	All	Non work	Work
18	3.0	2.6	3.6	3.4	3.7	2.9
19	3.6	3.3	3.9	4.1	4.1	4.1
20	4.1	4.5	3.8	4.5	4.3	4.7
21	4.3	4.3	4.3	5.2	5.2	5.2
22	4.4	5.3	3.9	4.6	5.0	4.3
23	4.6	6.4	3.8	5.0	6.8	3.9
24	4.4	6.5	3.6	5.6	7.7	4.4
25	4.2	6.4	3.4	5.6	8.4	4.3
26	4.4	7.1	3.6	5.5	8.8	4.0
27	4.5	7.4	3.6	5.8	10.0	4.0
28	4.2	6.8	3.4	5.6	10.1	3.9
29	4.2	7.0	3.4	5.8	10.0	4.2
Peak age	53	48	22	49	49	20
	2016-2020			2021-2025		
	All	Non work	Work	All	Non work	Work
18	5.4	4.5	7.1	7.0	6.9	7.2
19	6.8	6.2	7.7	7.9	6.9	9.0
20	6.4	6.2	6.8	8.0	7.1	9.1
21	6.1	5.4	6.8	7.9	6.9	8.7
22	6.7	7.2	6.5	8.2	7.2	8.7
23	6.7	7.6	6.3	8.9	11.2	8.0
24	7.1	8.2	6.6	8.3	9.6	7.9
25	6.6	8.3	6.0	7.5	9.5	6.7
26	6.2	9.0	5.3	7.5	9.0	7.0
27	6.4	10.5	5.0	8.1	10.9	7.3
28	6.7	9.2	5.9	7.6	10.4	7.0
29	6.7	10.3	5.6	8.7	12.5	7.7
Peak age	46	46	19	23	48	20

Table 2. Kessler and depression frequency, NHIS 1997-2024.

a) Kessler score				
	1997-2018 & 2021		2024	
	Work	Non-work	Work	Non-work
23-29	-.0602 (2.47)	.7235 (15.45)	-.1855 (1.30)	.3606 (1.33)
30-39	-.1641 (7.13)	1.0670 (24.43)	-.8020 (6.01)	.5663 (2.32)
40-49	-.2964 (12.81)	2.2069 (49.98)	-1.3219 (9.78)	1.0411 (4.07)
50-59	-.4830 (20.37)	2.1579 (51.28)	-1.8834 (13.84)	.9775 (4.19)
60-69	-.8721 (32.34)	.0983 (2.51)	-2.1838 (15.5)	-1.2408 (5.89)
70-79	-1.1765 (27.99)	-.6451 (16.44)	-2.5566 (14.5)	-1.8912 (9.06)
80+	-1.3125 (14.17)	-.7156 (17.02)	2.9133 (9.22)	-1.9439 (9.00)
Female	.6511 (63.50)	.2705 (14.83)	.7811 (15.07)	.3292 (4.62)
Black	-.2327 (14.80)	-.2633 (10.25)	.4208 (4.63)	.0719 (0.59)
Asian	-.4337 (17.63)	-.8414 (18.72)	.7048 (7.23)	-.4412 (2.91)
Hispanic	-.4121 (24.92)	-.5821 (19.77)	-.6608 (9.08)	-.2520 (2.13)
Constant	2.5329	3.8013	3.5978	3.7657
Adjusted R <sup>2</sup>	.0300	.0779	.0593	.0692
N	412,287	271,856	17,663	12,990

b). Depression frequency, NHIS 2010-2024.				
	2010-2022		2024	
	Work	Non-work	Work	Non-work
23-29	-.0152 (1.16)	.2162 (9.24)	.0313 (0.77)	.2180 (2.82)
30-39	-.0766 (6.09)	.2572 (11.92)	-.1489 (3.93)	.2129 (3.05)
40-49	-.1167 (9.24)	.5034 (23.09)	-.2566 (6.68)	.3120 (4.28)
50-59	-.1543 (12.23)	.5587 (27.56)	-.3360 (8.68)	.3934 (5.91)
60-69	-.2302 (17.27)	.0645 (3.45)	-.4254 (10.64)	-.1389 (2.31)
70-79	-.3126 (17.15)	-.1405 (7.48)	-.5546 (11.06)	-.3430 (5.75)
80+	-.3882 (10.29)	-.1932 (9.83)	-.4480 (4.93)	-.3556 (5.76)
Female	.2125 (42.07)	.1220 (16.05)	.2381 (16.09)	.1252 (6.09)
Black	.1686 (20.63)	-.1711 (14.98)	-.1729 (6.68)	.0966 (2.77)
Asian	-.2296 (21.70)	-.3338 (19.10)	-.2381 (8.55)	-.2049 (4.71)
Hispanic	-.1930 (22.57)	-.2492 (18.02)	-.2631 (12.66)	-.2101 (6.18)
Constant	1.6504	1.9016	1.9245	1.9911
Adjusted R <sup>2</sup>	.0341	.0598	.0471	.0480
N	141,164	104,771	17,967	13,282

Includes year, education and region dummies and 'other' race dummies. Excluded 18-22, never attended school and white. T-statistics in parentheses.

Table 3. Life satisfaction, depression and loneliness, BRFSS 2005-2025.

a) Life satisfaction				
	2005-2017	2018-2025	2005-2017	2018-2025
	Worker	Workers	Non-workers	Non-workers
23-29	.0001 (0.01)	.0286 (4.83)	-.1054 (21.27)	-.0810 (9.18)
30-39	.0188 (5.19)	.1327 (24.06)	-.1376 (31.25)	-.0616 (7.67)
40-49	.0083 (2.33)	.1833 (33.45)	-.2741 (64.35)	-.1127 (14.44)
50-59	.0189 (5.30)	.2277 (41.76)	-.2331 (57.76)	-.0657 (9.32)
60-69	.0734 (19.73)	.2728 (48.73)	-.0024 (0.64)	.1259 (19.61)
70-79	.1099 (24.03)	.2984 (44.10)	.0362 (9.32)	.1854 (29.11)
80+	.1073 (13.79)	.3182 (27.72)	.0053 (1.34)	.1786 (26.95)
Female	-.0050 (4.81)	.0011 (0.57)	.0437 (32.85)	.0407 (17.98)
Constant	3.2957	3.1583	3.2371	3.1564
Adjusted R <sup>2</sup>	.0243	.0385	.0524	.0503
N	1,258,045	336,563	1,120,720	335,806
b) Depression				
	2006-2017	2018-2025	2006-2019	2018-2025
	Worker	Workers	Non-workers	Non-workers
23-29	-.0025 (1.54)	-.0084 (4.83)	.0970 (42.91)	.0683 (27.68)
30-39	-.0078 (4.97)	-.0334 (20.34)	.1444 (70.59)	.1023 (45.61)
40-49	-.0133 (8.60)	-.0700 (42.82)	.2180 (10.43)	.1360 (61.99)
50-59	-.0169 (11.08)	-.1006 (62.10)	.2218 (123.67)	.1148 (58.25)
60-69	-.0315 (19.84)	-.1232 (73.79)	.0762 (45.08)	-.0166 (9.22)
70-79	-.0723 (36.32)	-.1509 (73.48)	-.0190 (11.20)	-.0905 (50.48)
80+	-.1023 (30.15)	-.1879 (52.30)	-.0717 (40.47)	-.1608 (85.54)
Female	.0953 (179.56)	.1178 (193.48)	.0541 (84.72)	.0721 (105.42)
Constant	.1422	.1631	.1319	.1877
Adjusted R <sup>2</sup>	.0284	.0477	.0705	.0676
N	1,777,063	1,515,133	1,782,663	1,458,234
c) Lonely				
	2023-2025	2023-2025		
	Workers	Non-workers		
23-29	-.0890 (7.49)	.0388 (2.23)		
30-39	-.3140 (28.33)	-.0444 (2.79)		
40-49	-.4447 (40.40)	-.0514 (3.32)		
50-59	-.5422 (49.45)	-.1823 (13.04)		
60-69	-.6198 (55.15)	-.4522 (35.60)		
70-79	-.6640 (49.00)	-.5436 (43.20)		
80+	-.6592 (29.01)	-.5138 (39.33)		
Female	.1249 (30.13)	.1314 (29.35)		
Constant	2.7563	2.4103		
Adjusted R <sup>2</sup>	.0451	.0485		
N	209,601	213,720		

Includes 4 race, education, year and state dummies and dk education. Excluded 18-22, never attended school and white. T-statistics in parentheses.

Table 4. Despair regressions 1993-2025 and state unemployment rate

	1993-2009		2010-2020		2021-2025	
	Non-workers	Workers	Non-workers	Workers	Non-workers	Workers
Unemployment rate	-.0045 (1.73)	.0002 (0.18)	.0011 (0.70)	.0003 (0.22)	-.0061 (2.04)	-.0050 (2.14)
23-29	.0329 (20.12)	.0005 (0.48)	.0378 (23.09)	-.0021 (1.85)	.0400 (14.11)	.0004 (0.20)
30-39	.0585 (38.12)	.0030 (2.91)	.0726 (38.54)	-.0031 (2.69)	.0811 (28.68)	-.0001 (0.08)
40-49	.1061 (58.89)	.0031 (2.84)	.1104 (57.04)	-.0084 (7.42)	.1073 (32.79)	-.0114 (5.44)
50-59	.0912 (61.01)	.0016 (1.59)	.1032 (68.97)	-.0123 (10.20)	.0842 (34.16)	-.0234 (11.21)
60-69	.0157 (13.06)	-.0074 (6.85)	.0239 (21.11)	-.0177 (14.46)	.0135 (6.46)	-.0338 (16.10)
70-79	-.0028 (2.42)	-.0136 (10.88)	-.0055 (5.17)	-.0256 (20.21)	-.0119 (6.03)	-.0375 (16.25)
80+	.0084 (6.72)	-.0146 (7.78)	-.0157 (13.95)	-.0252 (16.04)	-.0257 (12.70)	-.0414 (15.60)
Female	-.0025 (4.86)	.0161 (53.07)	.0019 (4.53)	.0148 (51.60)	.0060 (9.79)	.0200 (33.76)
Age 18-22*lowed	.0022 (1.40)	.0032 (2.18)	.0057 (3.94)	.0074 (4.76)	.0150 (5.53)	.0181 (6.24)
Age 23-29*lowed	.0099 (4.61)	.0072 (7.45)	.0245 (9.84)	.0116 (9.47)	.0257 (6.05)	.0203 (9.35)
Constant	.0683	.0070	.0772	.0465	.0842	.0643
Adjusted R <sup>2</sup>	.0344	.0204	.0376	.0087	.0340	.0139
N	1,567,397	2,170,574	2,378,826	2,392,197	810,156	857,440
2021-2025	Unemployed	Student	Homeworker	Unable to work	Retired	
Unemployment rate	-.0283 (2.52)	-.0186 (1.84)	.0050 (0.64)	-.0143 (1.15)	-.0024 (0.81)	
23-29	.0525 (6.82)	.0190 (5.01)	.0278 (1.43)	.0439 (1.38)	.1262 (3.92)	
30-39	.0822 (10.52)	.0490 (9.26)	.0229 (1.29)	.0884 (3.26)	.0730 (2.65)	
40-49	.0910 (11.22)	.0633 (7.80)	.0184 (0.98)	.0984 (3.54)	.0250 (0.92)	
50-59	.0707 (8.74)	.0309 (3.47)	.0108 (0.56)	.0464 (1.64)	.0141 (0.52)	
60-69	.0315 (4.04)	.0344 (2.41)	-.0000 (0.00)	-.0025 (0.09)	.0094 (0.34)	
70-79	-.0036 (0.44)	-.0179 (1.48)	-.0120 (0.62)	-.0278 (0.99)	-.0005 (0.02)	
80+	-.0205 (1.81)	-.0066 (0.299)	-.0218 (4.24)	-.0827 (2.88)	-.0356 (1.19)	
Female	.0199 (7.46)	.0341 (14.41)	-.0221 (5.27)	.0297 (10.57)	.0062 (10.96)	
Age 18-22*lowed	.0429 (4.44)	-.0056 (0.51)	.0120 (0.58)	.0189 (0.65)	.0871 (1.68)	
Age 23-29*lowed	.0148 (1.94)	.0181(1.33)	.0008 (0.10)	-.0046 (0.25)	.0747 (1.42)	
Constant	.1176	.1008	.0727	.1947	.0889	
Adjusted R <sup>2</sup>	.0175	.0158	.0142	.0203	.0061	
N	72,473	41,934	65,927	99,492	553,006	

Includes state, year and 5 race and 5 education controls, standard errors clustered at state and year level. T-statistics in parentheses.

Lowed is hs graduate and below. Unemployment rates are in logs.

Table 5. Despair with MMSA Unemployment rates, 2013-2023

	2013-2017		2018-2023	
	Non-workers	Workers	Non-workers	Workers
Unemployment rate	.0065 (1.68)	.0041 (1.47)	-.0026 (0.82)	.0006 (0.25)
23-29	.0346 (10.77)	-.0033 (1.44)	.0343 (11.77)	-.0034 (1.48)
30-39	.0679 (18.14)	-.0032 (1.41)	.0669 (20.60)	-.0066 (2.93)
40-49	.1028 (25.31)	-.0092 (4.30)	.0869 (22.64)	-.0169 (7.61)
50-59	.1012 (32.94)	-.0114 (5.09)	.0805 (29.53)	-.0264 (11.84)
60-69	.0259 (12.90)	-.0156 (7.43)	.0116 (4.94)	-.0334 (15.13)
70-79	-.0044 (2.37)	-.0231 (9.80)	.0141 (6.57)	-.0373 (15.38)
80+	-.0131 (6.70)	-.0253 (8.23)	.0257 (11.58)	-.0386 (12.45)
Female	.0011 (1.43)	.0139 (24.04)	.0058 (8.06)	.0183 (30.17)
Age 18-22*lowed	.0010 (0.37)	.0065 (2.14)	.0110 (3.46)	.0147 (5.02)
Age 23-29*lowed	.0228 (4.89)	.0121 (5.11)	.0196 (4.30)	.0161 (6.13)
Constant	.0747	.0445	.0874	.0557
Adjusted R <sup>2</sup>	.0358	.0085	.0316	
N	559,027	598,964	574,248	

Notes: excluded 18-22 and white non-Hispanic. Also includes race (5), education (5) plus county and year dummies. Unemployment rate is in logs. T-statistics in parentheses. Standard errors clustered at county\*year. Lowed = HS graduate and below. There are 169 counties.

Table 6. Despair regressions by age with unemployment rate and work

a) MSA 2013-2023

	Age 18-22	Age 23-29	Age 30+
Unemployment rate	.0031(0.49)	-.0080 (1.70)	.0054 (3.05)
Work	.0097 (6.38)	-.0281 (16.93)	-.0282 (48.29)
Female	.0304 (18.40)	.0196 (14.64)	.0111 (28.39)
HS dropout	.0387 (10.79)	.0454 (10.70)	.0461 (27.69)
HS graduate	.0183 (10.63)	.0360 (20.47)	.0176 (35.80)
Constant	.0106	.0666	.0387
Adjusted R <sup>2</sup>	.0117	.0154	.0130
N	101,413	176,809	2,124,799

Also includes race, year and MSA dummies

b) State 1993-2017

	Age 18-22	Age 23-29	Age 30+
Unemployment rate	.0005 (0.17)	.0027 (1.12)	.0018 (0.90)
Work	.0027 (3.47)	-.0326 (37.17)	-.0152 (27.38)
Female	.0216 (25.58)	.0125 (19.92)	.0175 (33.64)
HS dropout	.0340 (23.32)	.0506 (29.47)	.0425 (36.22)
HS graduate	.0138 (15.63)	.0252 (31.35)	.0201 (32.83)
Constant	.0072	.0361	.0202
Adjusted R <sup>2</sup>	.0071	.0150	.0100
N	274,579	528,269	4,552,003

	Age 18-22	Age 23-29	Age 30+
Unemployment rate	-.0073 (1.04)	-.0078 (1.80)	.0039 (2.04)
Work	.0141 (10.18)	-.0296 (18.06)	-.0241 (46.09)
Female	.0397 (25.24)	.0245 (19.18)	.0127 (34.33)
HS dropout	.0521 (14.31)	.0478 (12.63)	.0476 (36.39)
HS graduate	.0247 (15.63)	.0418 (25.75)	.0180 (38.05)
constant	.0390	.0804	.0444
Adjusted R <sup>2</sup>	.0128	.0144	.0107
N	120,262	197,228	2,541,120

d) Single year of age, 1993-2025

	Age 18	Age 19	Age 20
Unemployment rate	-.0078 (1.43)	-.0023 (0.36)	-.0063 (1.01)
Work	.0084 (4.38)	.0008 (0.37)	-.0014 (0.61)
Work*new	.0053(1.70)	.0115 (3.43)	.0155 (4.64)
Female	.0287 (18.64)	.0300 (17.25)	.0271 (14.57)
HS dropout	.0128 (4.88)	.0602 (15.10)	.0595 (14.18)
HS graduate	-.0021 (0.89)	.0188 (11.05)	.0257 (13.52)
Constant	.0184	.0094	.0143
Adjusted R <sup>2</sup>	.0127	.0108	.0088
N	79,077	73,196	74,608

	Age 21	Age 22	Age 23
Unemployment rate	-.0077 (1.31)	-.0051 (0.88)	.0012 (0.20)
Work	-.0021 (0.97)	-.0105 (4.72)	-.0223 (9.42)
Work*new	.0105 (3.30)	.0059 (1.79)	.0027 (0.72)
Female	.0255 (14.96)	.0211 (13.69)	.0209 (13.08)
HS dropout	.0556 (13.70)	.0593 (14.24)	.0567 (14.22)
HS graduate	.0246 (12.98)	.0314 (16.16)	.0352 (28.24)
Constant	.0215	.0242	.0171
Adjusted R <sup>2</sup>	.0131	.0129	.0107
N	83,440	84,520	91,111

	Age 24	Age 25	Age 26-29	Age 30+
Unemployment rate	-.0080 (1.44)	-.0029 (0.54)	-.0015 (0.53)	.0019 (1.95)
Work	-.0234 (9.62)	-.0257 (10.60)	-.0355 (28.31)	-.0298 (64.23)
Work*new	.0015 (0.42)	-.0030 (0.81)	-.0060 (2.72)	.0011 (1.69)
Female	.0182 (11.69)	.0177 (12.47)	.0132 (17.27)	.0106 (56.59)
HS dropout	.0537 (13.94)	.0524 (14.00)	.0477 (25.21)	.0429 (69.84)
HS graduate	.0308 (16.31)	.0325 (18.12)	.0271 (29.95)	.0143 (60.63)
Constant	.0468	.0388	.0461	.0347
Adjusted R <sup>2</sup>	.0142	.0155	.0173	.0131
N	94,371	103,316	436,699	9,056,253

Where new is a 1,0 dummy for 2013-2025. Standard errors are clustered at the state\*year level. Equations include race, year and state dummies

Table 7. Change in youth relative hourly wage, 2012-2024 – weighted by *earnwt*

Age	18-22	23-29	30+	18-22/23-29	18-22/30+
2012	\$9.58	\$13.33	\$17.40	71.9%	55.1%
2013	\$9.76	\$13.50	\$17.54	72.3%	55.7%
2014	\$10.05	\$13.67	\$17.80	73.5%	56.4%
2015	\$10.46	\$14.10	\$18.04	74.2%	58.0%
2016	\$10.82	\$14.52	\$18.70	74.6%	57.9%
2017	\$11.29	\$15.22	\$19.16	74.2%	58.9%
2018	\$11.86	\$15.84	\$19.71	74.9%	60.2%
2019	\$12.37	\$16.58	\$20.30	74.7%	61.0%
2020	\$12.99	\$17.54	\$21.55	74.1%	60.3%
2021	\$13.77	\$18.14	\$22.03	75.9%	62.5%
2022	\$15.14	\$19.52	\$23.25	77.6%	65.1%
2023	\$15.99	\$20.59	\$24.33	77.6%	65.7%
2024	\$16.70	\$21.66	\$25.67	77.1%	65.0%
N	123,650	186,307	795,486		

Source: Merged Outgoing Rotation Group files of the CPS

Table 8. Worker attitudes in the BRFSS, 2022-2025

	Food	Employ	Transport
23-29	.0272 (3.67)	-.0282 (9.10)	-.0190 (8.76)
30-39	-.0091 (1.33)	-.0637 (22.10)	-.0409 (20.28)
40-49	-.0711 (10.34)	-.0832 (29.04)	-.0541 (27.00)
50-59	-.1509 (22.05)	-.0941 (33.02)	-.0691 (34.64)
60-69	-.2042 (29.07)	-.0999 (34.15)	-.0779 (38.06)
70-79	-.2112 (24.87)	-.1020 (28.82)	-.0809 (32.68)
80+	-.2330 (16.16)	-.1254 (20.87)	-.0757 (18.06)
Grades 1-8	-.2605 (6.66)	-.0034 (0.21)	-.0360 (3.16)
Grades 9-11	-.3198 (8.33)	-.0457 (2.86)	-.0305 (2.73)
HS graduate	-.5949 (15.77)	-.1099 (6.99)	-.0886 (8.05)
College 1-3yrs	-.7022 (18.62)	-.1236 (7.87)	-.0963 (8.76)
College 4+ yrs	-.9039 (23.99)	-.1728 (11.01)	-.1240 (11.28)
Black	.3099 (60.31)	.0576 (26.89)	.0419 (28.07)
Asian	.0371 (4.77)	-.0109 (3.37)	-.0006 (0.30)
Native	.3558 (34.77)	.0259 (6.08)	.0664 (22.29)
Hispanic	.2188 (46.90)	.0675 (34.74)	.0305 (22.51)
Constant	2.0898	.3144	.1999
Adjusted R <sup>2</sup>	.0997	.0373	.0341
N	335,489	336,475	334,669

Q12. Food. During the past 12 months how often did the food that you bought not last, and you didn't have money to get more? 5=always; 4=usually; 3=sometimes; 2=rarely; 1=never.<sup>28</sup>

Q13. Lost. In the past 12 months have you lost employment or had hours reduced? Yes/No?<sup>29</sup>

Q14. Transport. During the past 12 months has a lack of reliable transportation kept you from medical appointments, meetings, work, or from getting things needed for daily living? Yes/No?<sup>30</sup>

Excluded 18-22, never attended school and white. T-statistics in parentheses.

Means

	Food	Employ	Transport
18-22	1.55	.21	.13
23-29	1.62	.22	.11
30-39	1.57	.17	.10
40-49	1.51	.14	.08
50-59	1.45	.12	.07
60-69	1.40	.08	.06
70-79	1.29	.03	.04
80+	1.24	.01	.05
Total	1.47	.13	.08

<sup>28</sup> Sample sizes are 2022=119,035; 2023=109,460; 2024=103,130; 2025=3,864.

<sup>29</sup> Sample sizes are 2022=119,388; 2023=109,771; 2024=103,440; 2025=3,876.

<sup>30</sup> Sample sizes are 2022=118,805; 2023=109,177; 2024=102,839; 2025=3,848.

