Childhood Mental Health and Long Run Financial Outcomes

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Abstract

We investigate the relationship between childhood mental health conditions and financial outcomes later in life. We find that individuals with childhood mental health conditions are significantly less likely to hold any assets, accumulate fewer total assets both unconditionally and conditionally on asset ownership, and are less likely to be homeowners over the life cycle. They also tend to accumulate more debt, and in particular more non-mortgage debt. These results are largely driven by white and male demographic groups. Financial literacy mitigates most of these effects. Childhood mental health is also linked to a lower likelihood of overconfidence, shorter life span expectancy and financial planning horizons, more pessimistic economic outlook, and reduced cognitive abilities, all of which may jointly explain the observed differences in financial outcomes.

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1 Introduction

It is estimated that now more than one in five U.S. adults live with a mental illness. Many of those mental disorders have their origins in childhood and adolescence (Kessler *et al.*, 2007).[1] In 2021, the American Academy of Pediatrics, American Academy of Child and Adolescent Psychiatry, and Children's Hospital Association declared a national emergency in child and adolescent mental health.[2] While a growing body of literature suggests that poor mental health early in life can have significant long lasting effect on health and labor outcomes later in adulthood (e.g. Goodman *et al.*, 2011; Hakulinen *et al.*, 2019), the impact of childhood mental health on households' financial choices and balance sheets is underexplored. In this paper, we empirically investigate whether early life mental health conditions have a long lasting impact on asset ownership decisions, and debt accumulation, and how these vary across racial and gender groups.

Childhood and adolescent mental health illness could affect long term household portfolio choice for a variety of reasons. First, having any health shock, physical or mental, reduces productivity and increases medical spending, thereby reducing the availability of funds to invest. Second, mental health may alter cognitive abilities, which can result in lower educational attainment and life-time earnings, and affect investment decision making (Abramson *et al.*, 2024; Biasi *et al.*, 2021; Cornaglia *et al.*, 2015; Wang *et al.*, 2023). Third, mental health may affect one's ability to regulate mood and emotion that could affect a person's ability to evaluate investment opportunities. Awareness for one's underlying mental health issues may alter the perceived need of liquidity and thus affect asset allocation. Fourth, mental health may alter an individual's degree of risk aversion and confidence that has been shown to be an important determinant of portfolio choice. Finally, mental health may affect an individual's planning horizon, thereby affecting his motivation to invest for future returns.

Drawing on these insights, we use detailed micro-level data from the Health and Retirement Survey (HRS) to test whether early life mental health disorders relate to financial choices and outcomes later in adulthood. Our main analysis uses the biennial survey for a representative sample

[1] The National Alliance on Mental Illness further documents that 16.5% of U.S. youth aged 6-17 experienced a mental health disorder in 2016. 50% of all lifetime mental illness begins by age 14, and 75% by age 24. Among people in the U.S. under age 18, depressive disorders are the most common cause of hospitalization.

[2] See American Academy of Pediatrics (2021) AAP-AACAP-CHA Declaration of a National Emergency in Child and Adolescent Mental Health.

of approximately 20,000 people in the US over the 1998 to 2020 period that includes data on individuals' childhood mental health diagnosis, as well as detailed household financial information on assets, housing and liabilities. In addition to information about income, work, assets, pension plans, health insurance, disability, physical health and functioning, cognitive functioning, and healthcare expenditures, we license the restricted HRS survey that includes important co-variates such as race, address and birth information. HRS collects information on respondents' childhood health situation through the Aggregated HRS Childhood Family and Health data set. The data set includes information on whether an individual was diagnosed with a depression or another mental health problem before the age of 16.

We find that individuals with childhood mental health conditions are significantly less likely to hold any assets, hold fewer total assets both unconditionally and conditionally on asset ownership, and are less likely to be an home owners over the life cycle. These magnitudes are economically large. Total assets are for instance 31% lower on average conditionally on positive assets and 37% unconditionally for the single household sample.

Next, we find that individuals with childhood mental health conditions are on average 8.7% less likely to be a home-owner over the life cycle. The effect on home ownership is statistically significant and economically large. Lower (financial) capabilities to afford home-ownership, a lower preference for home-ownership and the financial, emotional and locational burdens and restrictions associated with home-ownership may all contribute to the observed difference in home-ownership for individuals with childhood mental health conditions. Contrary to our expectations, we do not observe significant differences in asset composition for individuals with childhood mental health conditions in the single household sample.

Next, we observe that childhood mental health conditions are also associated with higher debt accumulation later in life unconditionally, and in particular with more non-mortgage debt, both conditionally and unconditionally. These effects are present in case of both single and couple households and are economically large. For the single household sample, we find a 5.3% (6.4%) higher likelihood of holding any (any non-mortgage) debt, and a 32% more non-mortgage debt conditional on holding debt.

We next proceed to investigate the impact of mediating factors on the observed patterns. We first analyze the impact of childhood mental health conditions for at least one partner within a

couple household on the household's long-term financial outcomes, and evaluate to what extent household members eliminate some of the economic consequences identified in the single household sample. We find that the negative relation between childhood mental health conditions and asset ownership, as well as home-ownership, is attenuated in couple households, which points to the mitigating influence of household level social support. Zooming into the impact of childhood mental health conditions on asset composition, in contrast to single households, we find a more pronounced shift toward safe assets. For couple households the compositional shift towards non-mortgage debt relative to mortgage debt is even more pronounced, relative to single households.

Male and female children and adults experience mental health challenges differently and have different coping strategies. While women are more likely to internalize problems such as anxiety disorders, men are more likely to externalize problems (Herrmann *et al.*, 2024; Martin & Hadwin, 2022). Examining how early childhood mental health conditions affect financial decision-making reveals interesting differences based on gender. Male individuals tend to experience more significant negative impacts, resulting in lower asset accumulation. In contrast, for women, the negative association is less pronounced. The asset composition shift towards safer assets is present only for male individuals with childhood mental health conditions. Interestingly, we find that for female individuals, the likelihood of home-ownership over the life cycle is significantly reduced in the presence of childhood mental health disorders.

The impact of mental health may manifest itself differently across racial groups due to cultural differences and inequities. Cultural differences may influence how mental health issues are expressed and addressed. Factors such as racial discrimination, unequal access to mental health care, and differing socioeconomic starting points may amplify the financial consequences of childhood mental health issues. When analyzed by race and ethnicity, data shows that White individuals living alone typically have fewer assets on average, both unconditionally and when considering only those with positive assets. This group also demonstrates a stronger shift towards safer assets and away from risky investments and retirement accounts. Additionally, across all racial and ethnic groups, individuals with childhood mental health conditions are less likely to become homeowners. Furthermore, the impact of these conditions on debt levels is notably higher among White individuals compared to the overall average.

Lastly, we find that financial literacy, i.e. respondents' knowledge of, and ability to use fun-

damental financial concepts in their economic decision-making, seems to countervail some of the economic differences. Childhood mental health has important long-term consequences, which may partially be driven by non-optimal economic decision-making. Financial literacy enables individuals to use their resources to the fullest (Lusardi & Mitchell, 2014, 2023) and may thus be able to mitigate some of the economic consequences of childhood mental health as they equip individuals with tools and knowledge to navigate financial challenges. We find that financial literacy (proxied by whether an individual has worked in the finance sector) appears to offset the long-term economic decision of non-home-ownership for individual with childhood mental health. Individuals with early-life mental health conditions, who have a higher degree of financial literacy are more likely to be home-owners. Related, we also observe that the positive relationship between childhood mental health conditions and debt accumulation, respectively non-mortgage debt, is eliminated or even reversed for individuals with higher degree of financial literacy.

Childhood mental health conditions may affect individuals on multiple cognitive and non-cognitive dimensions which may contribute to the differences that we document. Specifically it may affect individuals productivity/earnings, cognitive and non-cognitive ability, economic expectations, confidence and discount rate perception. We next explore whether these factors play a role and how childhood mental health conditions correlate with variables that approximate these dimensions. We find that individuals with childhood mental health conditions are less likely to be overconfident, have shorter life span expectations and financial planning horizon. They are also more likely to have pessimistic economic outlook, and are more likely to have reduced cognitive abilities.

An important caveat to our analysis is that the relation we document between early childhood mental health disorders and financial choices later in adulthood may not be causal in nature. Although we control for a host of observable differences and account for early childhood and current economic conditions through birth state-year, county-year and cohort fixed effects, omitted variables bias is still a possible concern.

1.1 Related literature

This paper builds on the literature on mental health and its implications for a host of economic outcomes. One strand of literature focuses on the relation between *contemporaneous* mental health

conditions and portfolio choice. It has been shown that households with household members, either adults or children, affected by mental health issues contemporaneously decrease risky investments (Bogan & Fernandez, 2017; Bogan & Fertig, 2013). Similarly, existing work looks at the relation between contemporaneous mental health conditions and educational and labor market outcomes. Using detailed data from Denmark, Biasi *et al.* (2021) examine the career effects of mental health, focusing on depression, schizophrenia, and bipolar disorder. They document that mental health issues are associated with earning penalties in the workforce. Wang *et al.* (2023), similarly, document that early adulthood mental health issues can lead to significant earning penalties in the future. Cornaglia *et al.* (2015) study the link between poor mental health and low educational outcomes and find a large negative association between being at risk of poor mental health and educational outcomes. Abramson *et al.* (2024) construct an economic theory of mental illness to study its macroeconomic implications and show that mental health disorders alter consumption, savings, portfolio choice, and labor supply. Our paper, on the other hand, zooms in on the implications of early life mental health disorders on financial well-being later in life.[3]

This paper is also related to literature on health and investment choices. Spaenjers & Spira (2015) examine the empirical relation between subjective life horizon (i.e., the self-reported expectation of remaining life span) and portfolio choice. They find that equity portfolio shares are higher for investors with longer horizons, controlling for gender-specific age effects, socio-economic characteristics, health, and optimism. Rosen & Wu (2004) analyze the role health status plays in household portfolio decisions. They find that health is a significant predictor of both the probability of owning different types of financial assets and the share of financial wealth held in each asset category. Households in poor health are less likely to hold risky financial assets, other things (including the level of total wealth) being the same.

In departure from existing literature that focuses on the contemporaneous relationship between mental health and asset allocation, we examine the role of *early life* mental health conditions and their *long run* implications on both sides of the households' balance sheet: assets and liabilities. Instead of focusing solely on asset allocation, we provide novel evidence on the role of early life mental health condition on debt accumulation over the life cycle. Additionally, by leveraging

[3]Recent work has examined the impact of financial distress on individual's mental health (e.g Iyer *et al.*, 2022; Kárpáti & Renneboog, 2024).

detailed data on gender and race, we build upon Bogan & Fertig (2013) to show gender and racial differences in how childhood mental health issues impact household portfolio choice and homeownership decisions.

The rest of the paper is organized as follows. In Section 2 we discuss the existing theories of childhood mental illness and how it may affect financial decision making later in life. In Section 3 we describe our data, and in Section 4 we analyze the patterns in childhood mental illness prevalence. In Section 5 we describe our empirical strategy and results. We conclude in Section 6.

2 Background and conceptual framework

2.1 Impact of (mental) health conditions on financial choices

Mental illness may affect financial choices through a variety of channels. We next discuss the different channels and their implications on individuals' financial choices.

Cognitive abilities: A substantial body of literature explores the influence of cognitive abilities on financial choices. For instance, Christelis *et al.* (2010) find that, when controlling for other factors, cognitive impairments decrease the likelihood of holding stocks and increase the tendency to invest in less information-intensive assets like bonds. Therefore, mental health issues that limit cognitive capabilities could lead to lower participation in financial markets. However, individuals facing cognitive limitations may opt to seek external financial advice. Elmerick *et al.* (2002) document that 18.5% of US households seek guidance from financial planners for their savings and investment decisions. An alternative pattern of soliciting financial advice might differentially influence the portfolio choices of individuals with mental health challenges.