Table 9. Workplace conditions regressions 2025 and state unemployment rate – American Job Quality Survey, 2025

	Job satisfaction	Freedom	Fast	Belong	Safe	Fair
23-29	.2048 (1.02)	.3256 (3.09)	-.0953 (0.88)	.0875 (0.80)	.0680 (0.76)	-.0098 (0.08)
30-39	.2624 (1.33)	.3257 (3.13)	-.0741 (0.70)	.1092 (1.02)	.0233 (0.26)	.0468 (0.37)
40-49	.4234 (2.15)	.4234 (4.08)	-.1379 (1.30)	.1957 (1.82)	.0987 (1.11)	.0870 (0.69)
50-59	.6725 (3.42)	.4102 (3.96)	-.2432 (2.29)	.2803 (2.61)	.0809 (0.92)	.1176 (0.94)
60-69	1.0961 (5.56)	.4815 (4.63)	-.4018 (3.77)	.3761 (3.49)	.1127 (1.27)	.2099 (1.67)
70-75	1.6695 (7.91)	.5529 (4.97)	-.6481 (5.65)	.5838 (5.05)	.2116 (2.23)	.2899 (2.14)
Female	-.0291 (0.92)	-.0949 (5.77)	.0373 (2.19)	.0254 (1.47)	-.0411 (2.90)	-.2302 (11.41)
Immigrant	.1605 (2.65)	-.0332 (1.05)	.0323 (0.99)	-.0253 (0.76)	-.0172 (0.64)	.0126 (0.33)
Black	-.3596 (6.92)	-.1494 (5.49)	-.2960 (10.44)	-.2302 (8.05)	-.1290 (5.51)	-.2381 (7.16)
Asian	-.0839 (1.11)	-.1217 (3.09)	.0119 (0.29)	-.1225 (2.94)	.0204 (0.60)	-.0698 (1.44)
Native	-.2674 (2.28)	-.2013 (3.30)	.0527 (0.83)	-.0682 (1.04)	-.2497 (4.73)	-.2223 (2.95)
Hispanic	-.1206 (2.41)	-.1215 (4.63)	-.0201 (0.74)	-.1113 (4.03)	-.0938 (4.16)	-.1211 (3.77)
Employee	-.2126 (4.54)	-.5456 (22.30)	.0623 (2.43)	-.2903 (10.92)	-.0879 (4.12)	-.2622 (8.59)
Union	-.0253 (0.54)	-.3025 (12.36)	-.0700 (2.77)	-.0988 (3.86)	-.4744 (22.72)	-.1083 (3.63)
Constant	6.4318	3.1379	3.6234	3.9918	4.5161	3.791
Adjusted R <sup>2</sup>	.0398	.0557	.0258	.0289	.0406	.0241
N	17,556	17,301	17,091	17185	17,169	17,322
Mean	6.76	2.92	3.44	3.92	4.39	3.48

Notes. Includes 51 state controls. Excluded is 18-22 and white. T-statistics in parentheses. Variables 1-5 coded 1=strongly disagree; 2=somewhat disagree; 3=neither; 4=somewhat agree and 5= strongly agree

1. *Job satisfaction*. Overall, how satisfied are you with your job? If you have more than one job, please answer in terms of the job on which you work the most hours. 0=not at all satisfied ...10=completely satisfied

2. *Freedom*. You have the freedom to decide how you do your work?

3. *Fast*. Your job requires that you work very fast?

4. *Belong*. You feel like you belong at work?

5. *Safe*. You feel physically safe at work?

6. *Fair*. You are paid fairly for the work you do?

The variable Work is distributed as follows - Employee n=(15,968); Independent Contractor (n=534) Informal Worker (n=150); Self-employed IC (n=1,153) and Self-employed not IC (n=624).

Chart 1a Kessler Score, NHIS 1997-2021



Chart 1b. Kessler Score, NHIS 2024

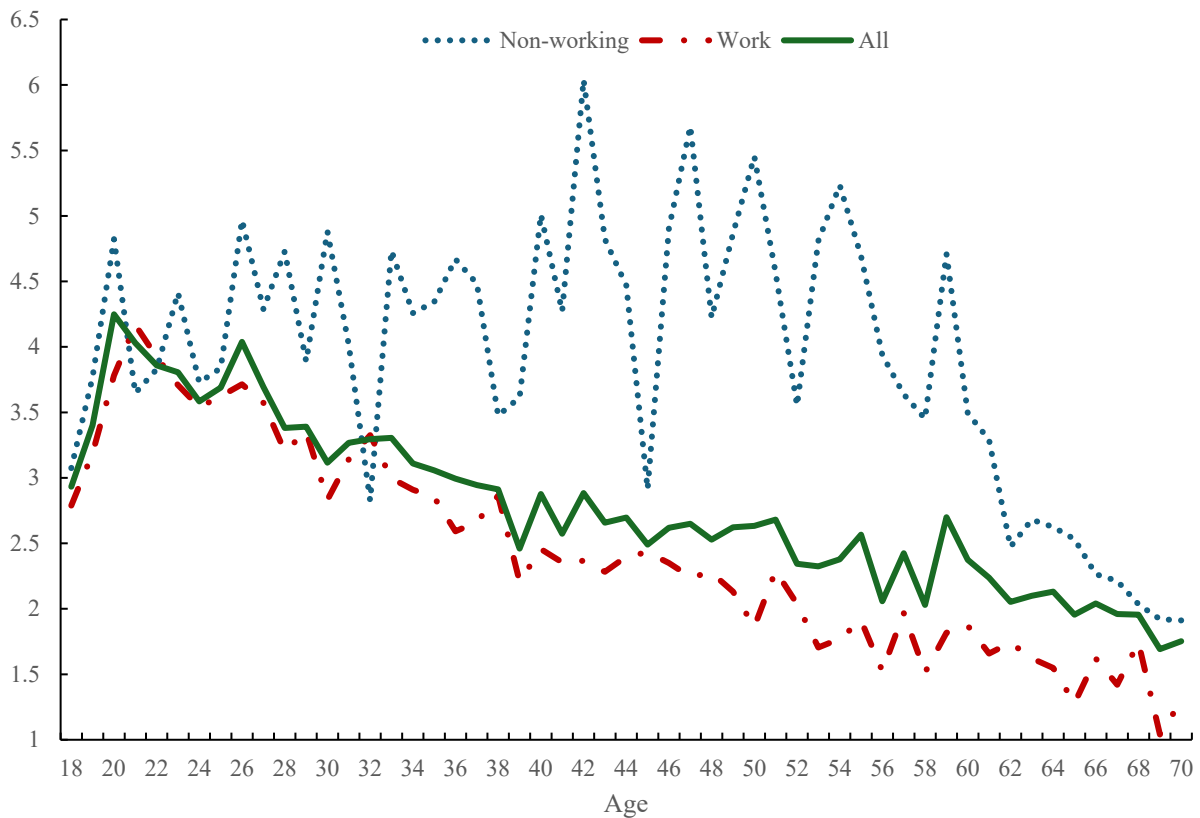


Chart 1c. Depression Frequency, NHIS, 2010-2021

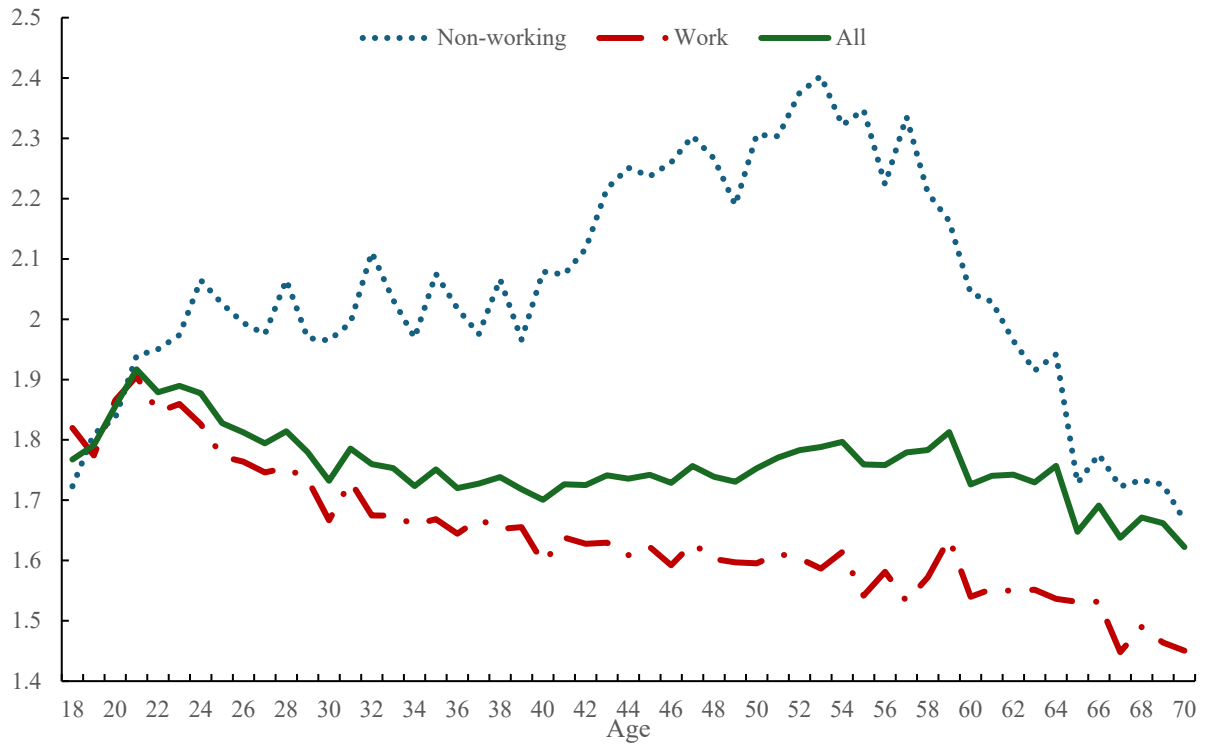


Chart 1d. Depression Frequency, NHIS 2024

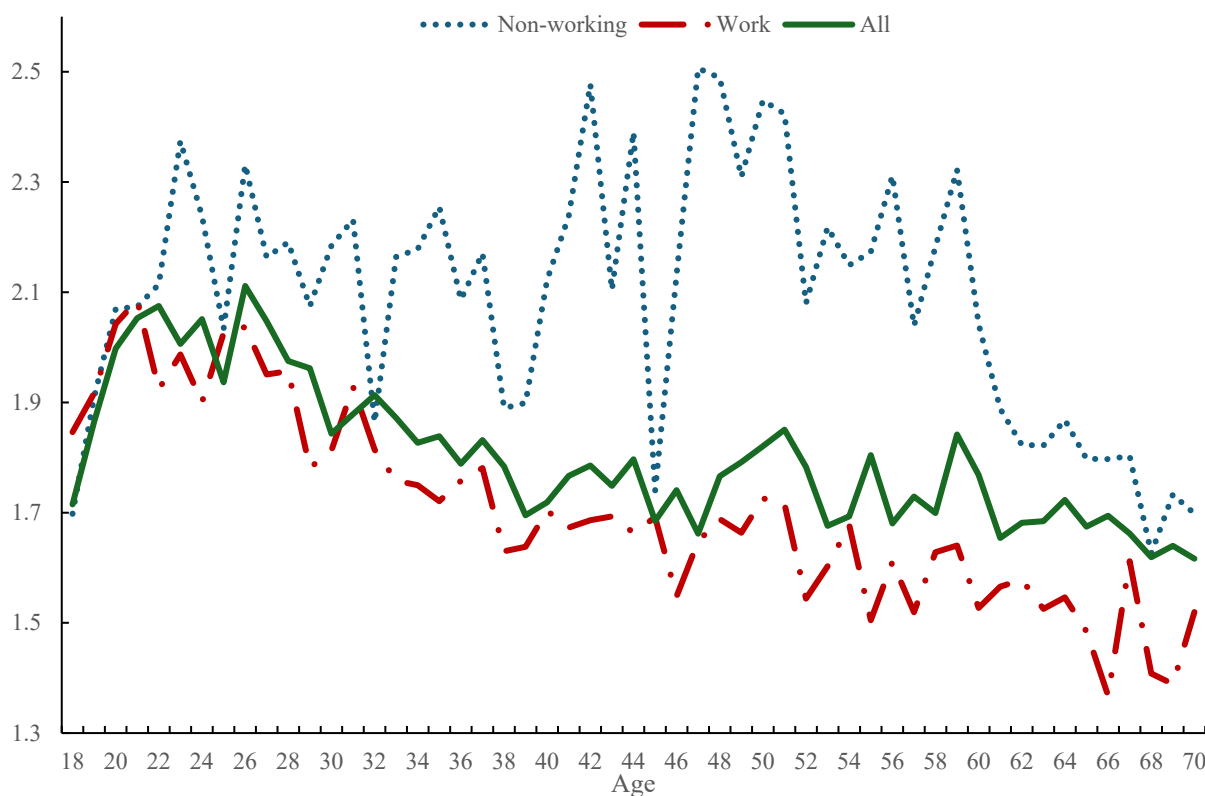


Chart 1e. Life satisfaction, NHIS, 2024

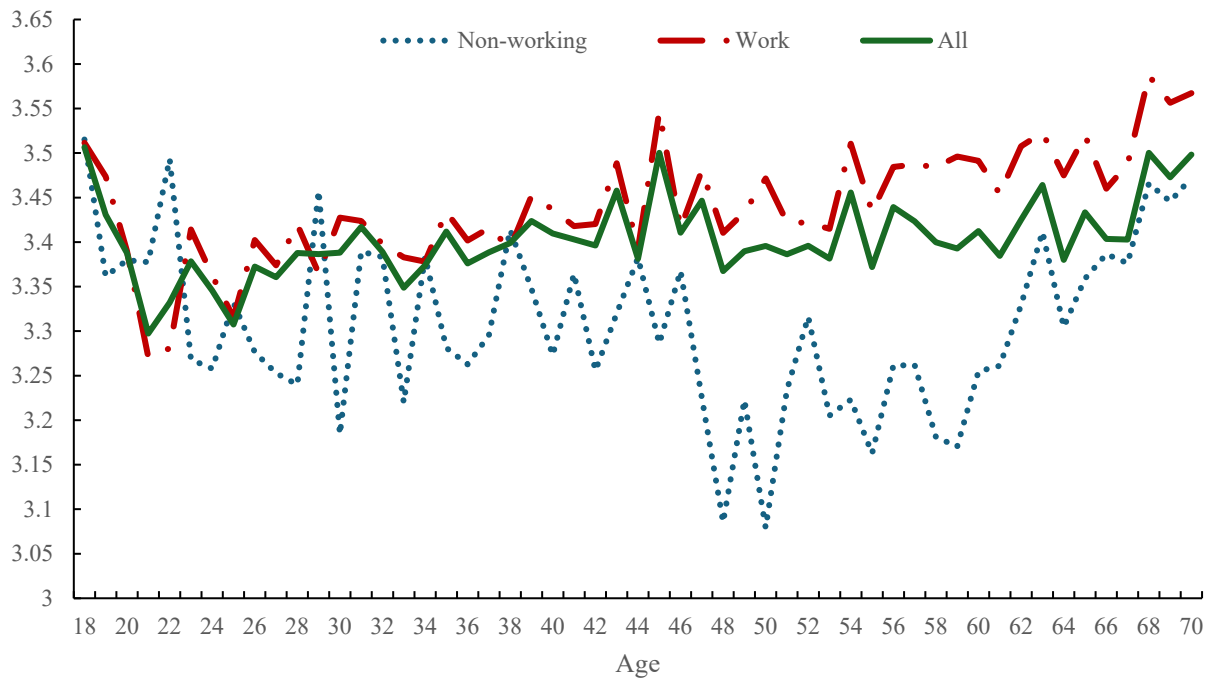


Chart 1f. Loneliness, NHIS, 2024



Chart 2a. Life satisfaction from the BRFSS, 2020-2025

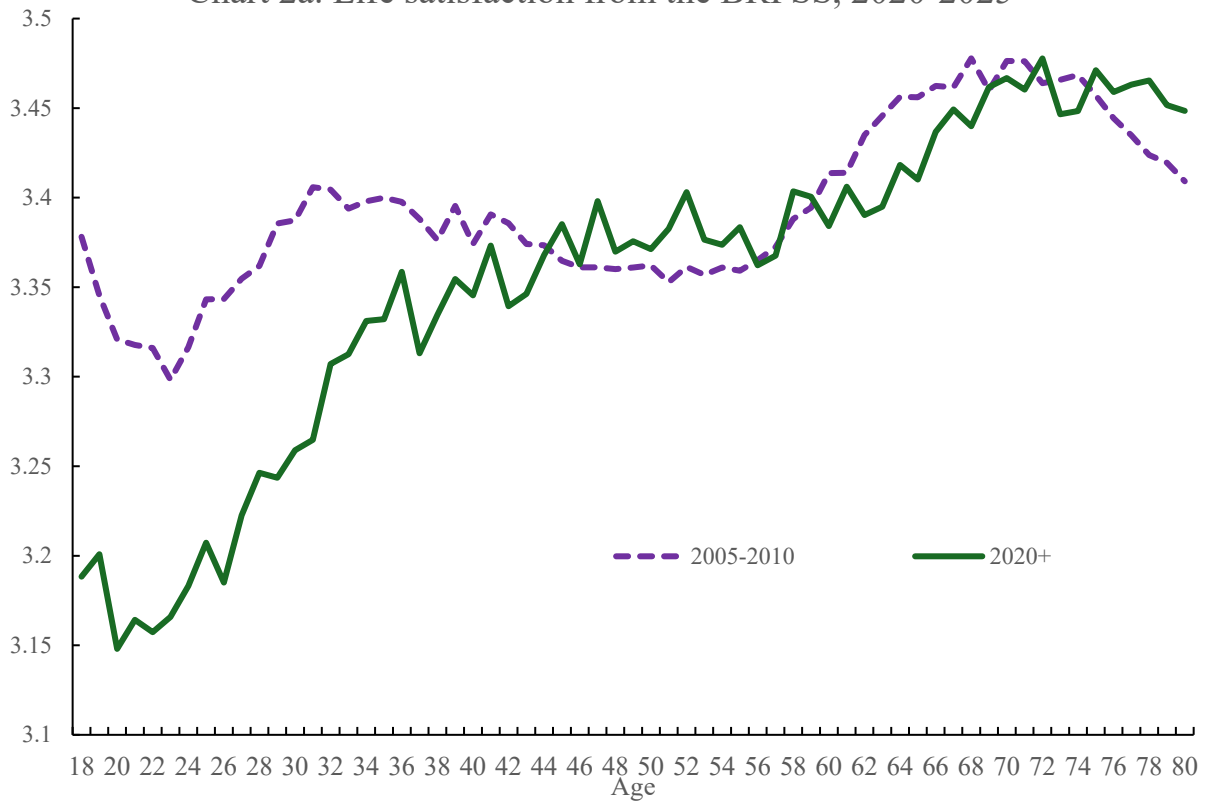


Chart 2b. Life satisfaction and work status, BRFSS

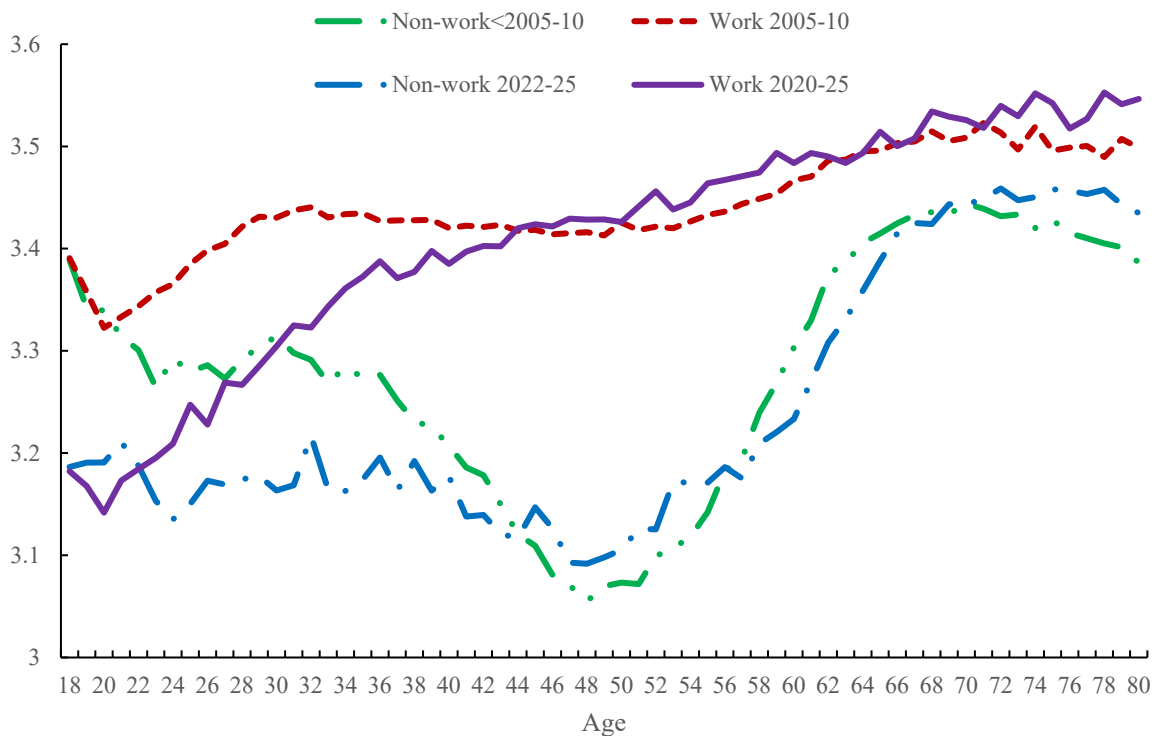


Chart 3a. Depressive Disorder Proportions, 2006-2025

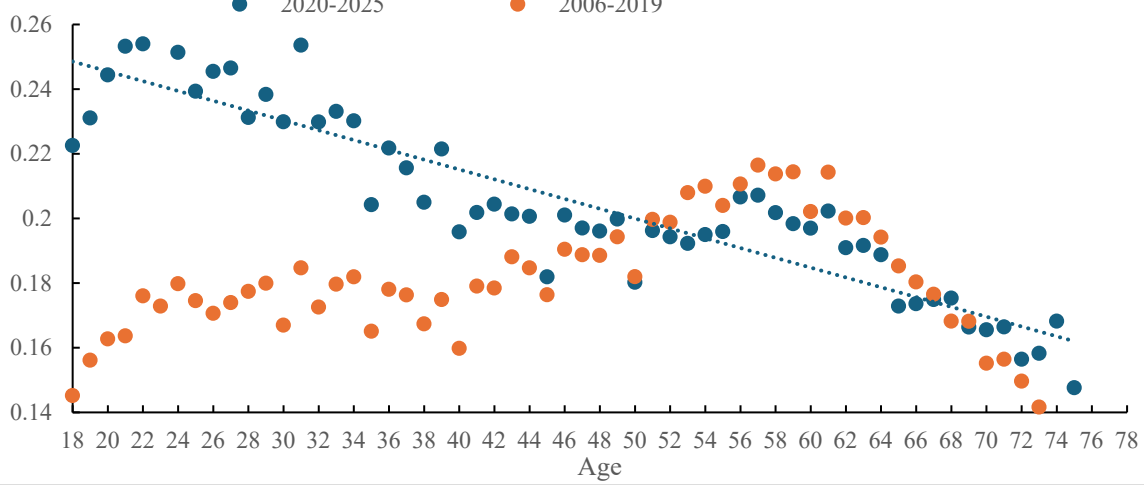


Chart 3b. Depressive Disorder Proportions by Labor Force Status, 2006-2025

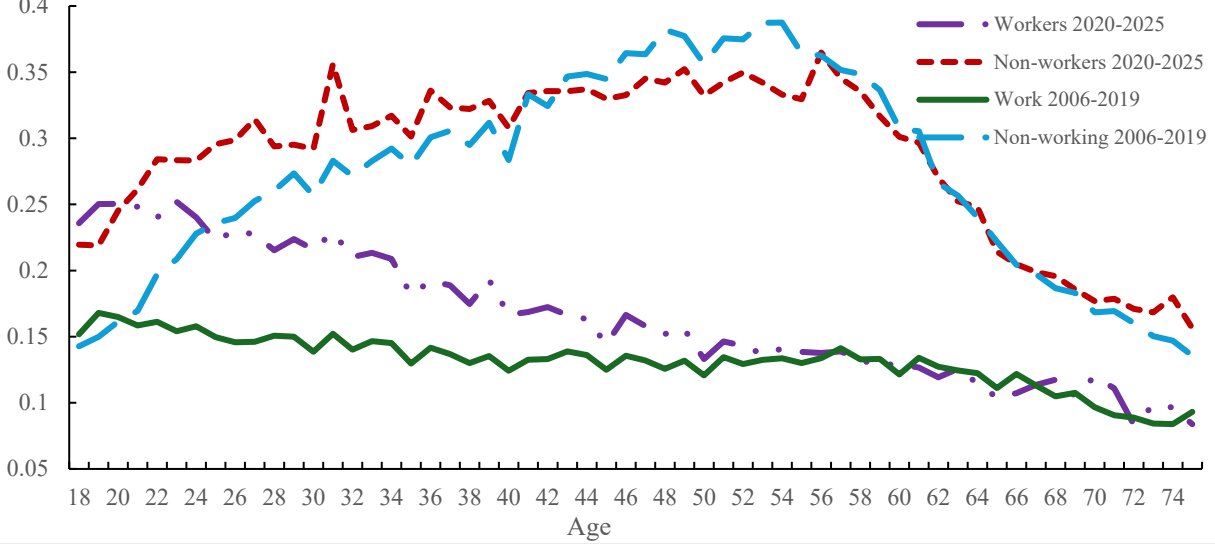


Chart 3c. Depression by age, 2020-2025 with current weights (calculated) and prior weights (counterfactual)