Non-cognitive abilities: Mental health conditions can also affect non-cognitive abilities. Xu *et al.* (2015) find a simultaneous correlation between non-cognitive abilities and measures of financial distress among a group of young adults. Kuhnen & Melzer (2018) illustrate that self-efficacy, which is belief that their actions can influence the future, can help individuals avoid financial shocks and financial distress. Individuals with high self-efficacy are less likely to default on bills and go into bankruptcy. Donnellan *et al.* (2009) also find a significant relationship between non-cognitive abilities and economic hardship among young adults. Parise & Peijnenburg (2019) find that people in the bottom quintile of noncognitive abilities are 10 times more likely to experience

financial distress than those in the top quintile.

Risk aversion and confidence: Mental health can also influence an individual's risk aversion. Edwards (2008) shows that health risks can increase risk aversion, as individuals seek to hedge against potential health-related uncertainties by investing their financial wealth in safer assets. Similarly, Berkowitz & Qiu (2006) show that a physical health shock leads households to restructure their portfolios by decreasing stock holdings. Likewise, Rosen & Wu (2004) find that households in poor health are less likely to hold risky financial assets, with smaller proportions of their wealth allocated to riskier investments and greater shares reserved for safer assets. Consequently, similar to the effects of a physical health shock, mental health issues could influence financial decisions, leading to long-term consequences for economic status.

Time preference: Mental health can influence an individual's rate of time preference, which in turn affects their willingness to invest in assets with long-term returns. Becker & Mulligan (1997) argue that physical health impacts time preference because poor health shortens one's lifespan, reducing planning horizons and future utility. Similarly, mental health issues can decrease an individual's expected or perceived lifespan, or the quality of their remaining years, leading them to discount future utility more heavily.

Human capital accumulation and budget constraints: The previous discussion highlights the effect of mental health on preferences and the ability to optimize. However, health problems can also influence an individual's budget constraint by impacting their earnings and/or medical expenses. Several studies indicate that individuals with mental health illnesses tend to face earnings penalties and lower educational outcomes (Abramson *et al.*, 2024; Biasi *et al.*, 2021; Cornaglia *et al.*, 2015; Wang *et al.*, 2023). Mental health issues are also linked to increased medical expenses, which can erode an individual's wealth. Gianfrancesco *et al.* (2005) show that family members who live with patients with serious mental disorders incur increased healthcare expenses. As a result, individuals with mental health conditions may invest less than healthier individuals due to limited available funds for investment or a need to maintain liquid assets to cover their medial expenses.

Mood: Mental health also affects emotions, which can influence investment evaluations. Those in better moods tend to view risks more optimistically, while those with poorer moods assess risks more pessimistically (Fehr-Duda *et al.*, 2011; Wright & Bower, 1992).

2.2 Prevalence of mental health conditions by gender and race

Motivated by the existing research showing gender and racial differences in negotiation, financial investment strategies, preferences for risk and competition, auto loan market, mortgage access, and housing returns (e.g. Ayres, 1990; Babcock & Laschever, 2009; Bajtelsmit & VanDerhei, 1997; Barber & Odean, 2001; Bertrand, 2018; Butler *et al.*, 2023; Gneezy *et al.*, 2003; Goldsmith-Pinkham & Shue, 2023; Hinz *et al.*, 1996; Kermani & Wong, 2023; Loya, 2023; Reuben *et al.*, 2015; Sapienza *et al.*, 2009; Sunden & Surette, 1998), we investigate the role of gender and race in the long run implications of childhood mental health issues.

Epidemiological studies consistently report gender differences in the prevalence of neurodevelopmental and mental health disorders in childhood and adolescence. Starting in early adolescence, women are more likely than men to experience internalizing disorders, which involve directing problematic feelings inward, leading to issues such as depression and anxiety. As a result, women often face self-blame and self-reproach more frequently than men do. They tend to cope with a deeper sense of loss, hopelessness, and helplessness regarding their situations. Additionally, women experience greater anxiety through phobias, panic attacks, and persistent feelings of unease (Avison & McAlpine, 1992; Gore *et al.*, 1993; Kessler, 2003; Turner & Lloyd, 1995; Rosenfield *et al.*, 2005).

In contrast, men are more prone to externalizing disorders, which negatively affect others. These include antisocial personality disorders and substance abuse or dependence. Men are also more likely to exhibit enduring personality traits that are aggressive and antisocial, which can create challenges in forming and maintaining close, lasting relationships.

When it comes to racial variation, a growing body of research suggests that racial and ethnic minorities in the US are less likely than their white counterparts to use mental health care. Harris *et al.* (2005) find significantly lower rates of mental health problems and use of mental health care among African American, Asian, Mexican, Central and South American, and other Hispanic-Latino groups relative to whites.

2.3 Hypotheses development

Motivated by discussion above, we formulate the following set of testable hypotheses.

Mental health conditions lead to earnings penalties and lower educational outcomes (Abramson *et al.*, 2024; Biasi *et al.*, 2021; Cornaglia *et al.*, 2015; Wang *et al.*, 2023), which could lead to lower ability to accumulate assets. At the same time, increased medical expenses have been shown to erode wealth (Gianfrancesco *et al.*, 2005) and the need for liquid assets to cover medical expenses limits investment (budget constraint effect). Mental health issues that limit cognitive capabilities may decrease participation in financial markets (Christelis *et al.*, 2010), resulting in lower asset accumulation over the life-cycle. Mental health conditions have been shown to increase risk aversion, leading to safer but potentially lower-return investments, which could slow asset accumulation (Edwards, 2008; Rosen & Wu, 2004). Shortened planning horizons from mental health issues may lead to prioritizing short-term utility over long-term wealth accumulation (Becker & Mulligan, 1997). Thus, we hypothesize that:

Hypothesis 1: *Early-life mental health conditions are associated with fewer total assets.*