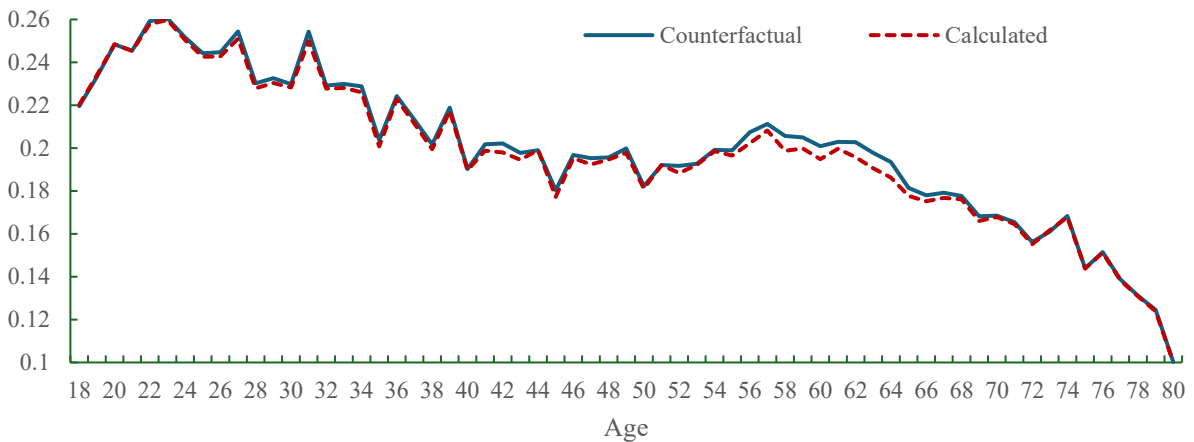


Chart 4. Loneliness, 2023-2025

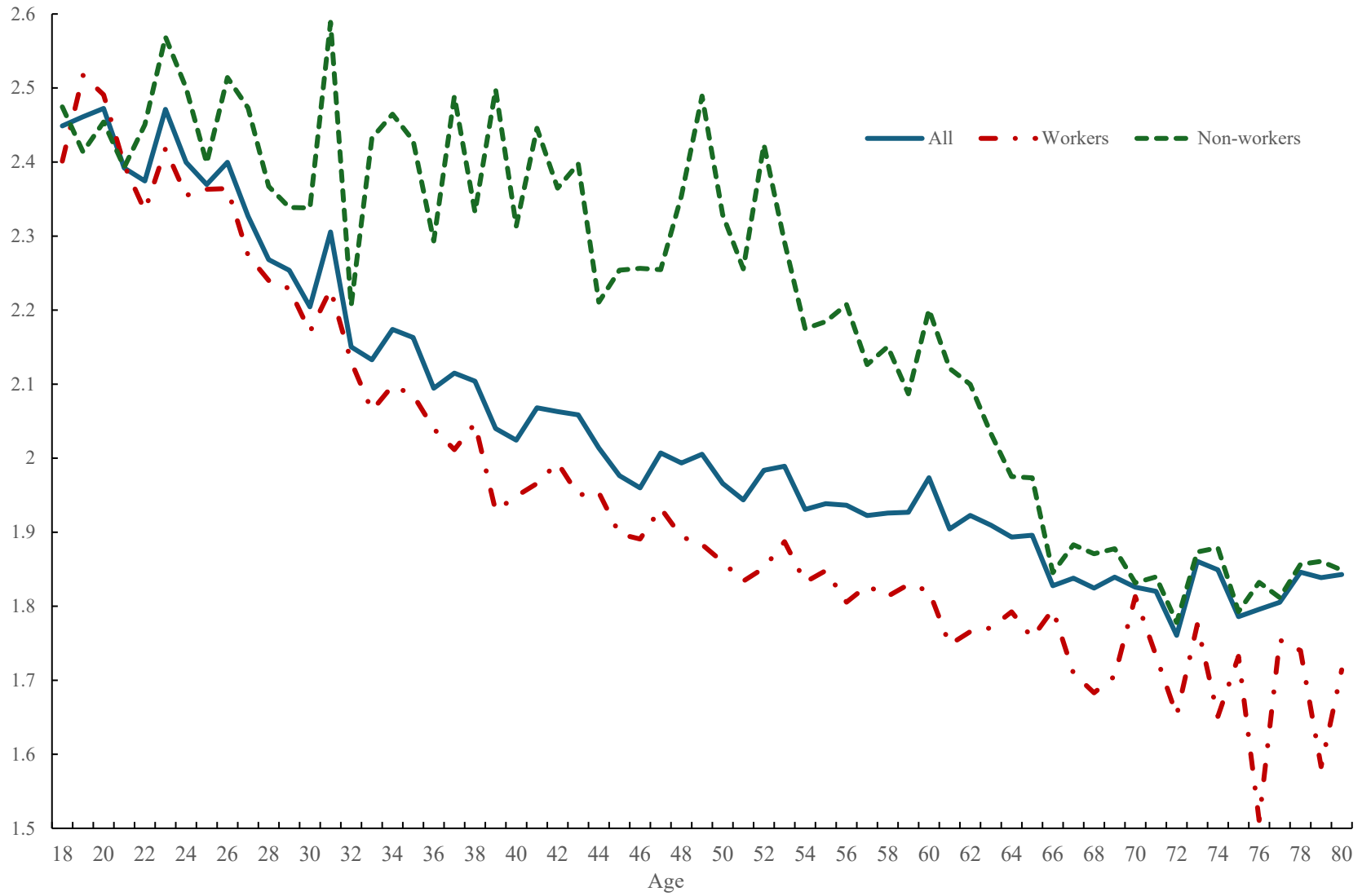


Chart 5. Despair, 1993-2025

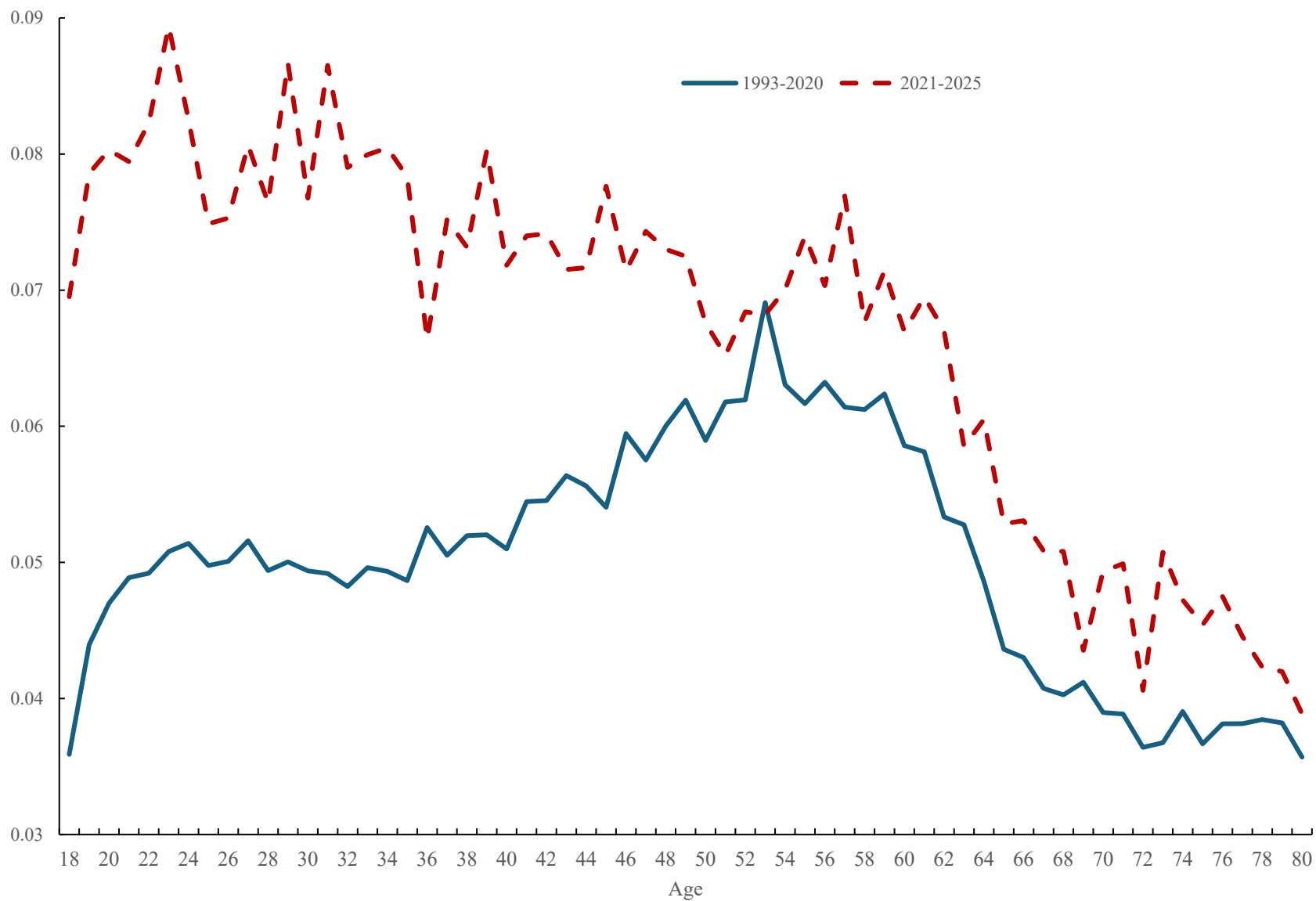


Chart 6a. Despair 1993-2009

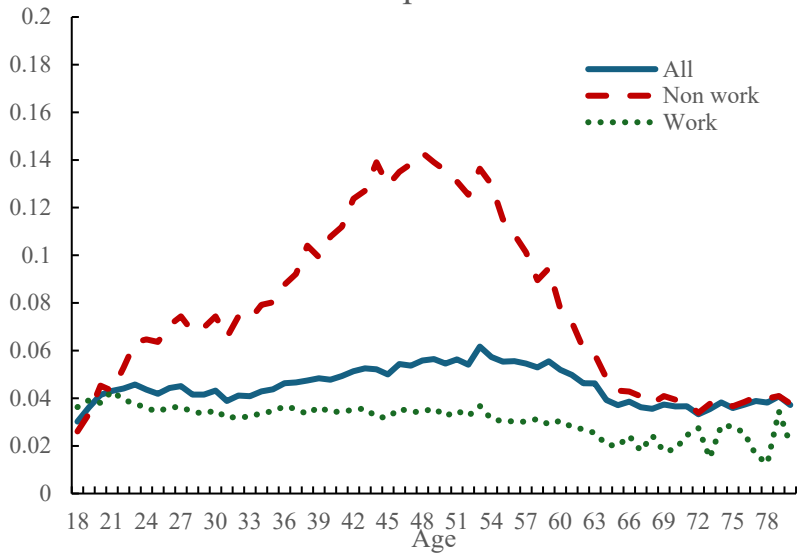


Chart 6b. Despair 2010-2015

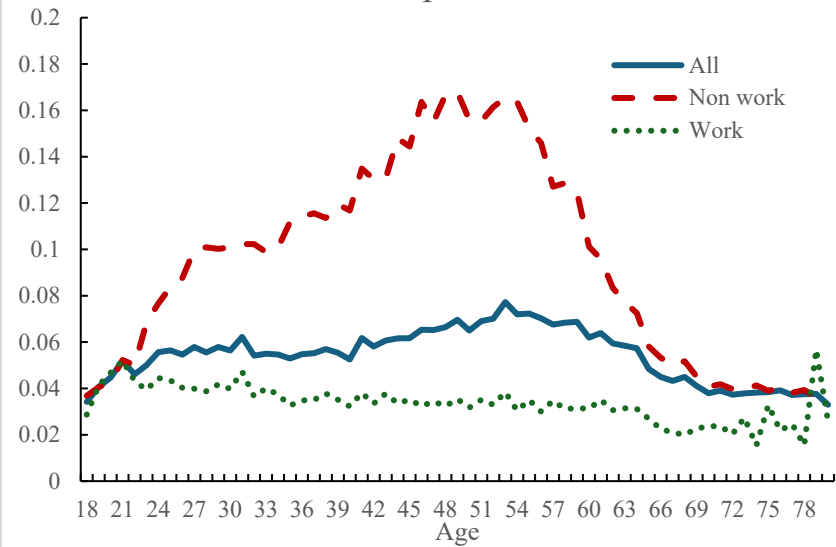


Chart 6c. Despair 2016-2020

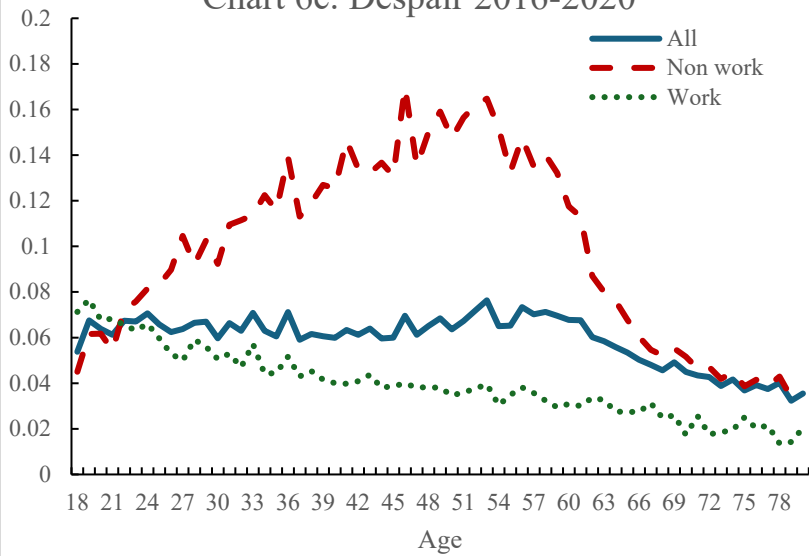


Chart 6d. Despair 2021-2025

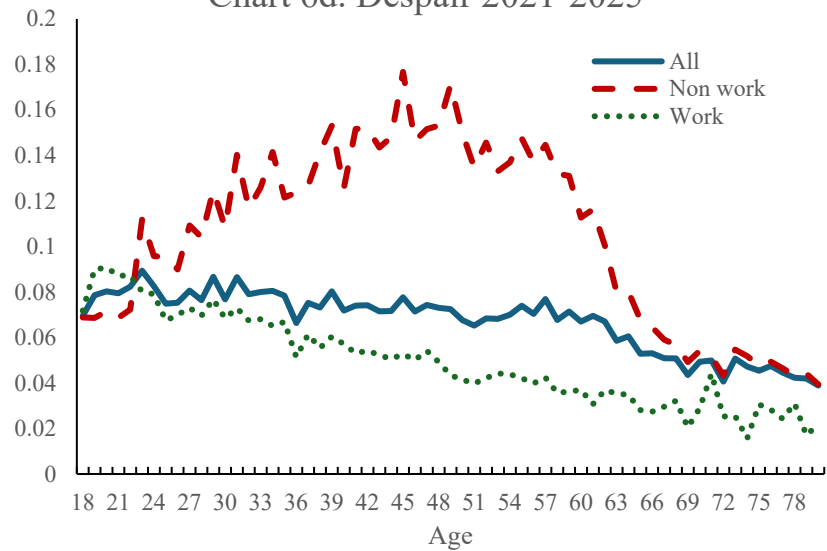


Chart 7a. Despair for non-workers

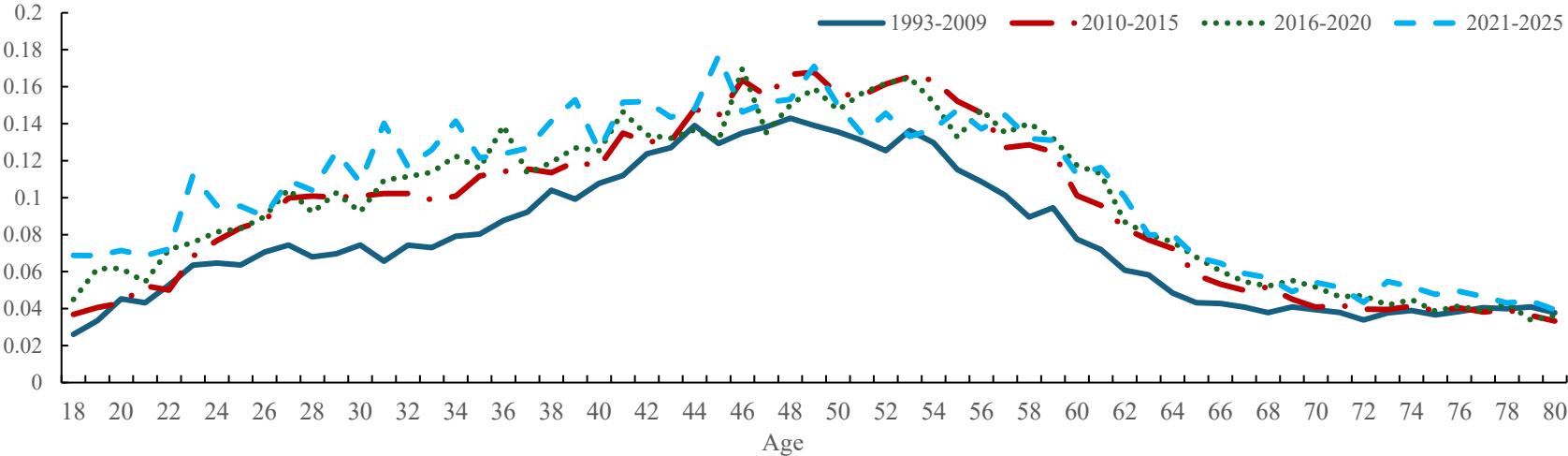


Chart 7b. Despair for workers.

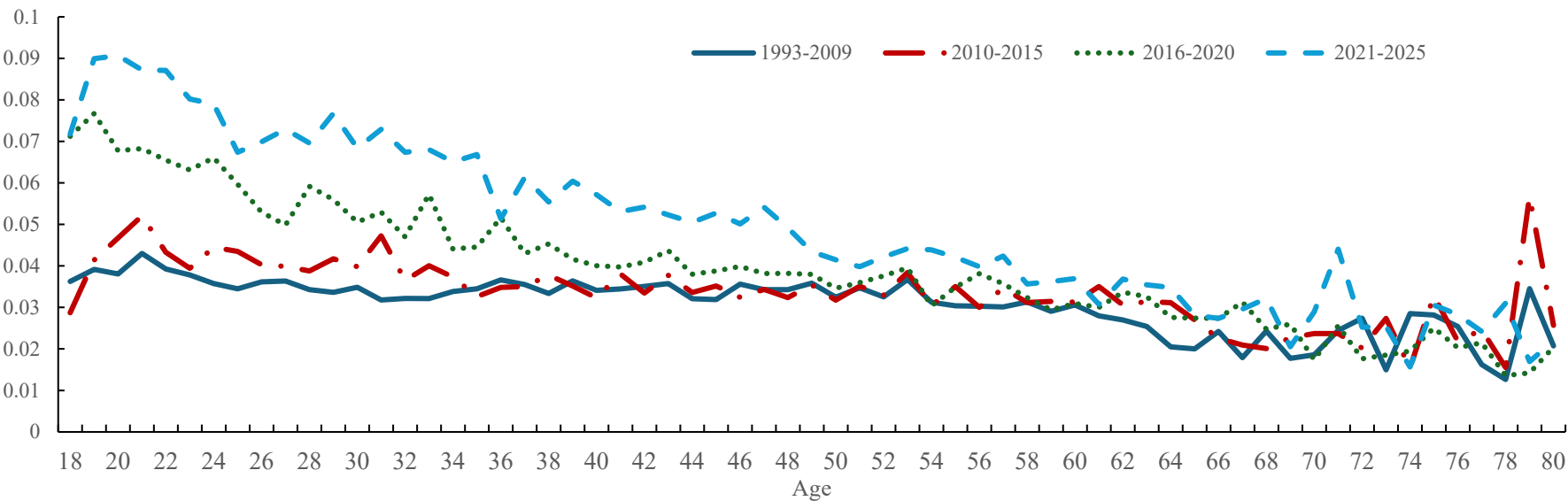


Chart 8. Differences in despair between work and non-work by age, 1993-2024

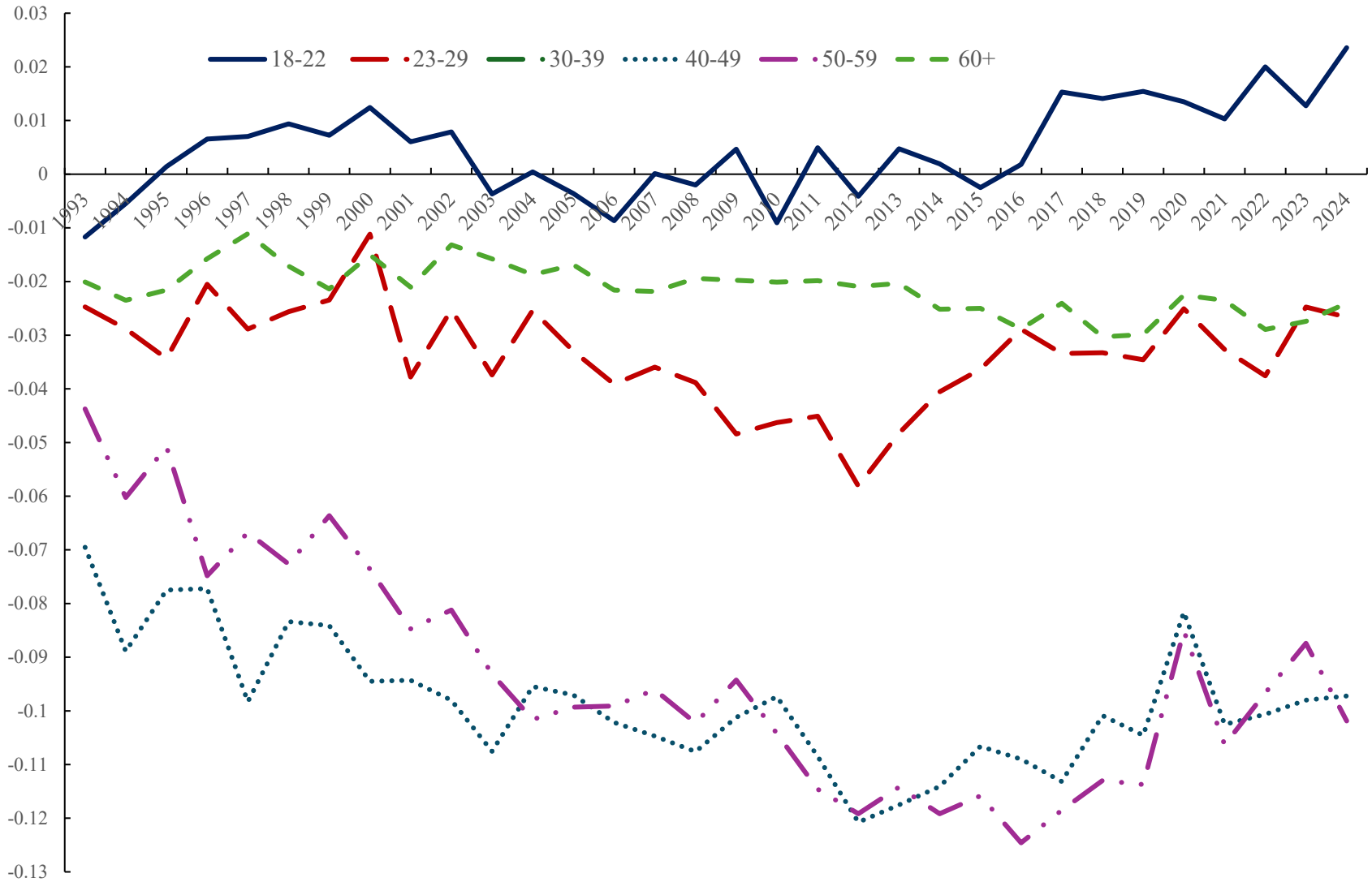
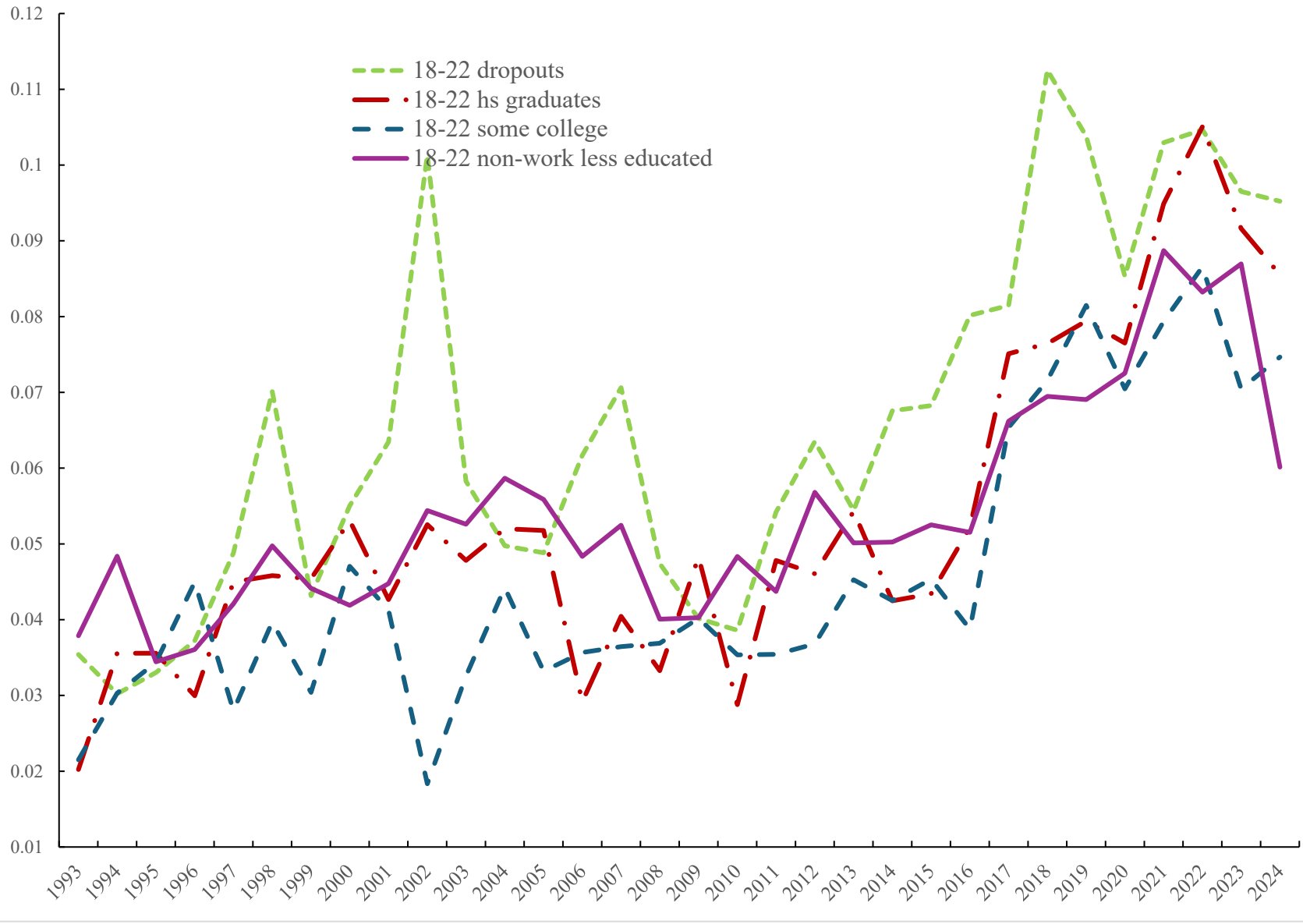


Chart 9. Despair, 1993-2024 for ages 18-22 by level of education for workers and non-workers



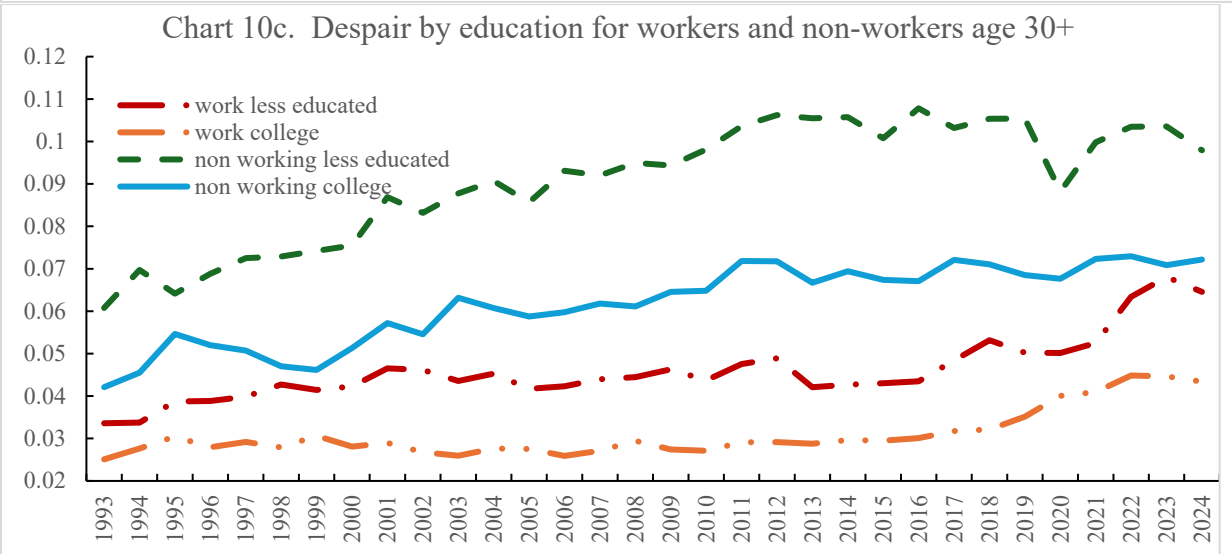
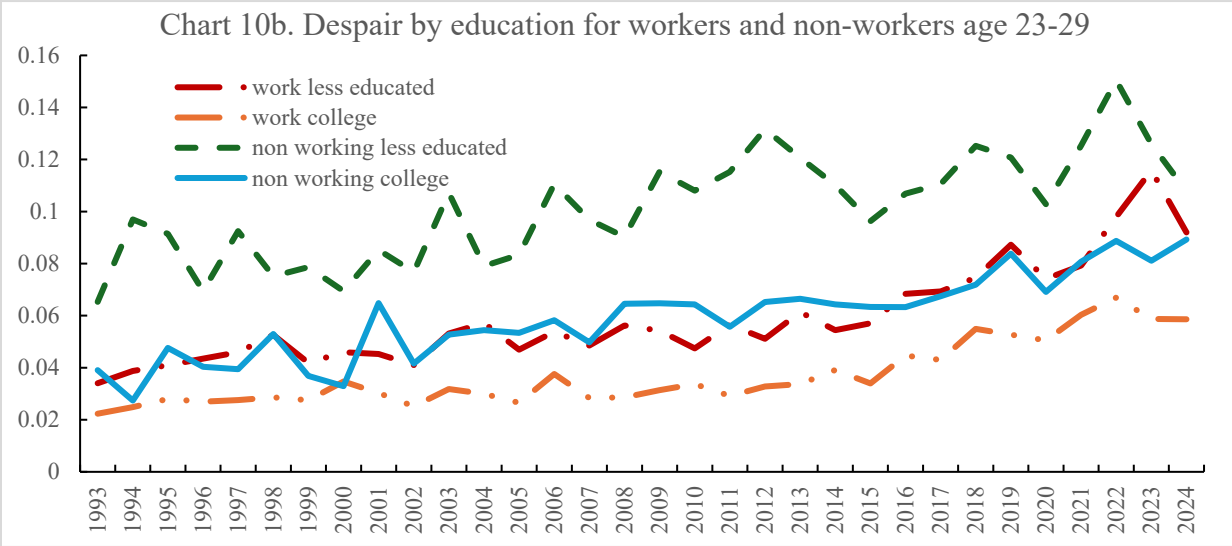
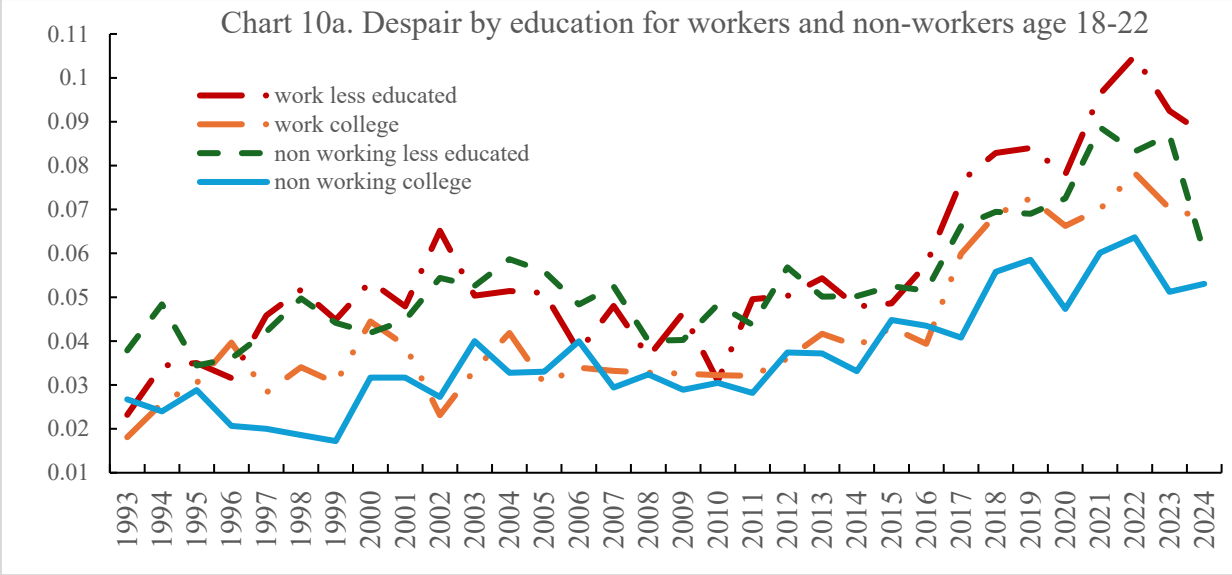