Earnings penalties and increased medical expenses due to mental health conditions in early childhood can reduce available funds for a down payment or mortgage (budget constraint effects). Mental health conditions have been shown to affect both cognitive and non-cognitive abilities. Literature on cognitive ability and financial outcomes shows that greater cognitive skills predict better outcomes in terms of mortgage delinquency, credit card usage, loan choices, and savings and investment behavior (Agarwal & Mazumder, 2013; Gerardi *et al.*, 2013; Grinblatt *et al.*, 2011; Stango & Zinman, 2009). Risk-averse individuals might avoid home-ownership due to its illiquid and risky nature (Rosen & Wu, 2004). Thus, we hypothesize that:

Hypothesis 2: *Early-life mental health conditions are associated with lower likelihood of home-ownership.*

Individuals with mental health conditions may be more risk-averse and prefer safer assets like bonds (Abramson *et al.*, 2024; Berkowitz & Qiu, 2006; Rosen & Wu, 2004). Limited cognitive capabilities due to mental health conditions may lead to reduced participation in riskier financial markets (Christelis *et al.*, 2010). This evidence motivates the following hypothesis:

Hypothesis 3: *Early-life mental health conditions are associated with a greater proportion of safe assets.*

Increased healthcare costs due to treatment of mental health conditions can lead to higher debt

levels. Lower non-cognitive abilities have been shown to be strongly correlated with financial distress and greater indebtedness (Kuhnen & Melzer, 2018; Parise & Peijnenburg, 2019; Xu *et al.*, 2015). Reduced income due to mental health issues may necessitate borrowing to meet expenses (Abramson *et al.*, 2024). This evidence motivates the following hypothesis:

Hypothesis 4: *Early-life mental health conditions are associated with higher debt accumulation.*

3 Data

We combine data on individuals' childhood mental health diagnosis with detailed household demographic and financial information as well as cognitive and non-cognitive measures from the University of Michigan Health and Retirement Study (HRS). Launched in 1992, HRS is a representative longitudinal panel that tracks approximately 20,000 older adults in the United States. Participants enter the study between the ages of 51 and 56 along with their spouses. They are surveyed biennially and typically continue to participate until they pass away. We use the confidential HRS survey version that additionally includes important covariates such as race, address, and birth information. Our final sample period covers the waves from 1998 to 2020, as waves prior to 1998 missed several questions or phrased them differently, rendering them incompatible. We additionally impute missing demographic values based on information from other survey waves. We split the data set into a single and couple household sample as their underlying situation and therefore decision-making process may be fundamentally different. A single household is a household whose member is never married, divorced, or widowed. A couple household is a household whose members are married.

The key independent variable of interest identifies on individuals with childhood mental health conditions. We construct the indicator variable *CHILDHOOD MENTAL HEALTH* equal to 1 if an individual self-reports that she was diagnosed with depression or other psychological problems before the age of 16. Appendix Figure A.I reports the exact questions individuals are asked by HRS. Even though this question has only been introduced in 2006, it is available for all respondents that did not exit the survey before 2006 given the cross-sectional nature of the data point. Table 1 documents that 6% (3.6%) of observations have a childhood mental health condition in the single (couple) household sample across all survey waves. A potential concern with this measure is that

the childhood mental health condition is self-reported, and due to bias or stigma suffers from under-reporting. Benchmarking our mental illness incidence rate with the Centers for Disease Control and Prevention childhood mental health incidence statistics suggests that our measure is similar to that for depression prevalence, however still lower when considering any mental illness.[4]

Next, we collect information on individuals' assets, home ownership, and liabilities. Following Bogan & Fertig (2013), we divide assets into four groups, i.e., safe assets, risky assets, retirement accounts, and bonds. In line with them, we thus strip bonds from the safe assets as a separate asset category. According to the HRS asset module, safe assets include savings and checking accounts, money market funds, CDs, government bonds, T bills, and rights in a trust or estate. Risky assets include stock or stock mutual funds. Retirement accounts comprise retirement accounts (IRAs), Keogh accounts, 401Ks, or similar defined contribution pension plans whereas bond assets contain corporate, municipal, government or foreign bonds, or bond funds exclusive of government saving bonds or treasury bills.

Table 1 highlights that 60.3% (70.3%) of households have positive assets in the single (couple) household sample. The average household in the single (couple) household sample has 73,446 (153,104) USD in assets and 75.5% (60.9%) in safe assets. Furthermore, we construct the indicator variable *HOME-OWNER*, which is equal to 1 if the household responds to have owned a home during any survey wave. While we cannot rule out that individuals have temporarily owned a home before they first entered the wave, it is unlikely to be a significant proportion of the sample as individuals enter the panel around the age of 55 and thus before retirement. 58.4% (82.5%) of households in the single (couple) household sample are home-owners.

On the liability side, we collect information on mortgages and non-mortgage debt. Mortgages include both amounts on the first-home mortgage and second-home mortgage. Non-mortgage debt includes all debt other than mortgages, such as credit card balances, medical debt, life insurance policy loans, loans from relatives, and so forth. All the monetary variables are deflated based on the 2008 CPI to account for inflation, and we winsorize all quantitative financial variables at the

[4] Bitsko (2022) find that 4.4% of children aged 3-17 years have been diagnosed with depression between 2016 and 2019, while the incidence rate of attention-deficit/hyperactivity disorder and anxiety is approximately one in eleven for children aged 3-17 years. The incidence rate of experiencing at least one major depressive episode is one in five for children aged 12–17 years.

2.5% level to mitigate the impact of outliers. Table 1 documents that 37.4% (27.4%) of households in the single household sample have debt, respectively non-mortgage debt. The share is slightly higher in the couple household sample with 47.3% (28.3%) having any debt (any non-mortgage debt).

We gather information on a large set of demographic and other financial variables. Specifically, we gather information on gender, race, ethnicity, age, education, marital status, number of children, financial transfers to and from children, employment, current health information, and information on the financial situation of their families during childhood.