Chart 11a. Wellbeing, AJQS, 2025

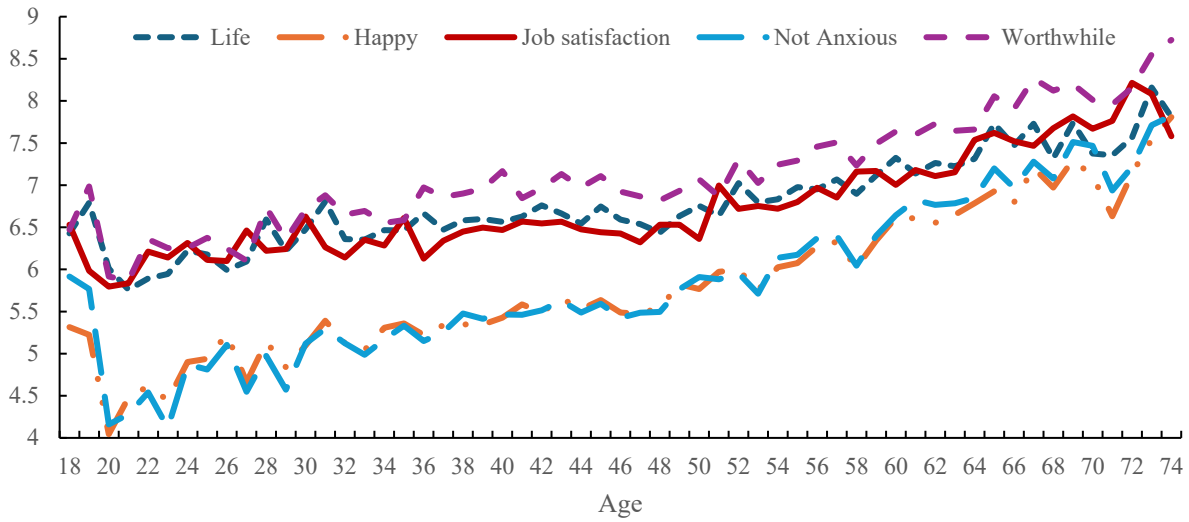


Chart 11b. Freedom, AJQS, 2025

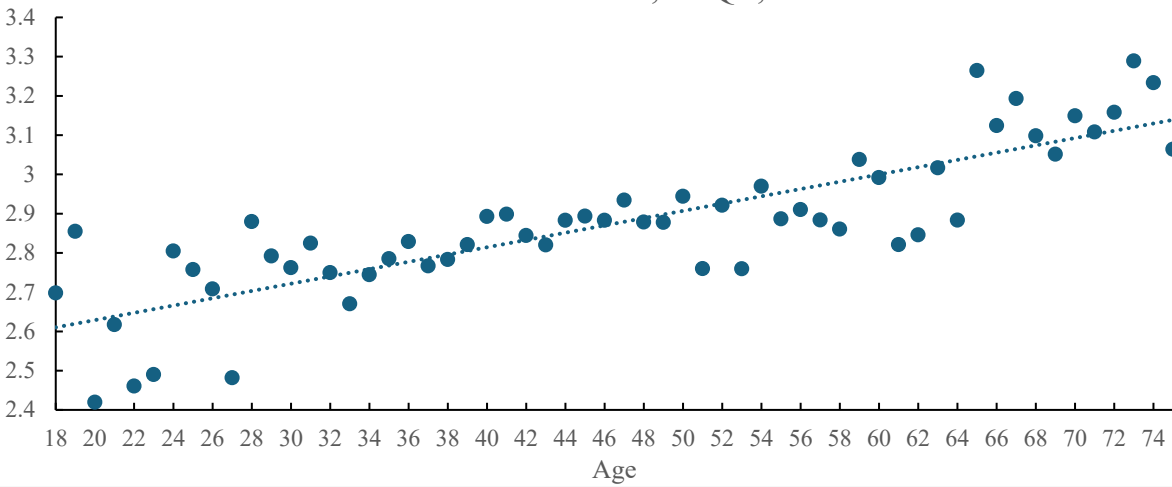


Chart 11c. Fast, AJQS, 2025

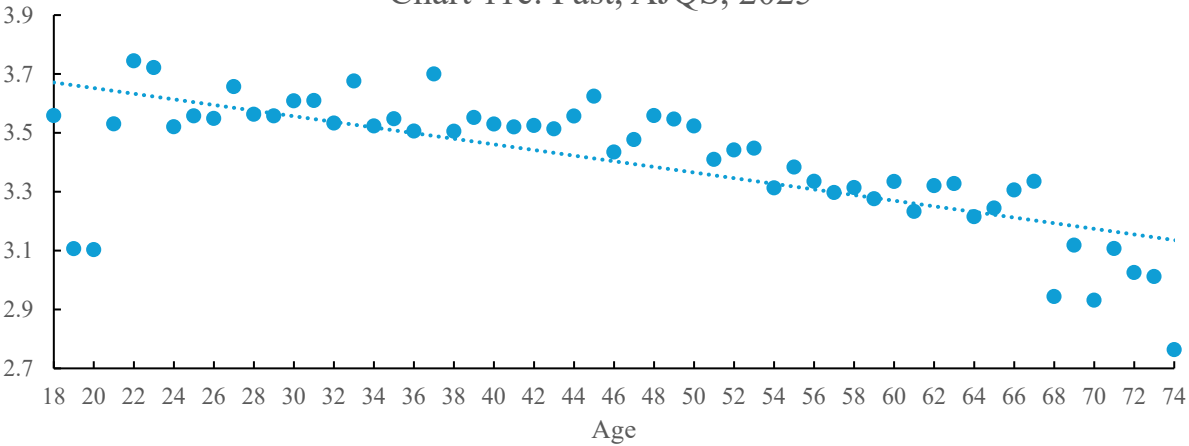


Chart 11d. Safe, AJQS, 2025

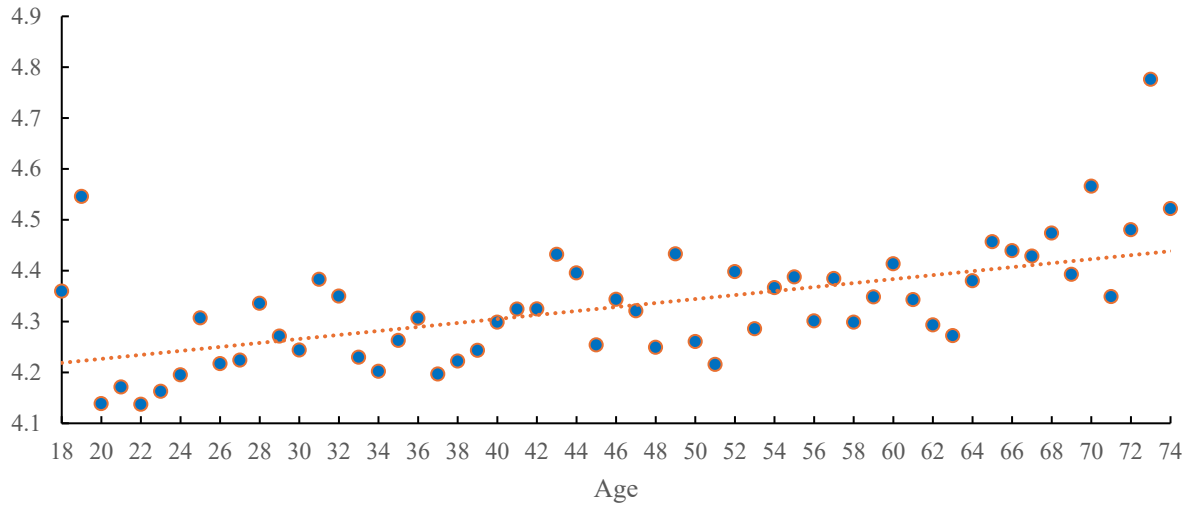


Chart 11e. Belong, AJQS, 2025

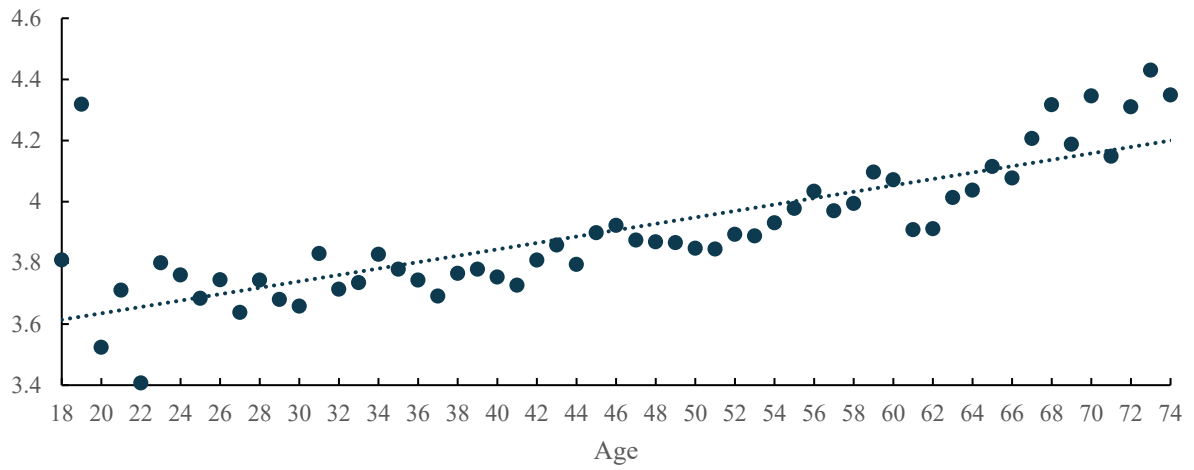
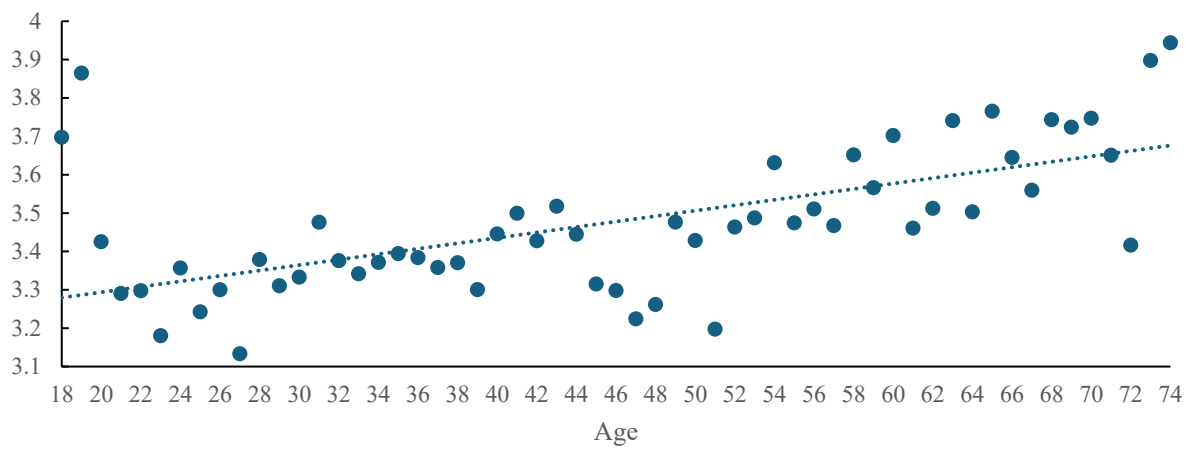
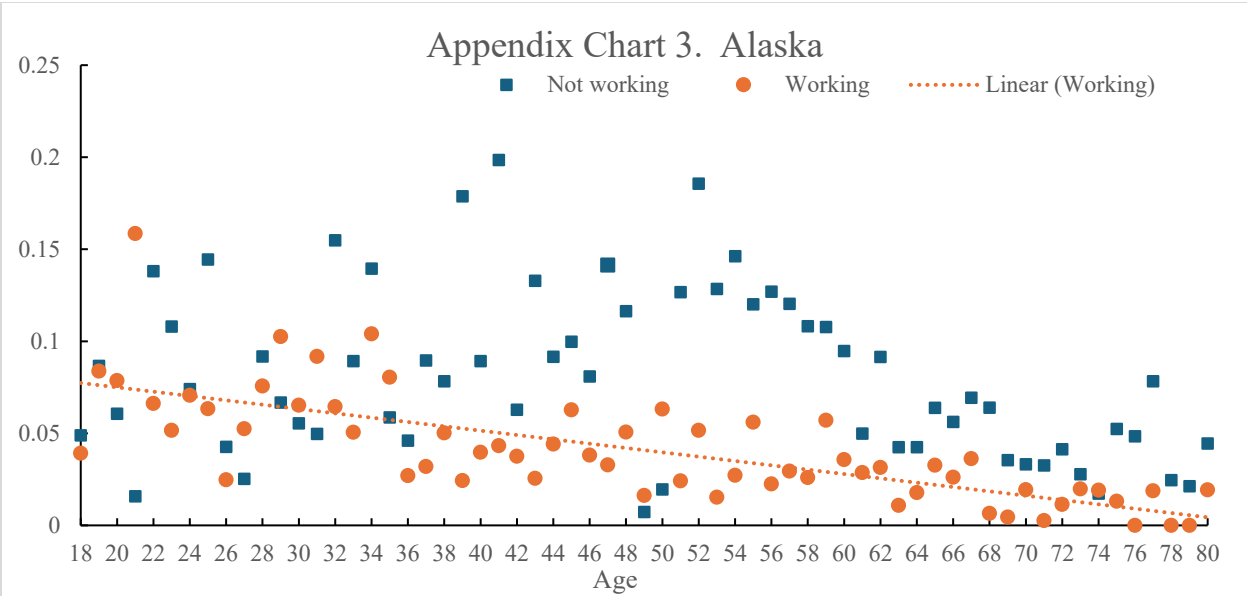
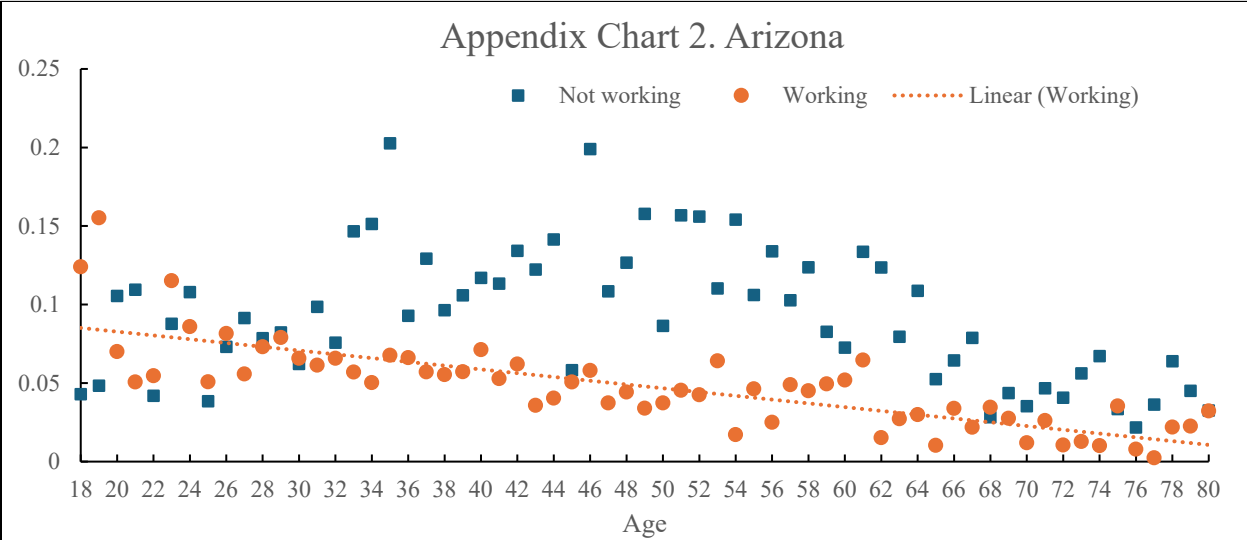
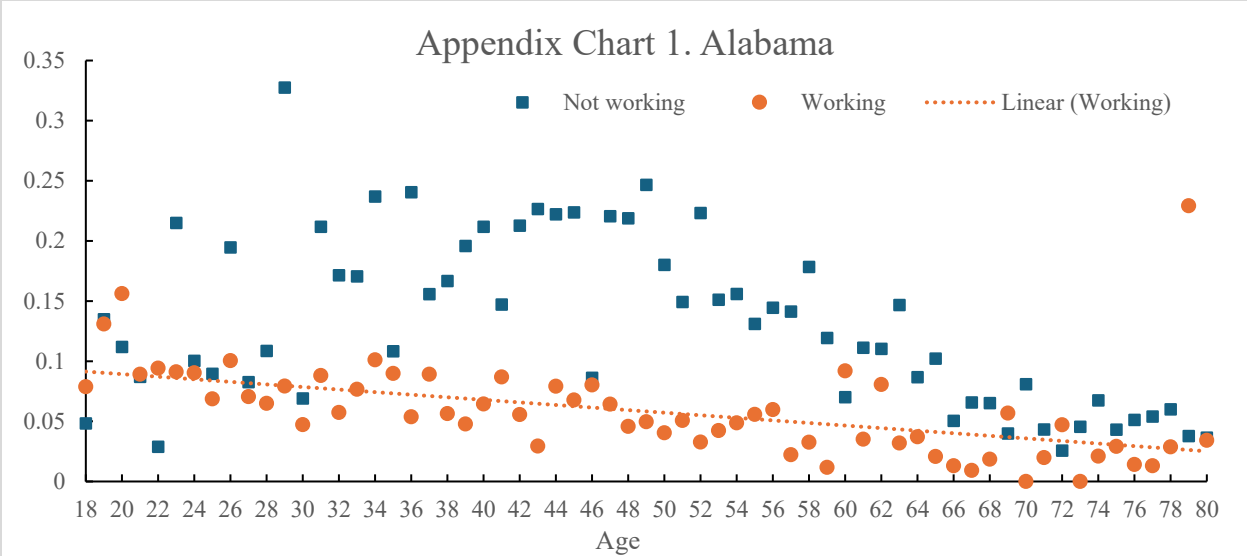
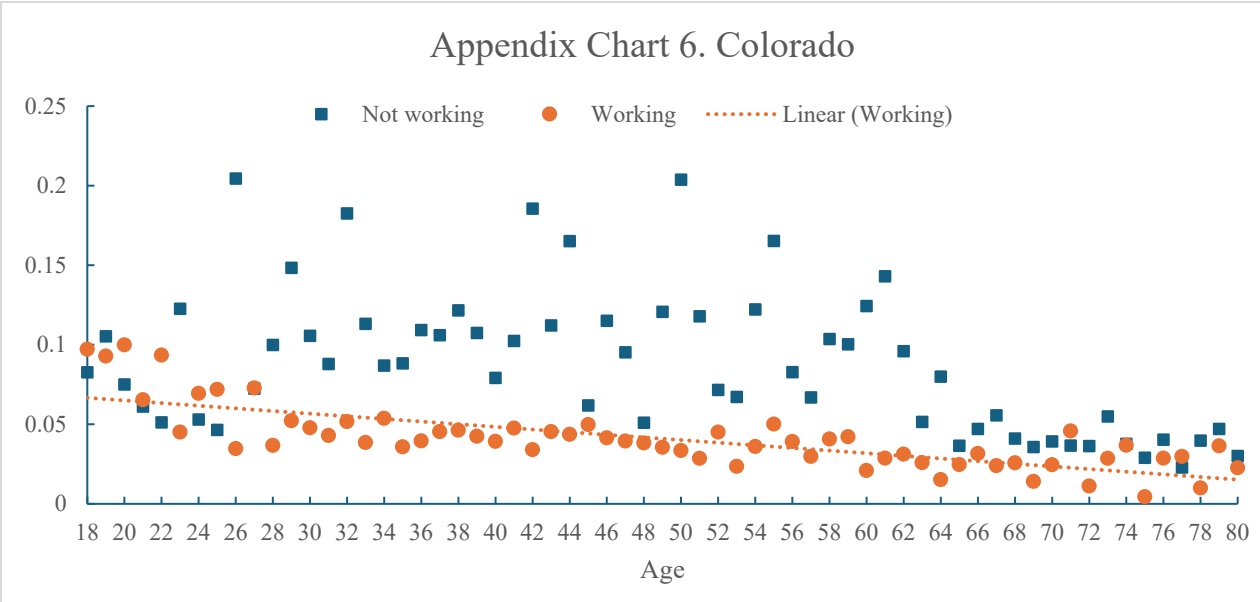
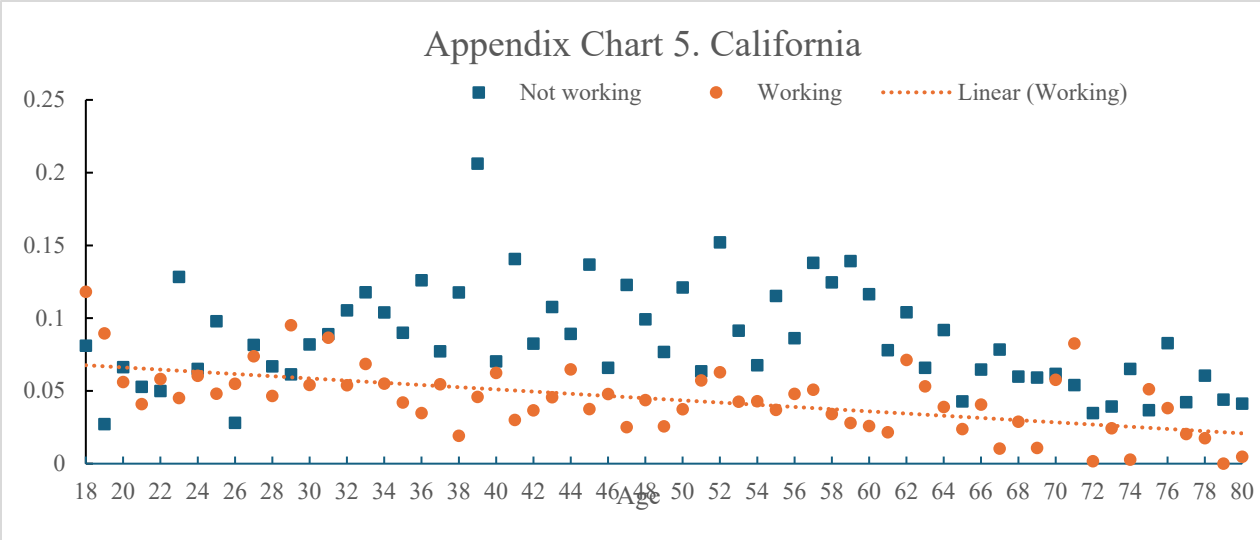
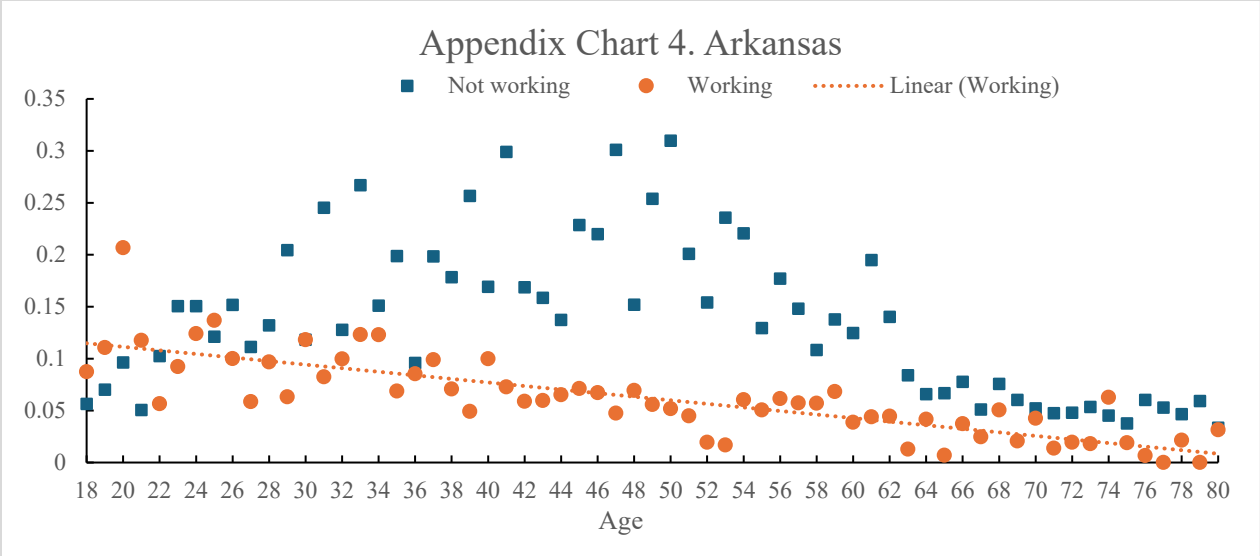


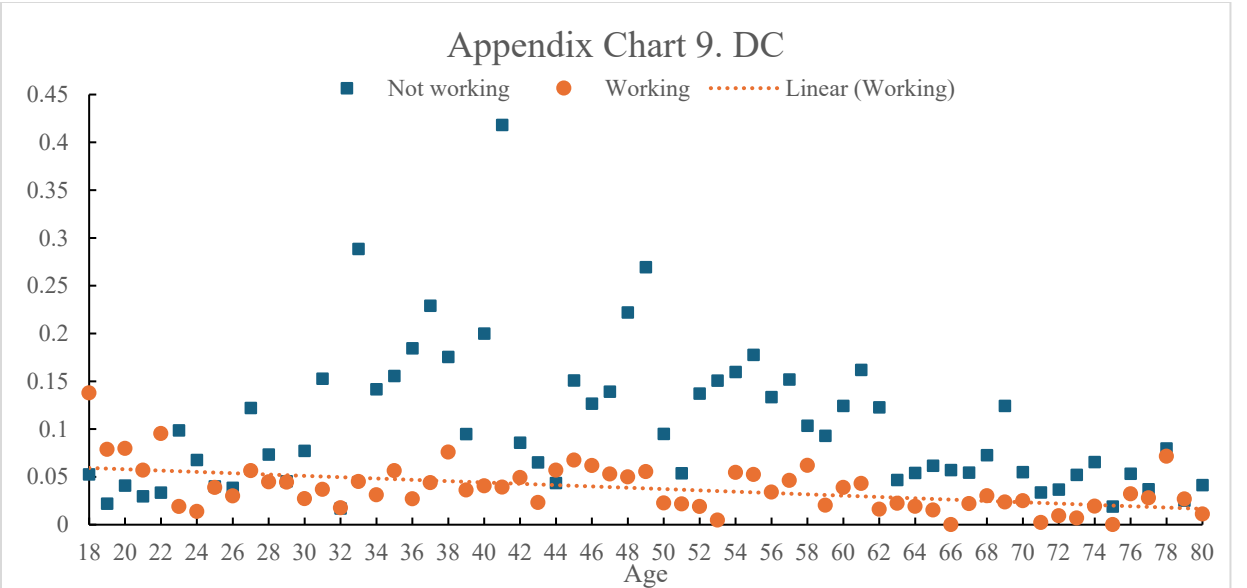
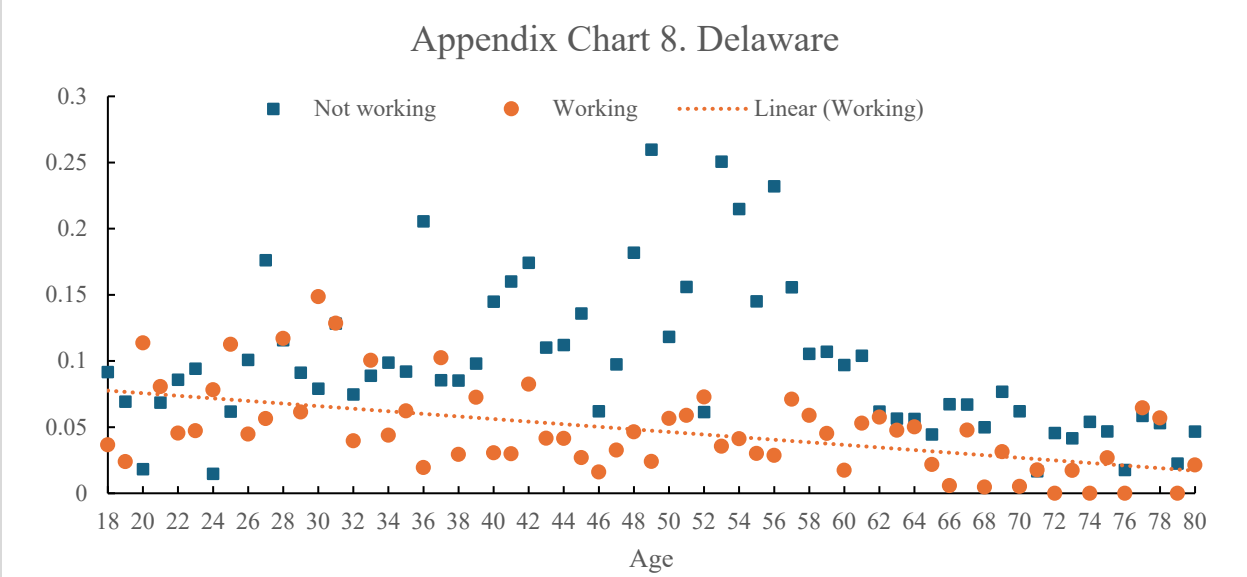
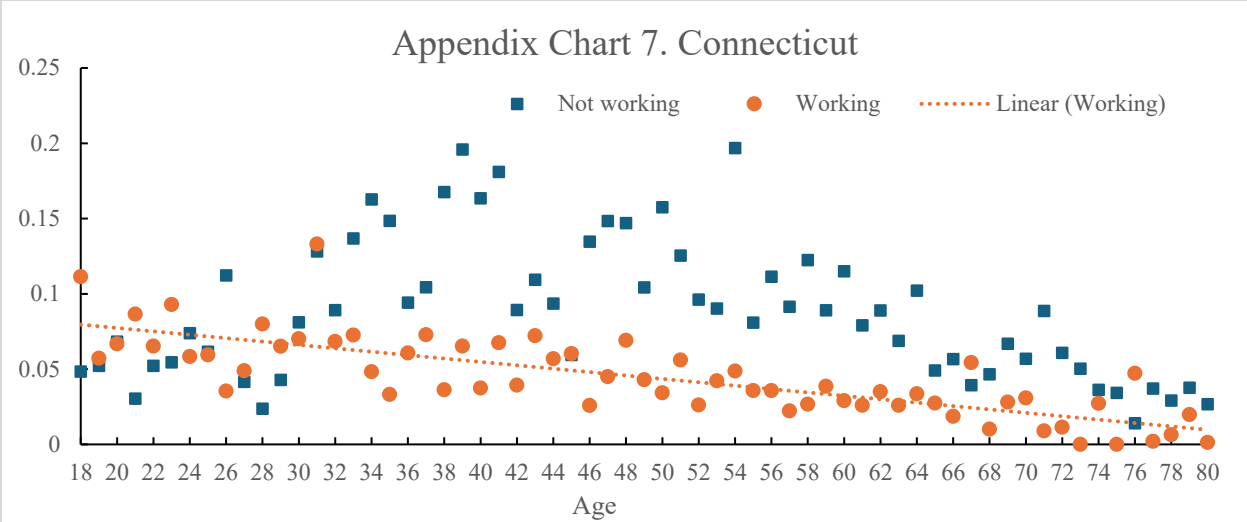
Chart 11f. Fair Pay, AJQS, 2025



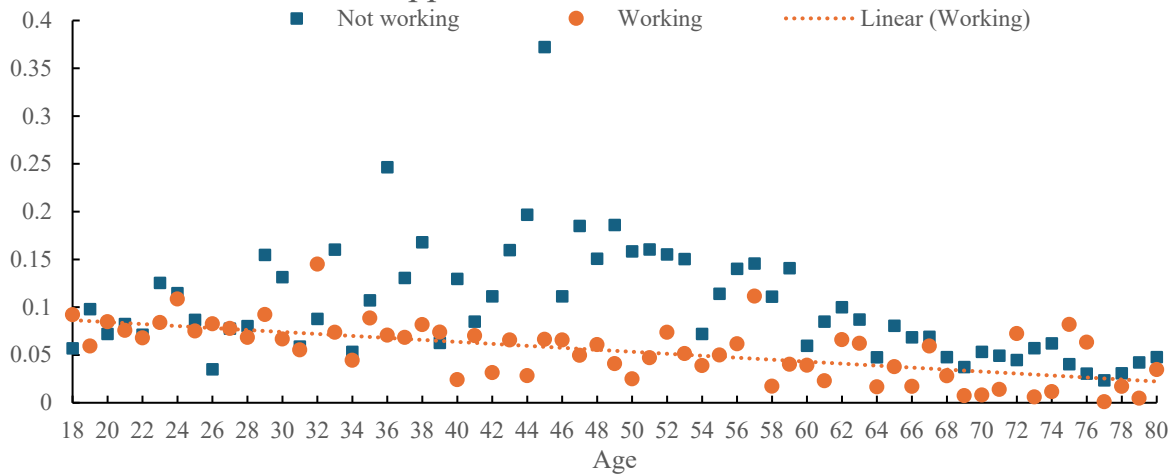
Appendix Charts showing despair by age for workers and non-workers across states and large cities, 2020-2025