Across the waves, about 40% of the sample are males and 60% are females, reflecting the fact that females represent a higher share in the older population in the U.S. This difference is driven by the single household sample. Based on HRS' categories, we split race into four categories White, Black, Asian (Asian or Pacific Islanders) and Others (including Native American, Native Alaskan, and other races). Since HRS allows respondents to report multiple races, we populate all the races reported by the individuals. Ethnicity has two groups, Hispanic or Non-Hispanic. The share of racial and ethnic minorities is increasing in the HRS sample. The white population accounted for 82% of the sample in 1998, but only 70% in 2020. Similarly, the Hispanic share grew from 8% in 1998 to 20% in 2020. The average age across the waves is 66 years and the average number of children is three. The composition of education levels across survey years is stable, with approximately 20% of the samples having less than 12 years of education and 80% having more than 12 years of education. The proportion of married households is declining from 72% in the 1998 survey year to 55% in the 2020 survey year, manifesting the fact that the survey targets older respondents that pass away as the survey proceeds. A similar trend can be observed for the proportion of individuals working diminishing from 48% to 25%.

Information on the current health status is based on self-reported health status information in the physical health module. Respondents are asked to rate their overall health as excellent, very good, good, fair, or poor. We construct an indicator variable, *ADVERSE HEALTH STATUS*, for poor current health, which is equal to one if the perceived health is poor. We see that 6% to 8% of the sample experienced poor current health in a given survey year. Transfers to and from children are extracted from the family structure (children) modules.

We also gather information on whether individuals experienced financial hardship in their

childhood. We combine the three questions [1] Do you rate your family when you were growing up, from birth to age 16 as "pretty well off financially", "about average", or "poor"? [2] Have financial difficulties ever caused your family to move to a different place before age of 16? and [3] Have financial difficulties ever caused your family to receive help from relatives before age of 16?, into the indicator variable *CHILDHOOD FINANCIAL HARDSHIP*, which is equal to one if respondents either answer poor for the first question, or yes for the last two questions. About 43.7% (39.4%) of individuals in the single (couple) household sample experienced childhood financial difficulties across different waves.

All variable definitions are summarized in Appendix Table A.I. The final data set contains around 71,000 individual-survey year observations for single household sample, and 62,000 household-survey year observations for the couple household sample. The number of observations will be lower for some questions that are not available in each survey year.

4 Patterns in childhood mental illness prevalence

4.1 Empirical strategy

In this section, we shed light on factors associated with the prevalence of childhood mental health conditions. We collapse the data at the individual level and consider only non-time-varying covariates. In its most saturated specification, we run the following linear probability regression model:

$$\begin{aligned} ChildMentalHealth_i = &\alpha + \beta^G Gender_i + \sum_{r=1}^{3} \beta_r^R Race_i + \beta^E Ethnicity_i + \beta^C ChildhoodFinHardship_i + \\ &\sum_{r=1}^{3} \beta_r^{GR} Race_i \times Gender_i + \beta^{GE} Ethnicity_i \times Gender_i + \tau_i + \kappa_i + \varepsilon_i \end{aligned} \tag{1}$$

where $ChildMentalHealth_i$ is an indicator equal to one if the individual i has reported a childhood mental health condition. $Race_i$, $Ethnicity_i$, and $ChildhoodFinHardship_i$ are the race, ethnicity, and childhood financial situation of individual i. To account for potential differences among the respondents entering the surveys in different waves, as well as for systematic differences across generations, we include the cohort fixed effect τ_i. κ_i is the birth state-birth year fixed effect used to

control for the local economic conditions at the time of the respondent's birth.

4.2 Results

We are particularly interested in how socio-demographic characteristics are associated with the prevalence of childhood mental health conditions. Table 2 shows the results of estimating Equation 1. We find that females are 2.3% more likely to report childhood mental health conditions. This is economically large, given that only 4.3% of individuals report childhood mental health issues. Moreover, the magnitude of this coefficient is stable across all specifications. This finding is in line with medical literature, which also finds that females are significantly more likely to report depression symptoms with odds ratio between 2.4 and 3.1 (Salk *et al.*, 2017).

In column 2, we add the *Childhood Financial Hardship* indicator. In line with our expectations, we find that children that experienced financial hardship during childhood are statistically and economically significantly more likely to report mental health diagnoses. Considering that children are unlikely to be working and generating income, it is likely that financial hardship drives mental health issues rather than the other way around.

We next control for unobserved variation in childhood mental health conditions. In column 3, we control for cohort fixed effects, i.e. the cohort through which a family entered into the survey, to account for unobserved variation between survey cohorts, such as attention to certain topics in one-off survey questions. In column 4, we additionally include birth state-birth year fixed effects to account for unobserved variation in the local economic situation during the individuals upbringing. These fixed effects absorb variation in the likelihood of being exposed to childhood adversities that have been found to be strongly associated with mental health occurrences (McLaughlin *et al.*, 2012).

Indeed, we find that the explanatory power of the regression increases multifold. The positive association between the female gender and individual childhood financial situation are robust in size and significance. However, once we control for childhood financial economic conditions, the coefficients on Black race and Hispanic ethnicity are negative and statistically significant. Childhood mental health seems to be more predominant or more likely to be reported for White individuals. In column 5, we additionally interact with the female dummy with the race and ethnicity dummies, but do not find any further economic or statistical difference in the likelihood of re-

porting mental health issues. Individuals' gender is not associated differently with mental health across different races and ethnicities.

[Insert Table 2 about here]

5 Long-term implications of childhood mental health conditions

5.1 Empirical Strategy

To investigate the relationship between childhood mental health conditions and various financial outcomes, we use the fixed-effect OLS (Ordinary Least Square) regression model and employ the full panel data. We conduct this analysis separately for single and couple household as their underlying situation and therefore decision-making process may be fundamentally different. For single and couple households analyses, the unit of observation is the given household, i.e the given individual or full household, respectively.