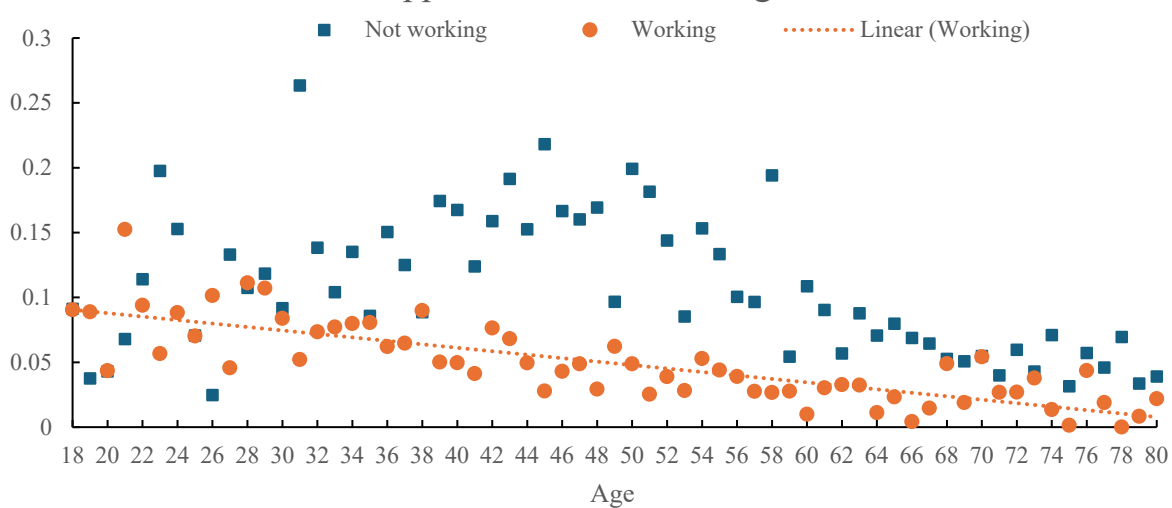




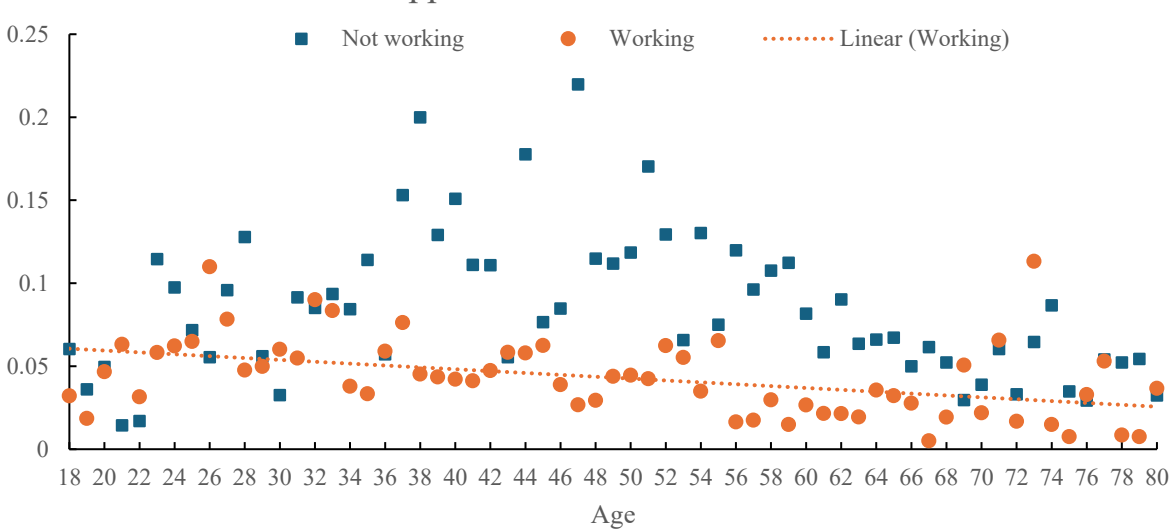
Appendix Chart 10. Florida



Appendix Chart 11. Georgia



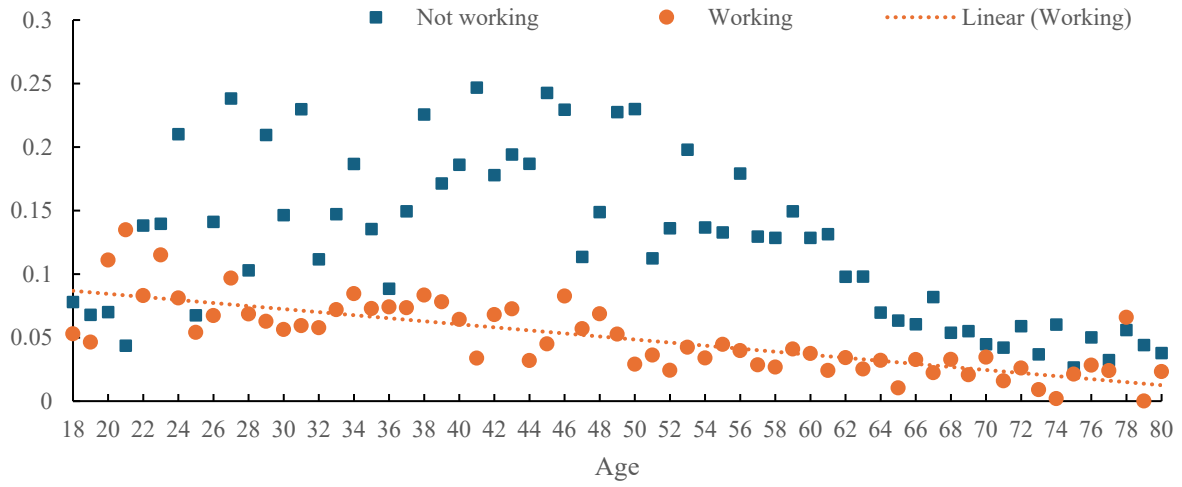
Appendix Chart 12. Hawaii



Appendix Chart 13. Idaho



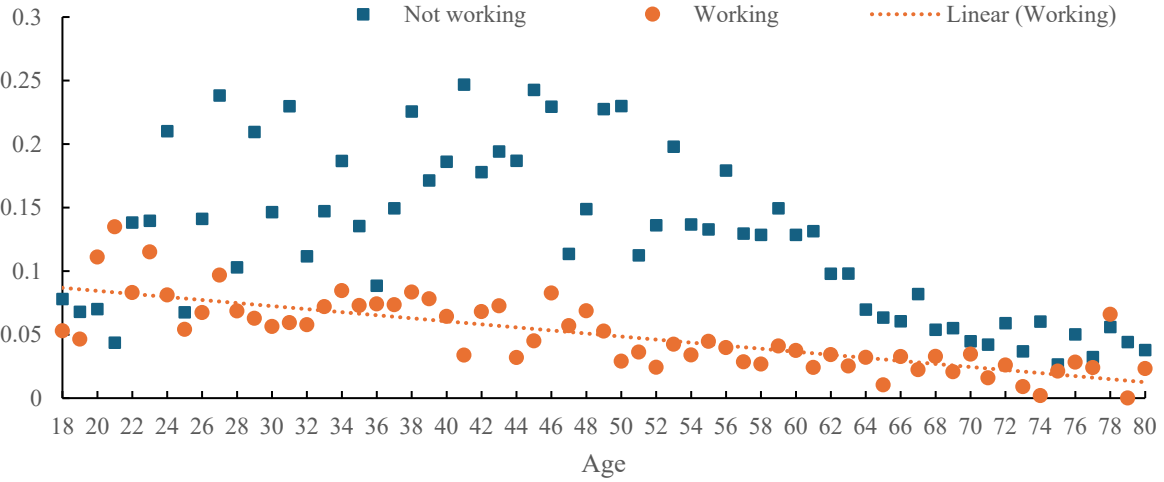
Appendix Chart 14. Indiana



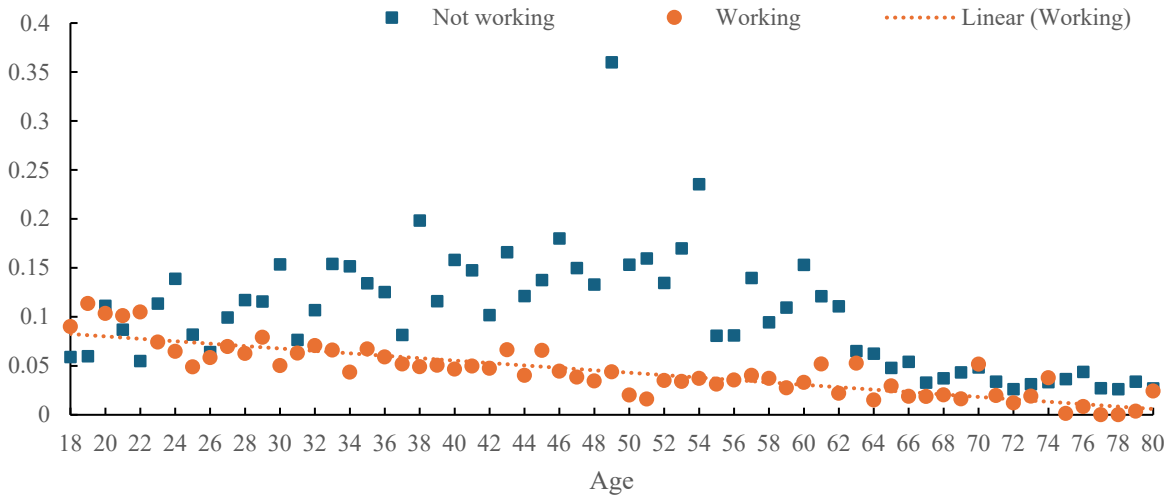
Appendix Chart 15. Illinois



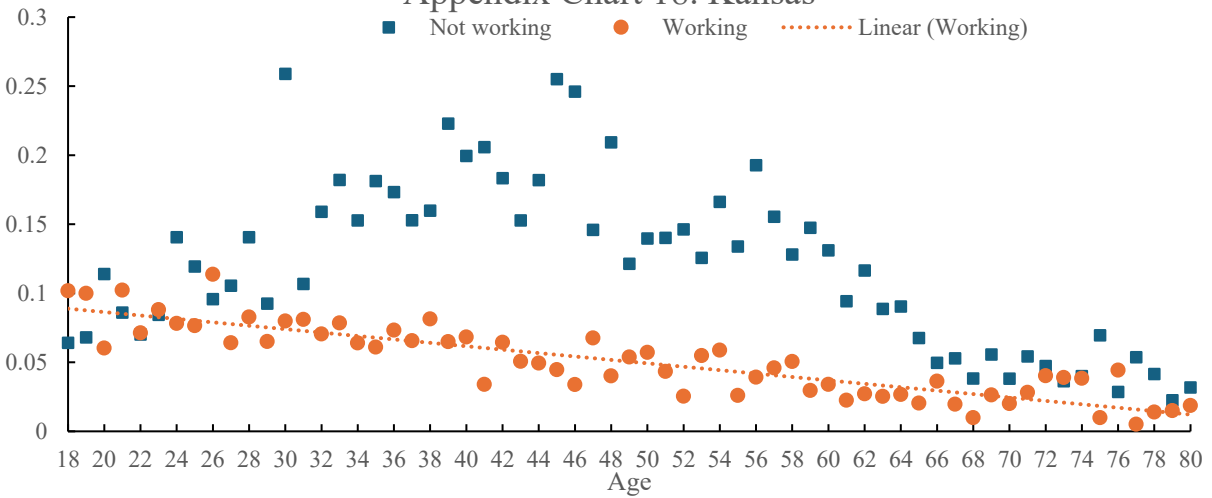
Appendix Chart 16. Indiana



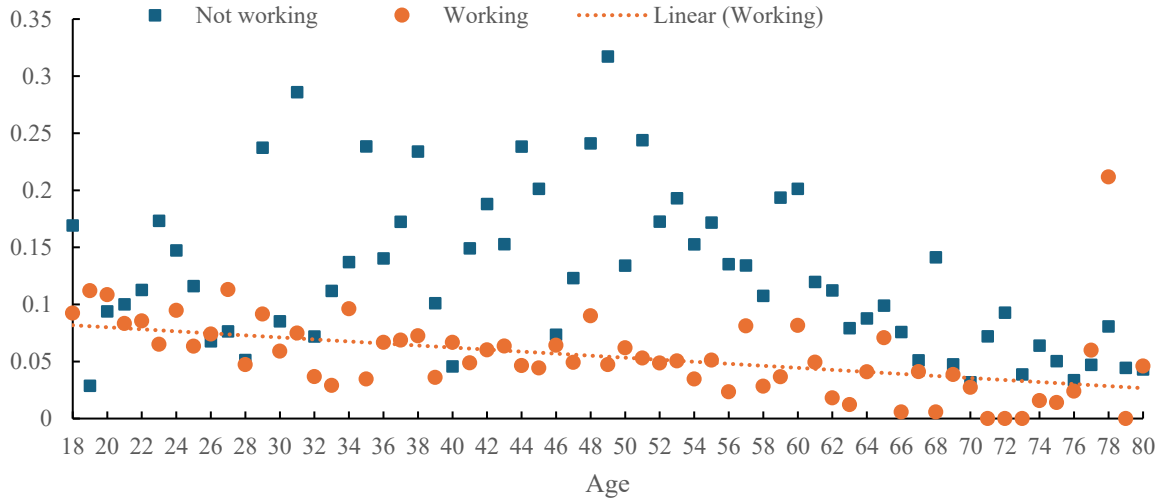
Appendix Chart 17. Iowa



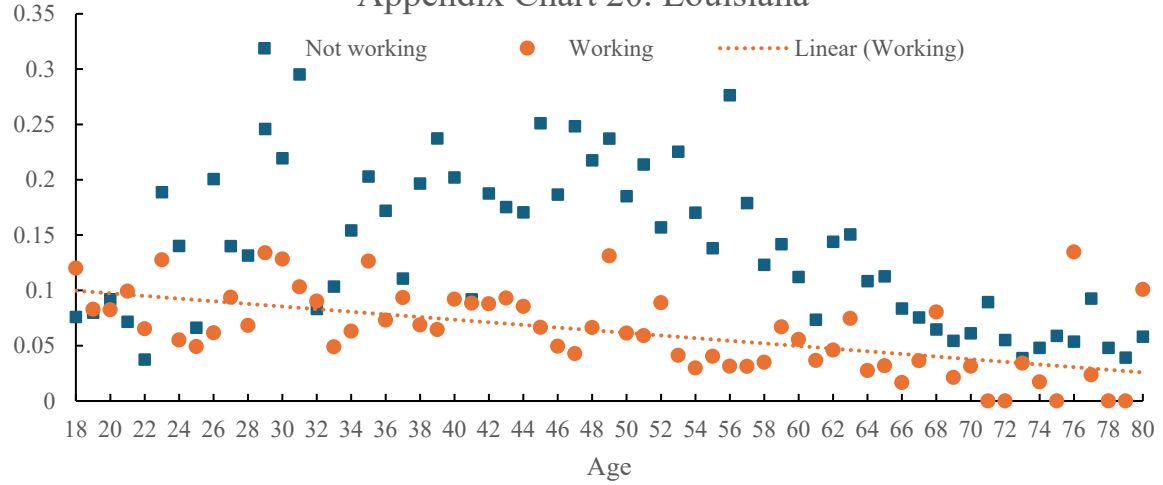
Appendix Chart 18. Kansas



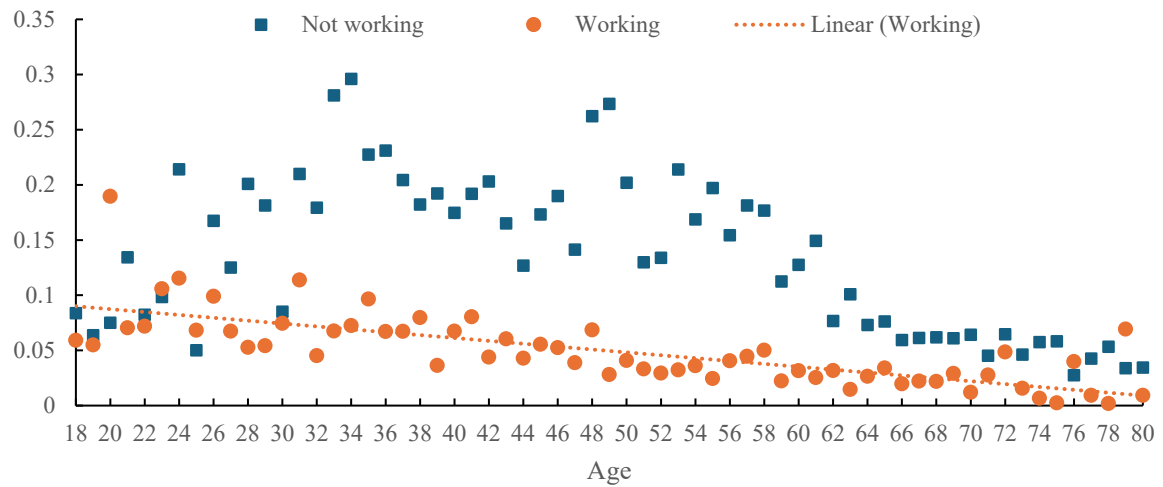
Appendix Chart 19. Kentucky



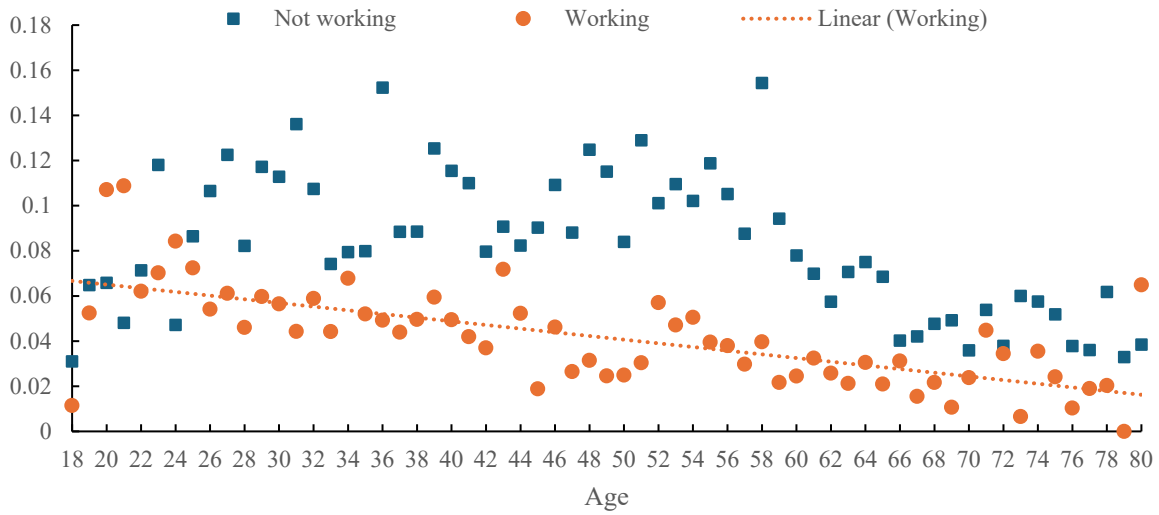
Appendix Chart 20. Louisiana



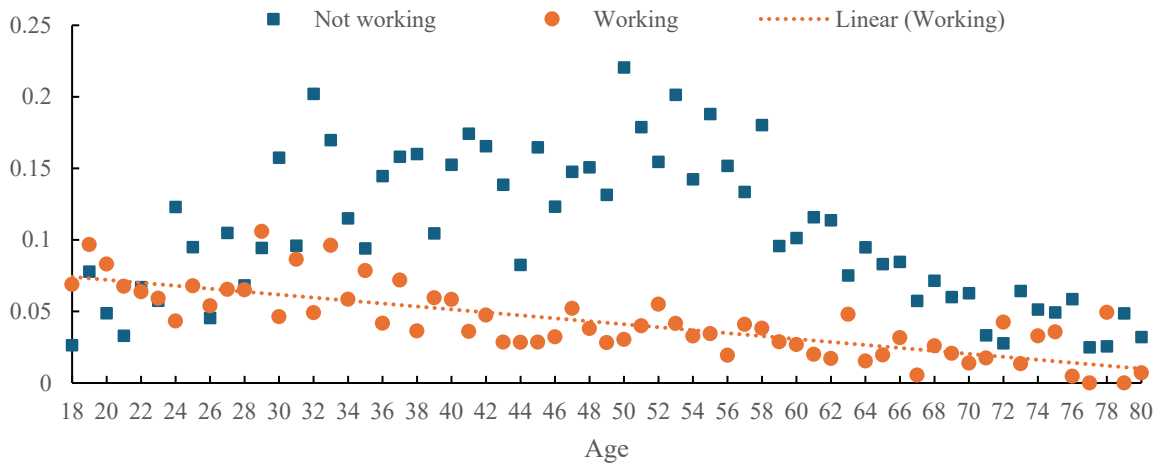
Appendix Chart 21. Maine



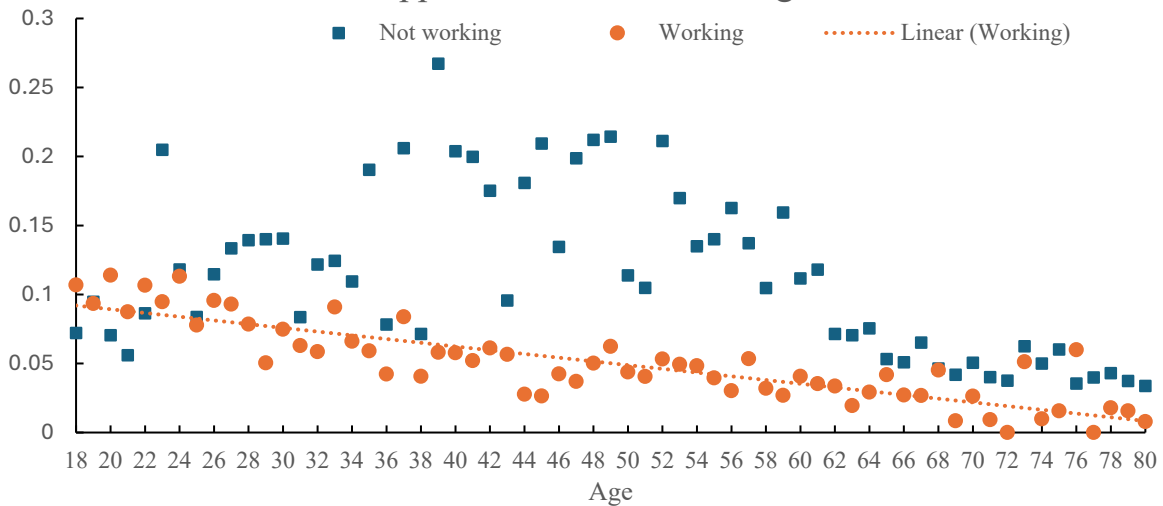
Appendix Chart 22. Maryland



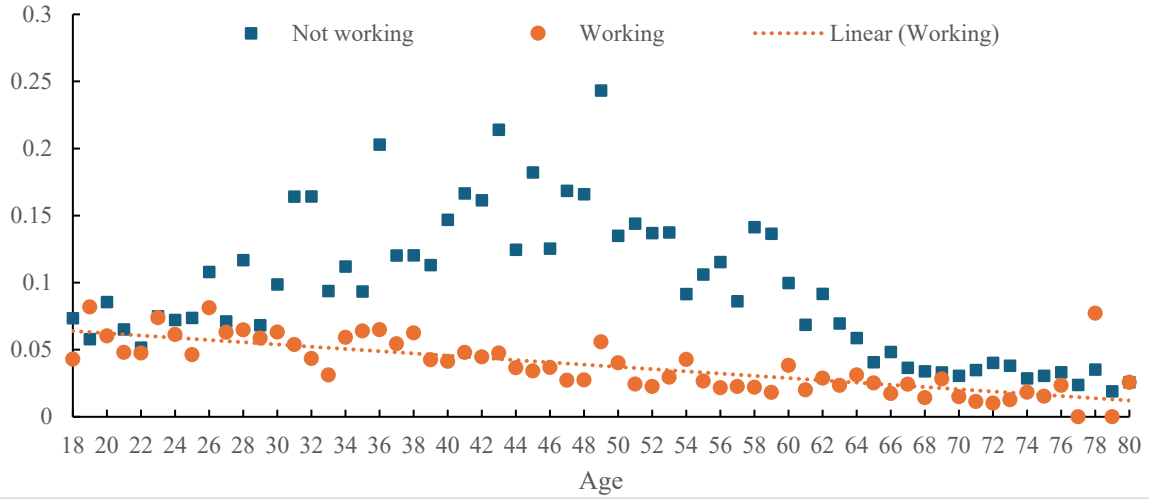
Appendix Chart 23. Massachusetts



Appendix Chart 24. Michigan



Appendix Chart 25. Minnesota



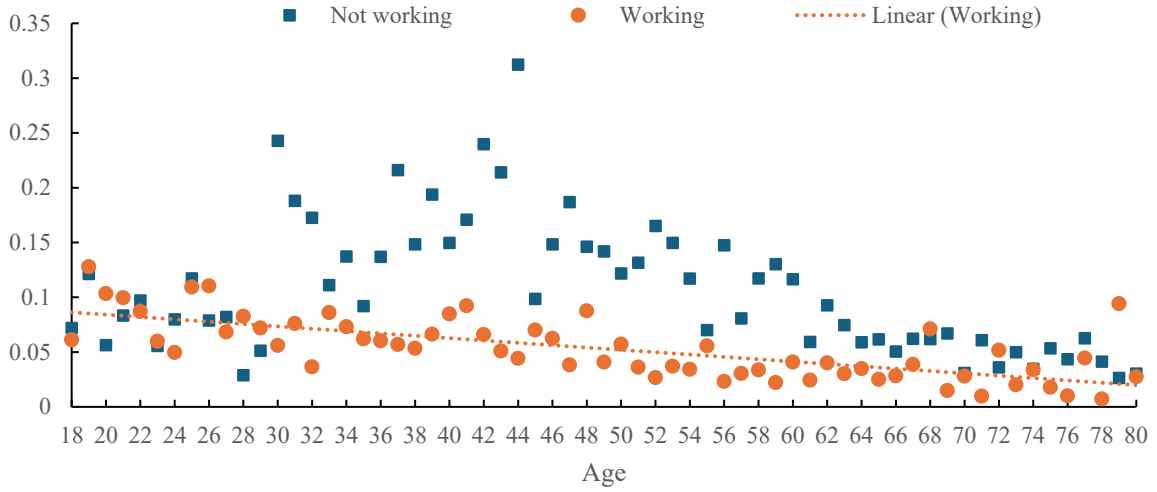
Appendix Chart 26. Mississippi



Appendix Chart 27. Missouri



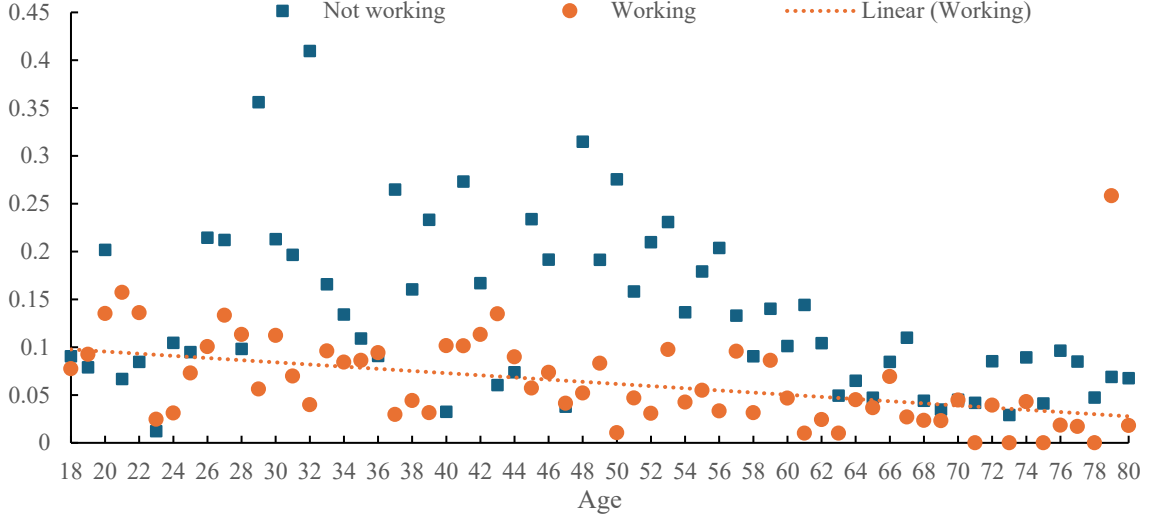
Appendix Chart 28. Montana



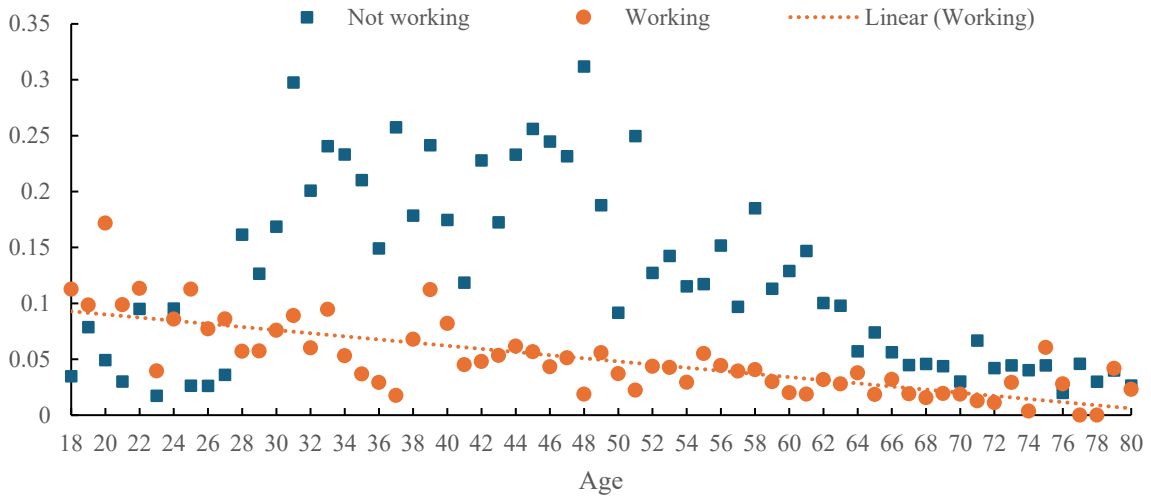
Appendix Chart 29. Nebraska



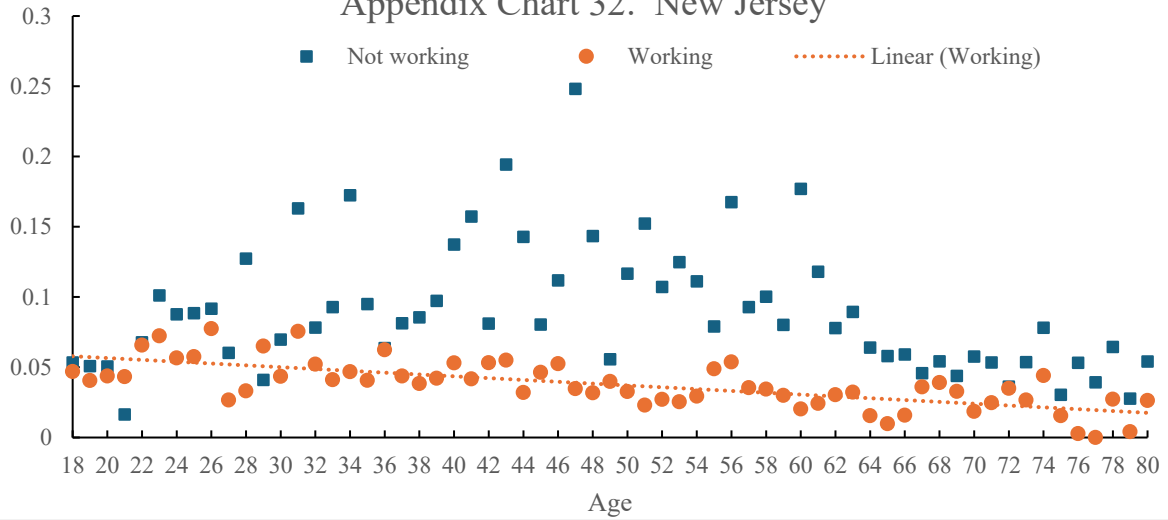
Appendix Chart 30. Nevada



Appendix Chart 31. New Hampshire



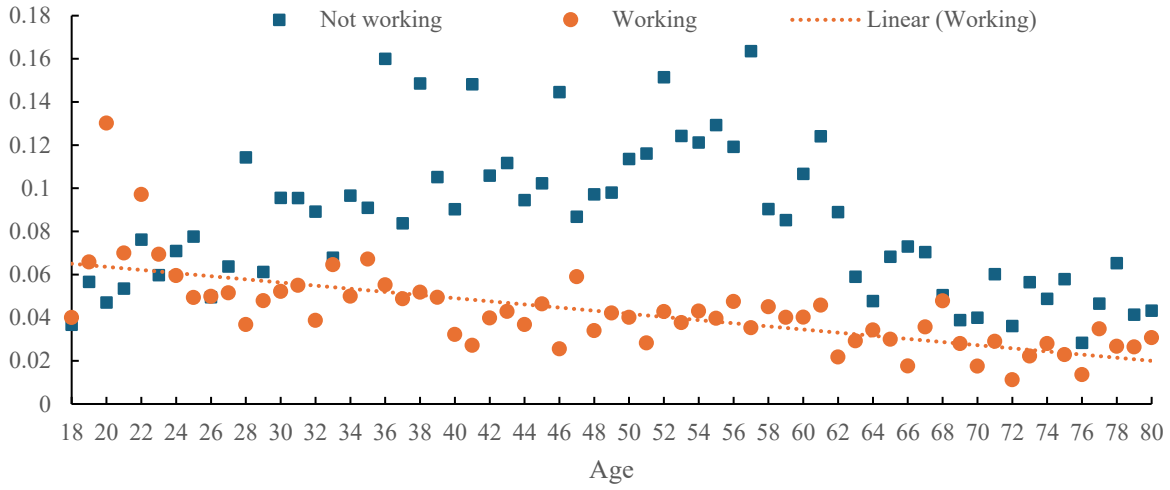
Appendix Chart 32. New Jersey



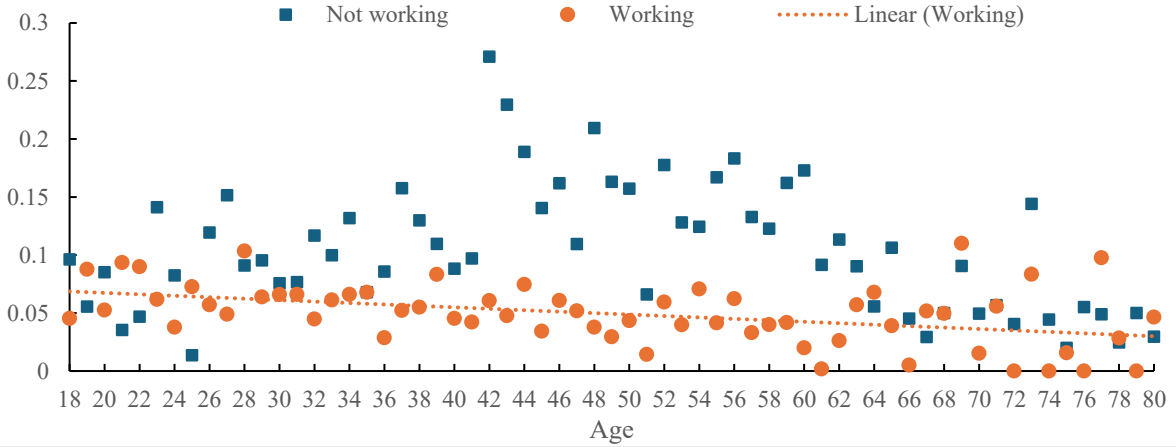
Appendix Chart 33. Nebraska



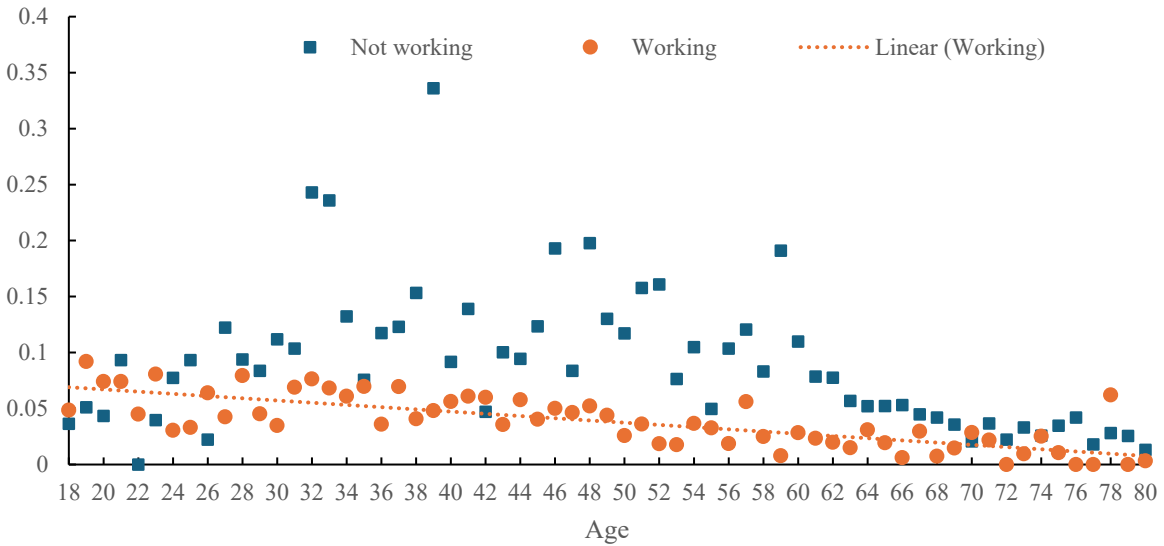
Appendix Chart 34. New York State



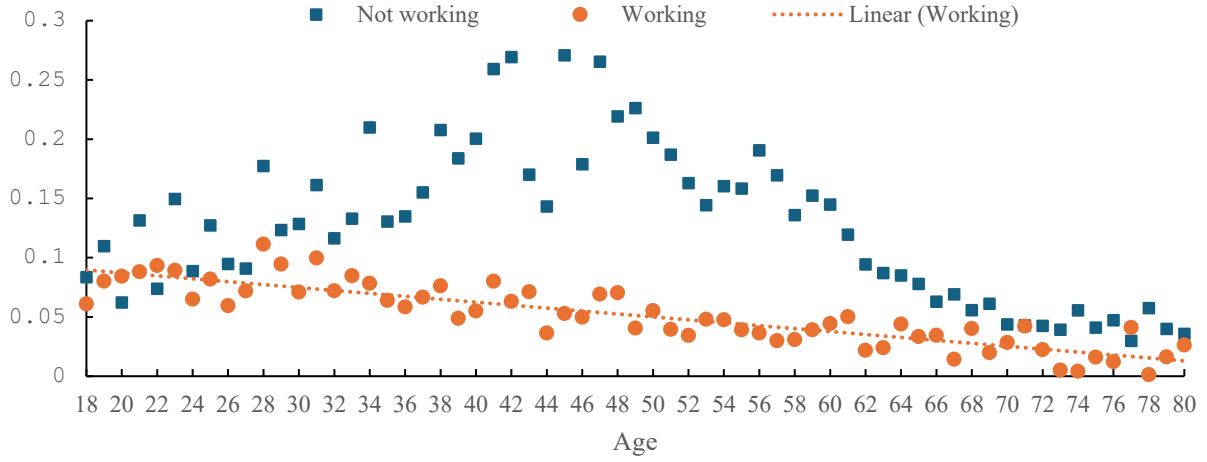
Appendix Chart 35. North Carolina



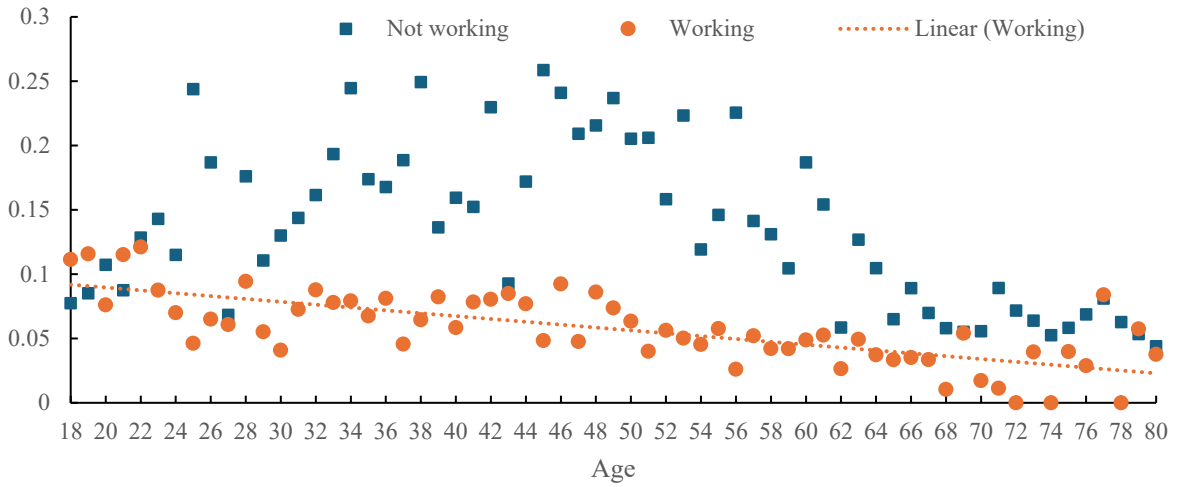
Appendix Chart 36. North Dakota



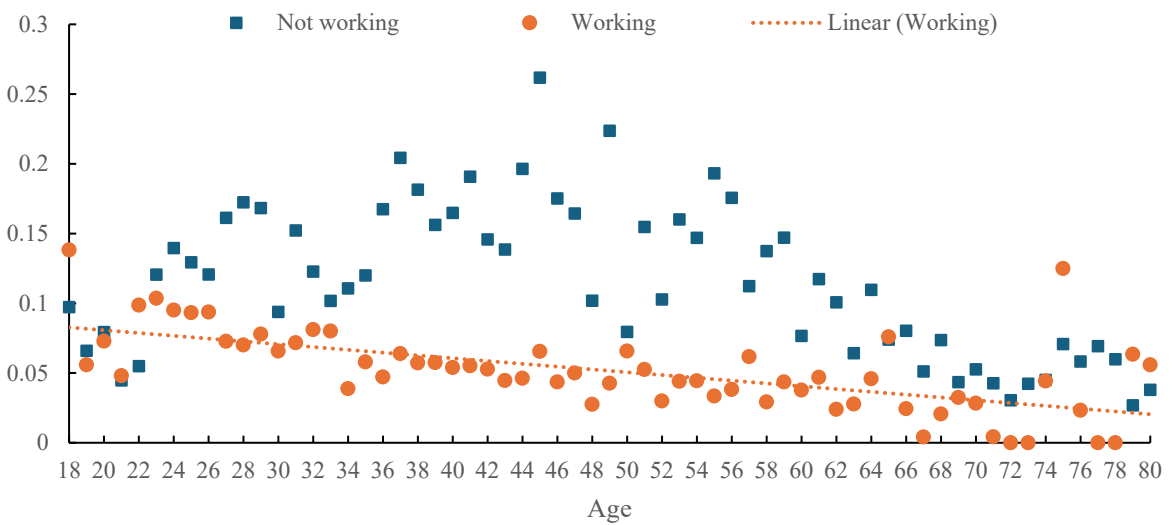
Appendix Chart 36. Ohio



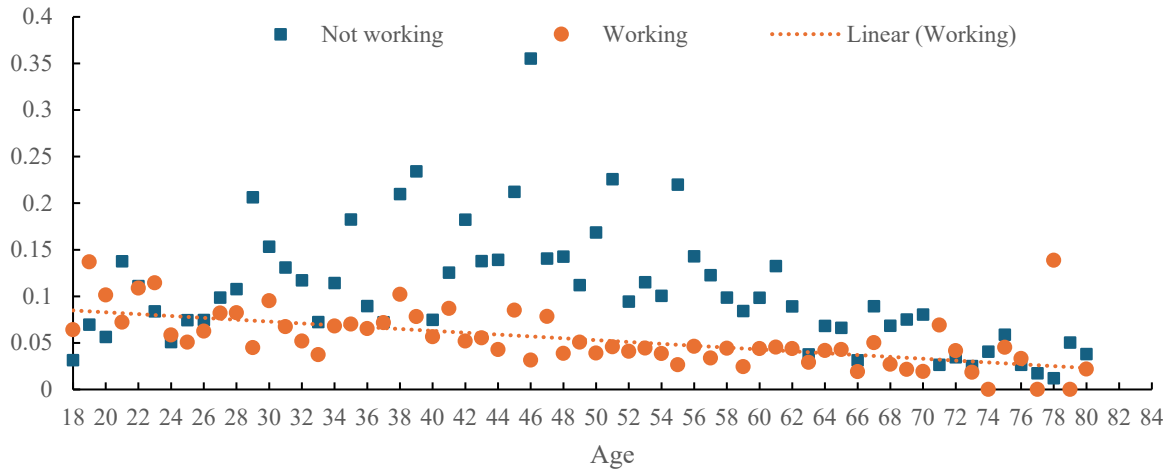
Appendix Chart 37. Oklahoma



Appendix Chart 38. Oregon



Appendix Chart 39. Pennsylvania



Appendix Chart 40. Rhode Island



Appendix Chart 41. South Carolina



Appendix Chart 42. South Dakota



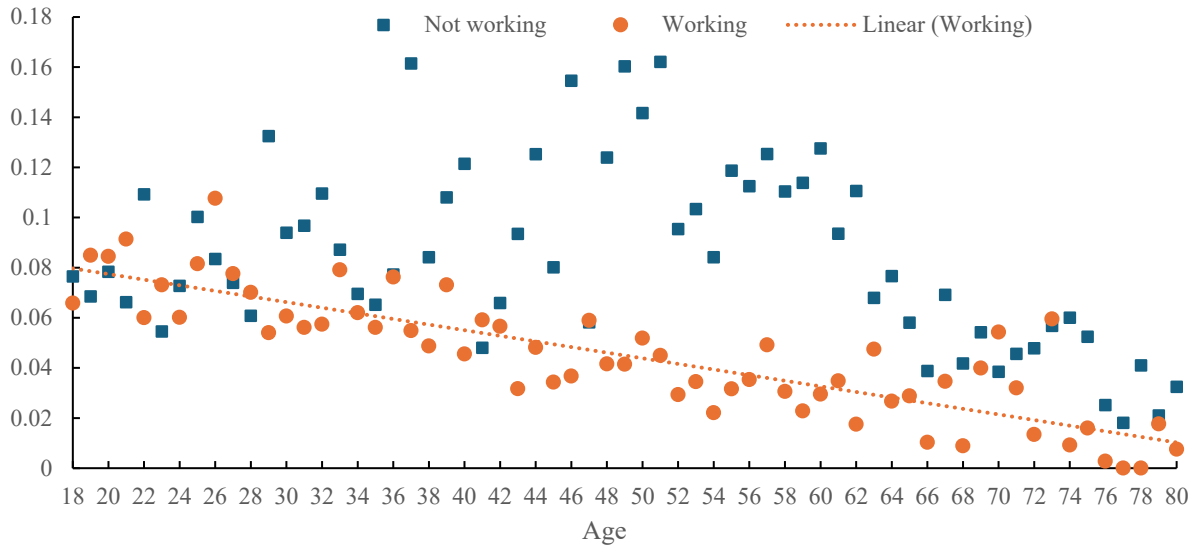
Appendix Chart 43. Tennessee



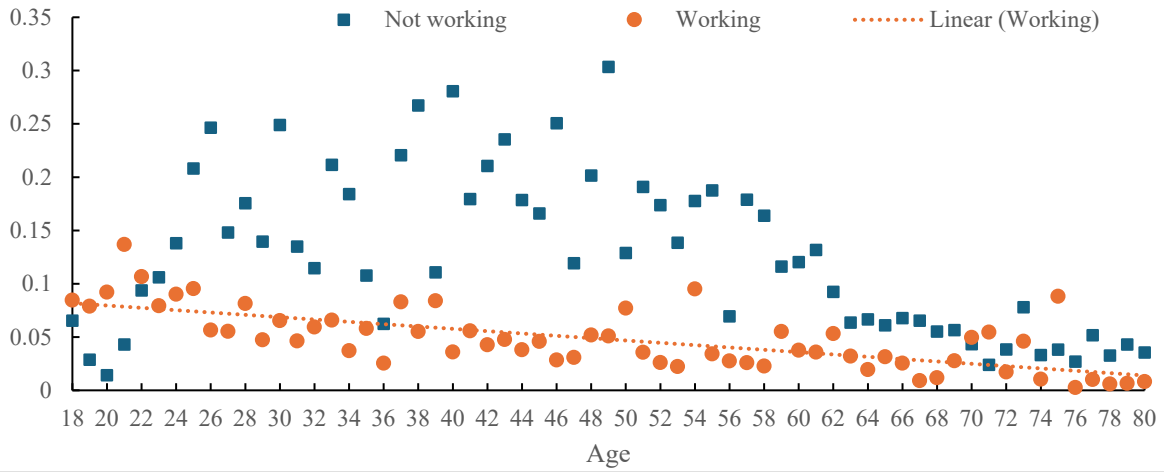
Appendix Chart 44. Texas