The baseline specification for single family analysis is the following:

$$y_{i,t} = \alpha + \beta ChildMentalHealth_i + \boldsymbol{X}'_{i,t}\boldsymbol{\delta} + \boldsymbol{Y}'_{i,t}\boldsymbol{\lambda} + \tau_i + \kappa_i + \theta_{i,t} + \varepsilon_{i,t} \tag{2}$$

where $ChildMentalHealth_i$ is the variable of interest indicating whether individual i has a childhood mental health condition or not. $\boldsymbol{X}'_i$ is the matrix of the fixed control variables, including gender, race, education, number of children, and childhood financial situation. $\boldsymbol{Y}'_{i,t}$ is the matrix of the time-varying control variables, including age, working status, health status, household income, transfer from children, transfer to children in all specifications. τ_i is the cohort fixed effect used to account for any potential differences among the respondents entering the surveys in different waves, whereas κ_i is the birth state-birth year fixed effect, which we use to account for variation in the childhood economic conditions that may have an impact on the future financial outcomes through its influence on the childhood mental health condition. Finally, $\theta_{i,t}$ is the county-survey year fixed effect which is used to control for the local economic conditions that may contemporaneously affect the outcome variables of interest. $\varepsilon_{i,t}$ is the error term for individual i in the survey year t.

For the couple household sample, we generally employ the same empirical specification. However, all variables are now defined at the household level. Specifically, $ChildMentalHealth_i$ is an indicator variable taking the value of 1 for household i if there is at least one household member who has experienced childhood mental health conditions. For the birth state-birth year fixed effect, we include both members' fixed effects as they may be born in different location and different years.

5.2 Baseline results with single households

Childhood and adolescent mental health illness may affect individuals' productivity, subsistence costs shocks, cognitive ability, risk preference and discount rate perception, as discussed in Section 2. All these factors can compound to translate into systematic differences in individuals adulthood financial situations. In this section, we examine the four hypotheses described in Section 2.3 and assess how childhood mental health conditions are related to total assets, home-ownership, asset composition and debt accumulation in late adulthood.

We begin by estimating the impact of childhood mental health on financial outcomes within single households. Within single households, the match between decision taker, outcome variable and mental health diagnosis is the most clean. This setting thus serves as important starting point to shed light on the impact of childhood mental health. We first assess the impact on asset accumulation and composition in Panel A of Table 3, and next zoom into individuals' debt accumulation in Panel B of Table 3. Panel A of Table 3 documents that childhood mental health conditions are associated with statistically and economically significantly lower asset holdings. In line with Hypothesis 1, individuals with childhood mental health conditions are significantly less likely to hold any assets and hold fewer total assets both unconditionally and conditionally on assets. These magnitudes are economically large. Total assets are for instance 31% lower on average conditionally on positive assets and 37% unconditionally. As discussed, the large economic difference in total assets in late adulthood may be driven by lower income-generating abilities, higher costs as well as different asset allocation and saving decisions.

We further hypothesize that childhood mental health conditions are associated with a lower home-ownership likelihood (Hypothesis 2) and a greater proportion of safe assets (Hypothesis 3). Table 3 Panel A column 3 documents that individuals with childhood mental health conditions

are on average 8.7% less likely to be a home-owner consistent with Hypothesis 2. The effect on home-ownership is statistically significant and economically large. Lower (financial) capabilities to afford home-ownership, a lower preference for home-ownership and the financial, emotional and locational burdens and restrictions associated with home-ownership may all contribute to the observed difference in home-ownership for individuals with childhood mental health conditions.

In columns 5 to 8, we next investigate whether individuals with childhood mental health are associated with different asset allocation and consider the shares of safe assets, risky assets, retirement accounts and bonds conditional on positive assets. Interestingly and contrary to Hypothesis 3, we do not observe any statistically significant difference in asset allocation across the full single household sample.

We now move towards the liability side of individuals and look at their borrowing behavior, which includes mortgage debt and non-mortgage debt, such as credit card debt, personal loans and auto loans. Table 3 Panel B shows that individuals with childhood mental health issues are not only more likely to have fewer assets but are also associated with statistically significantly more debt consistent with Hypothesis 4. Column 1 in Panel B reports that childhood mental health conditions are associated with a 5.3% statistically significant higher likelihood of holding any debt. Given that the sample average for holding any debt is 48%, this difference is economically large. In column 2, we assess the likelihood of holding non-mortgage debt and find that the difference in likelihood of holding non-mortgage debt is even greater than total debt. Column 3 highlights that the higher likelihood of holding any debt also translates in 45% more total debt unconditionally. However, once we condition on debt holdings being greater than zero, there is no longer a statistically significant difference in total debt. Strikingly, the key differences emerge again once we split debt into mortgage and non-mortgage debt. Childhood mental health condition is associated with 32% more non-mortgage debt conditional on holding any debt and if anything less mortgage debt. This suggests that the difference in debt accumulation is likely driven by debt used to cover short-term consumption needs rather than long-term investments. Taken together, we observe that childhood mental health has significant long-term economic consequences and is associated with both lower assets, a lower home-ownership likelihood and higher debt accumulation, in particular non-mortgage debt.

[Insert Table 3 about here]

5.3 Mediating factors: social support, coping-mechanisms and financial literacy

5.3.1 Role of social support: evidence from couple households

Many individuals live together with a partner and household members are an important and often the first component of social support. Couple households may form a decision jointly, be an important source of advice, or act as mediating factor to adverse financial and emotional situations. The impact of childhood mental health conditions may have a less pronounced effect if household members act as mediating factor. In this section we analyze the impact of childhood mental health conditions for at least one partner within couple households on long-term financial outcomes for couple household, and evaluate to what extent household members eliminate some of the economic consequences identified in the single household sample.

First, Panel A in Table 4 suggests that childhood mental health conditions are still associated with fewer total assets and lower home-ownership probability, but that this effect may be somewhat attenuated compared to single households. Column 1 shows that couples with at least one partner with childhood mental health conditions are not associated with a difference in the likelihood of having positive assets. However, these couples are still associated with lower total assets, although the magnitude of the coefficient has almost halved. Couples in which at least one member has experienced a childhood mental illness are associated with 18% fewer assets unconditionally, and 24% conditionally on having positive assets. Further, couple households with childhood mental health conditions are again statistically significantly less likely to be home-owners. The average effect is 6.3% and again weaker compared to the single households. In contrast to the arguably attenuated total asset effects, the impact of childhood mental health on asset composition is more pronounced for couple households and the results are in line with Hypothesis 3. Column 4 to 8 highlight that childhood mental health conditions in coupled households are associated with a higher proportion of safe assets and fewer risky assets. Low rates of asset market participation may be explained by four broad factors, namely household preferences, pecuniary and informational participation costs, risks and lack of trust as well as the influence of peers (see Gomes *et al.* (2021)). Structural differences in any of these factors between couples with and without childhood

mental health may explain the observed difference.