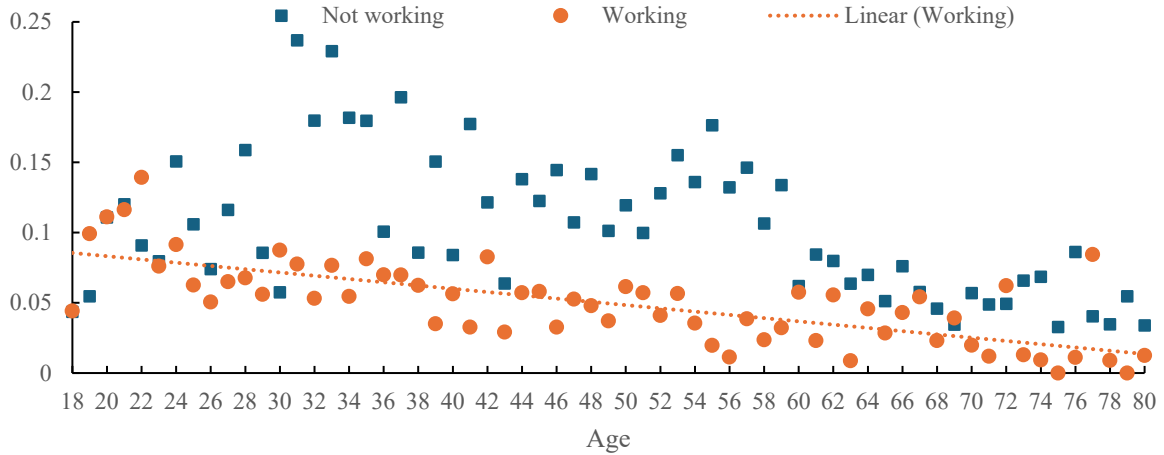
Appendix Chart 45. Utah

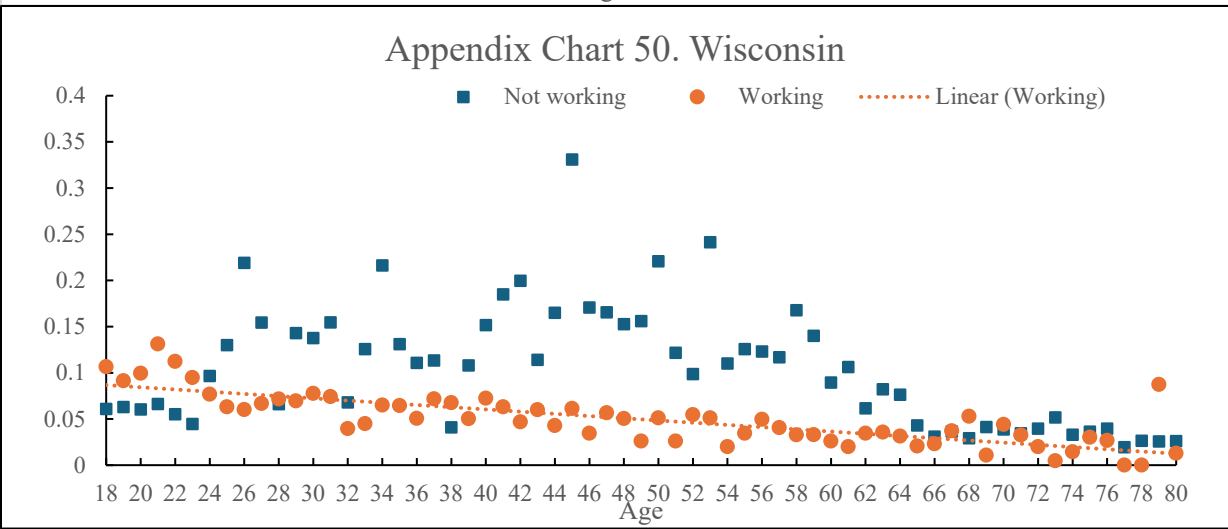
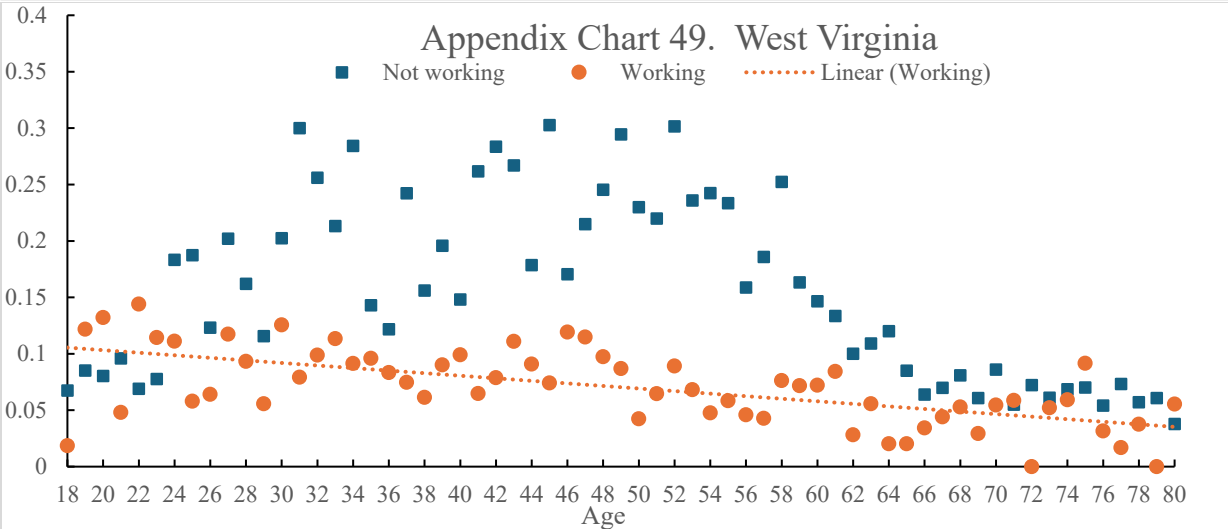
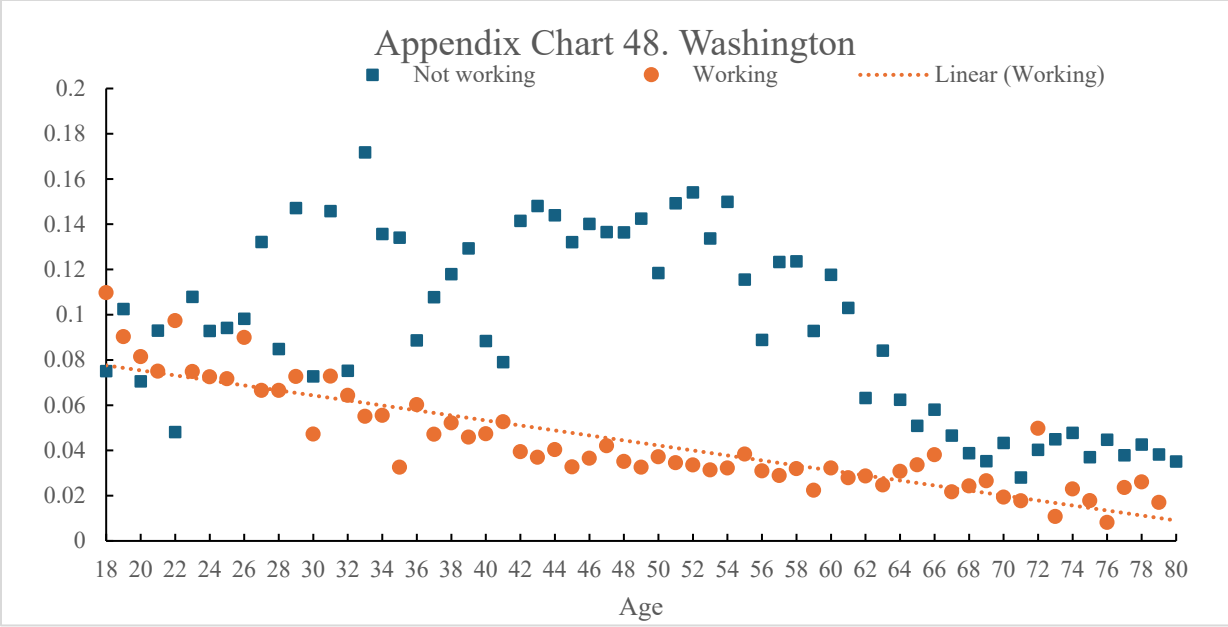


Appendix Chart 46. Vermont

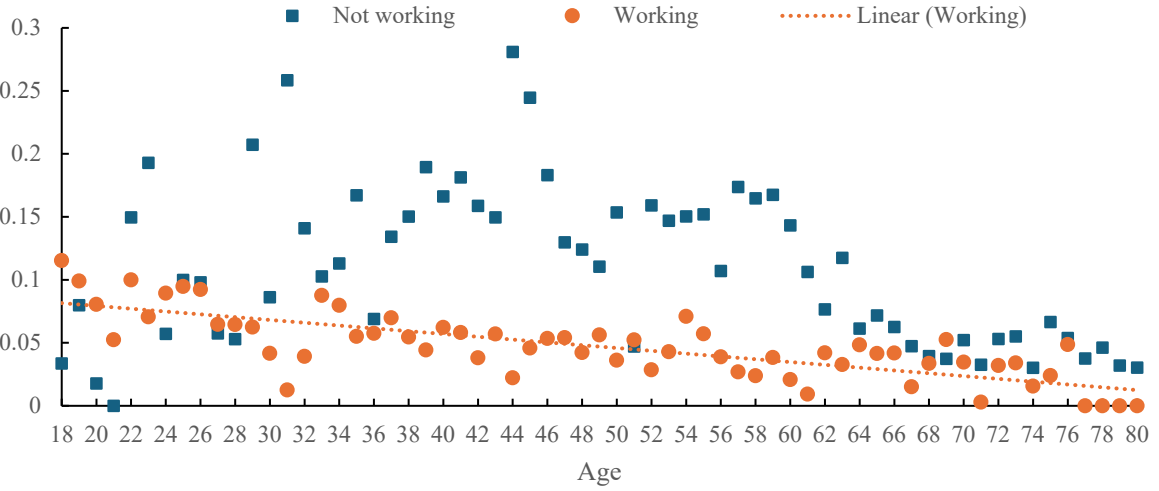


Appendix Chart 47. Virginia

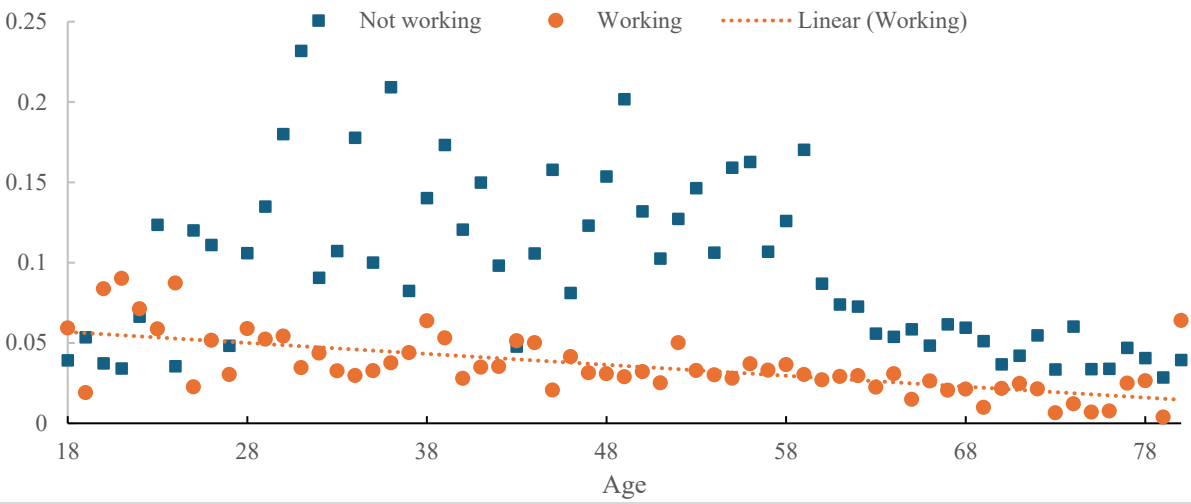




Appendix Chart 51. Wyoming



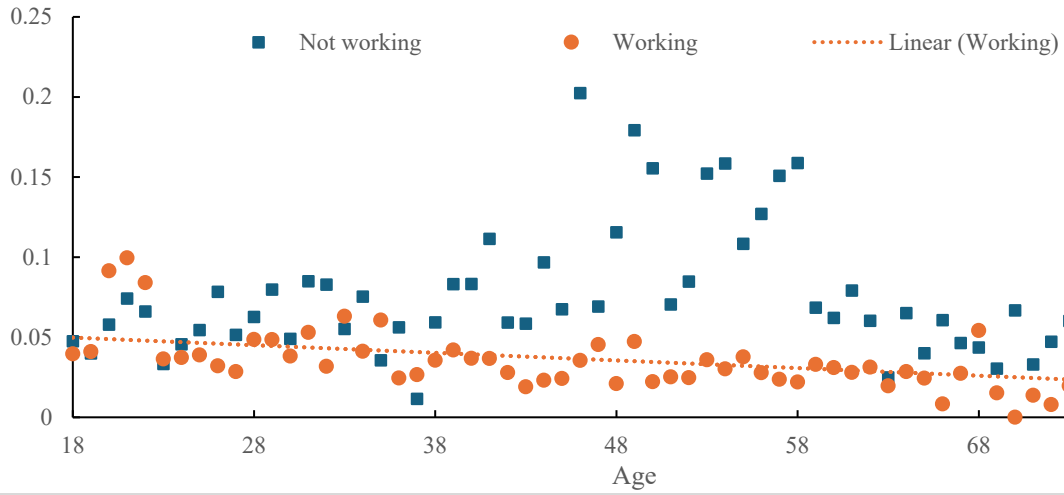
Appendix Chart 52. Baltimore-Columbia Towson-MSA



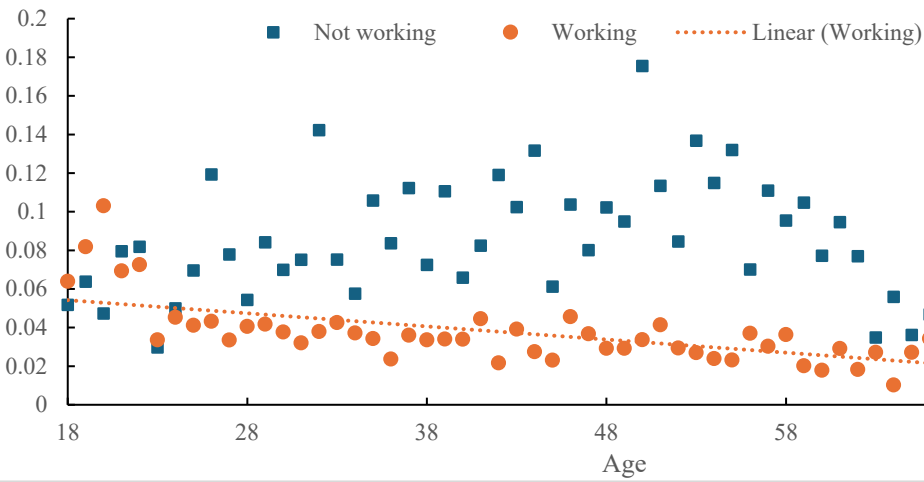
Appendix Chart 53. Chart Cambridge-Newton-Framingham- Boston MSAs



Appendix Chart 54. Chicago-Naperville-Elgin MSA



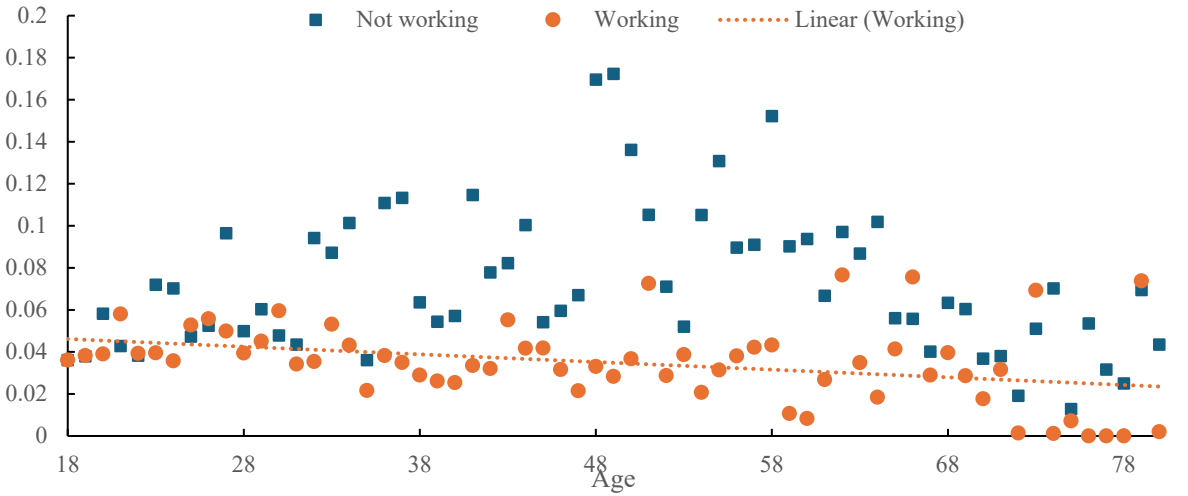
Appendix Chart 55. Denver-Aurora-Lakewood MSA



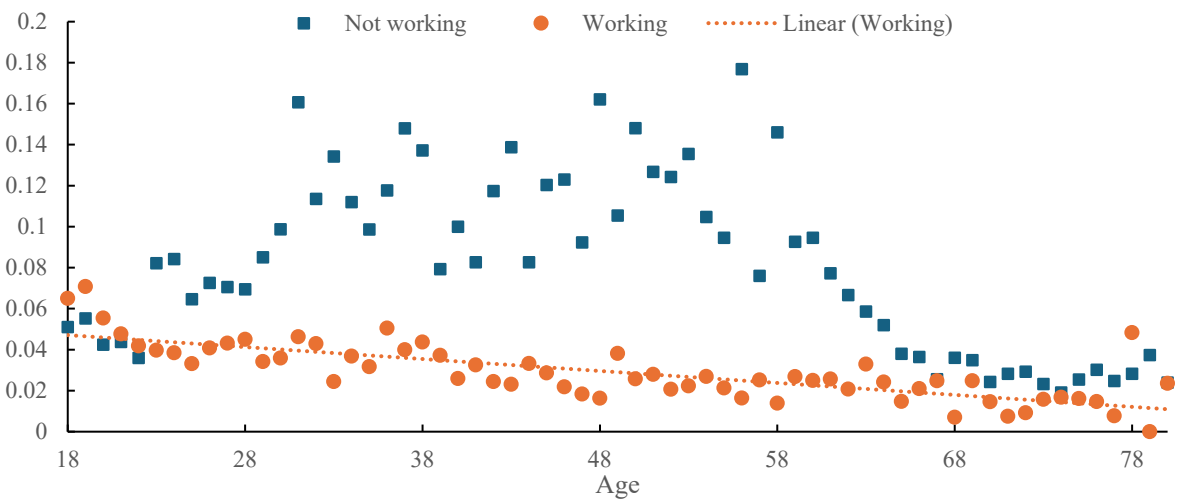
Appendix Chart 56. Chart Kansas City MS-KC MSA



Appendix Chart 57. Los Angeles-Long Beach-Anaheim MSA



Appendix Chart 58. Minneapolis-St Paul-Bloomington MN-WI MSA



Appendix Chart 59. New York-New Jersey City-White Plains NY-NJ



Appendix Chart 60. Seattle-Bellevue-Everett WA



Appendix Chart 61. Washington-Arlington-Alexandria DC-VA-MD-WV DC