In Panel B in Table 4, we zoom into the borrowing decisions of couples with at least one member with childhood mental health conditions. Similarly to single households, we again find that childhood mental health conditions are associated with more debt unconditionally and in particular with more non-mortgage debt both conditionally and unconditionally. For couple households the compositional shift towards non-mortgage debt relative to mortgage debt is even more pronounced. Specifically, columns 1 and 2 document a higher likelihood of holding any debt and any non-mortgage debt. In addition, we also observe that this results in a positive association with the amount of total debt. Once we condition on positive debt for couple households, we observe that childhood mental health in this sample is actually associated with less total debt. Yet, this effect is entirely driven by a smaller proportion of mortgage debt for couple households with childhood mental health conditions. Conditional on positive debt, couples with childhood mental health are associated with an economically large and statistically significant 58% greater amount of non-mortgage debt. This difference is twice as large for single households. Overall, the results for couple households are similar to the results for single households. Interestingly, while the economic differences in asset ownership are smaller for couple households, the economic difference in holding non-mortgage debt seems even larger for couple households.

[Insert Table 4 about here]

5.3.2 Role of differences in coping mechanisms: evidence by gender

Male and female children and adults experience mental health challenges differently and have different coping strategies. While women are more likely to internalize problems such as anxiety disorders, men are more likely to externalize problems (Herrmann *et al.*, 2024; Martin & Hadwin, 2022). It is unclear ex-ante how childhood mental health interacts with gender. On the one hand, effects on assets, home-ownership, and liabilities may be amplified for women because of internalizing coping strategies with greater self-doubt. On the other hand, the more prevalent externalizing coping strategies of men may also amplify decisions due to impulsivity and poorer decision-making. Moreover, the household finance literature has identified important gender differences for instance in housing (Goldsmith-Pinkham & Shue, 2023), macro-financial expectations

(D'Acunto *et al.*, 2020), and investing (Barber & Odean, 2001) that may also translate into differences in this setting. In the subsequent analysis, we therefore interact the childhood mental health dummy with a female indicator to allow for a heterogeneous response by gender.

Table 5 highlights interesting gender differences. Panel A.I zooms into asset and asset allocation for single households. One striking and consistently observed result is that the interaction coefficient on home-ownership in column 3 is negative and statistically significant. This result suggests that the difference in home-ownership for individuals with childhood mental health conditions is even greater for women. Women with childhood mental health are on average 9.5% less likely to be a home-owner relative to women without childhood mental health. Internalizing disorders more prevalent with women may be particularly detrimental to home-ownership. These disorders amplify feelings of uncertainty and self-doubt, which discourage taking on large financial commitments like mortgages and therefore hinder home-ownership. The large economic difference can have important consequences, as home ownership is an important source for wealth accumulation.

Interestingly, however, we observe that the negative relationship between childhood mental health and total assets seems stronger for men. Men with childhood mental health are on average associated with 49% fewer total assets than men without childhood mental health and this difference is even larger once we condition on positive assets. For women we still observe a negative association but the interaction coefficient is positive suggesting that the difference is attenuated. The lower home-ownership probability does not seem to spill into total assets. Externalizing disorders, more prevalent in men, with impulsive financial behavior and instability could be problematic for long-term asset accumulation. Lastly, we observe that the asset composition shift toward safer assets is present only for male individuals with childhood mental health conditions. Childhood mental illness for men is associated with a statistically significantly higher proportion of safe assets (about 4%), a significantly lower proportion of retirement accounts (about 3%), and a borderline insignificant lower proportion of risky assets (about 2%). In contrast, the interaction effect of females with childhood mental health issues cancels out any differences.

Panel A.II of Table 5 repeats this analysis for couple households. Female in this setting is an indicator equal to one if a female member of the household has had a childhood mental health condition. We observe an even stronger negative association with home-ownership if the female

member has childhood mental health conditions within a couple household. In contrast, we no longer observe a statistical difference by gender on total assets and asset allocation.

In Panel B of Table 5, we assess whether there are differential impacts of childhood mental illness by gender on debt accumulation. The nature of females' and males' coping strategy suggests that women may become more cautious with greater self-doubt, while men may become more aggressive and have more impulsive financial decisions. Thus, we expect the effect on borrowing to be stronger for males, and be again driven by non-mortgage debt which covers more short-term and impulsive decisions.

In Panel B.I, the sample is single households. Within this sample, we do not find any statistically significant difference in the likelihood of holding any debt and total amounts of debt between males and females with childhood mental health conditions. In Panel B.II, the sample is based on couple households. Within this sample, we observe large significant differences between couples with a male partner with childhood mental health conditions and couples with a female partner with childhood mental health conditions. Couple households in which a male partner has experienced childhood mental ilness are associated with economically and statistically significantly more debt. They have a higher likelihood of holding any debt and any non-mortgage debt. Once we condition on positive debt, we observe that there is no significant different in the amount of total debt, but that the type of debt held is very different. Conditional on positive debt, couple households with a male partner with childhood mental health are associated with less mortgage debt, but more non-mortgage debt. This finding points again towards more short-term emergency or ad-hoc borrowing. For couple household with a female partner with childhood mental health this effect is largely offset. The interaction coefficient on holding non-mortgage debt is negative and statistically significant. Surprisingly, while no significant differences in debt are observed at the single-household level, large and significant differences emerge at the couple-household level. This finding in contrast to the prior result suggests that couple households may not mitigate the effects of childhood mental health conditions, but rather that male household members with childhood mental health might aggravate these effects. The results highlight the complex interplay between childhood mental health conditions, coping strategies, and household dynamics in shaping financial outcomes.

[Insert Table 5 about here]

5.3.3 Role of cultural differences: evidence by race/ethnicity

In the subsequent analyses, we assess the impact of childhood mental health on financial outcomes by race and ethnicity. The impact of mental health may manifest itself differently across racial groups due to cultural differences and inequities. Cultural differences may influence how mental health issues are expressed and addressed. Factors such as racial discrimination, unequal access to mental health care, and differing socioeconomic starting points may amplify the financial consequences of childhood mental health issues.

Table 6 Panel A investigates whether we observe a differential impact for different race and ethnicity on assets and asset composition in the single household sample. We derive three main conclusions. First, we observe that the effects are more pronounced for White respondents (the omitted category) than for the rest of the sample. Childhood mental health conditions for single White individuals are associated with 53% fewer assets on average unconditionally (compared to 37% for the full sample), and 40% fewer assets on average conditional on positive assets (compared to 32% for the full sample). Further, we similarly observe that childhood mental health conditions for White individuals are associated with a more pronounced shift towards safe assets, and away from risky assets and retirement accounts. Second, we find that across all races and ethnicity individuals with childhood mental health conditions are associated with a lower likelihood of being a home-owner. There does not seem to be a statistically significantly different effect on the likelihood of being a home owner by race or ethnicity. Third, we observe some heterogeneity on the impact on assets and the composition of assets by childhood mental illness and race. Unconditionally, Asian and Other (non-Black) racial groups with childhood mental illness are associated with an even greater difference in total assets relative to their peer group. In contrast, the difference in total assets is less pronounced for Hispanics with childhood mental illness and may even reverse for Black with childhood mental illness. Further, Black and Hispanic respondents with childhood mental health conditions are associated with a lower proportion of safe assets and a higher proportion of retirement accounts. Samaan (2000) find that after controlling for socio-economic status, African American, Native American, and Hispanic children are less likely to have mental health conditions. One explanation is based on cultural factors, such as perceived social support, deep

religiosity, and the role extended families play as mediators of psychological distress. These effects may also attenuate the impact and severity of mental health conditions.

Table 6 Panel B repeats the analyses, but now focuses on couple households. For the purposes of this analysis, we define new categories based on both household members' race/ethnicity. For race, we identify four groups (All White, All Black, All Asian, as well as Mixed & All Other). For ethnicity we consider Not-All Hispanic and All Hispanic. Interestingly, the race/ethnicity interaction results are also much less consistent across single and couple households compared to the non-interacted and gender-interacted results. Within the couple household sample, All-Black households with childhood mental health conditions are no longer associated with more assets. At the same time, All-Asian households are now associated with more assets relative to the All-White households. Moreover, the reduced ever-home ownership likelihood is stronger for All-Black couples with childhood mental health conditions, but is reversed by All-Asian couples.[5]

[Insert Table 6 about here]

Table 7 zooms into the borrowing behavior by childhood mental health condition and race/ethnicity. Starting with the results for single household sample in Panel A, we observe that the effect of childhood mental health conditions on debt is higher for White respondents relative to the unconditional average. For instance White respondents with childhood mental health conditions are 6.3% more likely to hold any debt vs 5.3% in the full single household sample. Further, Hispanic respondents with childhood mental illness are associated with even higher debt levels, whereas the effect is less pronounced for Black respondents. Panel B analyses the impact of race within the couple households. Relative to the full couple household sample, the effect on debt remains higher for All-White couples and lower All-Black households. Unlike for the single household sample, the effect on debt is weaker for All-Hispanic households.

[Insert Table 7 about here]

[5]Note that the share of All-Asian couples in our sample is only 1%. As such, these estimates should be interpreted with caution.

5.3.4 Role of financial literacy

We document that childhood mental health conditions are associated with large economic differences. Some of these differences may be driven by non-optimal economic decision-making. Financial literacy, i.e. people's knowledge of and ability to use fundamental financial concepts in their economic decision-making, enables individuals to use their resources to the fullest (Lusardi & Mitchell, 2014, 2023). Financial literacy may thus be able to mitigate some of the economic consequences of childhood mental health as they equip individuals with tools and knowledge to navigate financial challenges. First, it may directly help individuals to make the most of available resources and build resilience against financial stress, as individuals with better financial literacy better know how to manage limited resources and plan for the future. Second, it may also foster confidence and thereby mitigate the impact of mental health, as individuals gain control over one's financial situation. We next test whether financial literacy mitigates some of the observed differences in assets, home-ownership and debt.

Following Ke (2021), who uses previous work experience in finance as a measure of financial sophistication, we construct an indicator variable *Work In Finance*, which is equal to one for individuals who have worked in finance, to capture individuals with a higher degree of financial literacy. Survey respondents report their current or last work before retirement. We classify respondents who report Finance, Insurance, or Real Estate as having worked in the finance industry. As we only know individuals' last industry of work and not the entire employment history of the respondents, this measure is a lower bound, as some respondents might have switched industries over their working life. Table 1 documents that 6.1% (7.3%) of the single (couple) household sample has worked in finance. We next interact childhood mental health with the financial literacy indicator variable and re-estimate the relationship with assets and liabilities. Strikingly, Table 8 and Table 9 show that financial literacy has a large mitigating effect on assets and debt.

Table 8 shows that the negative association between childhood mental health and home-ownership does not exist for individuals that work in finance for both the single household sample in Panel A and the couple household sample in Panel B. The interaction coefficient between childhood mental health condition and *Work In Finance* is positive and statistically significant. The countervailing effect is less pronounced for assets in general. The interaction coefficient is only positive and statis-

tically significant on the logarithm of total assets conditional on positive assets within the couple household sample. Financial literacy seems to countervail in particular the long-term economic decision of non-home-ownership for individuals with childhood mental health conditions.

[Insert Table 8 about here]

Table 9 shifts the focus to the borrowing side. Notably, we again observe that the positive relationship between childhood mental illness and debt accumulation, respectively non-mortgage debt accumulation, is eliminated or even reversed for individuals that have higher degrees of financial literacy. This time, the interaction is negative. The reversal effect is again stronger within the couple household sample than the single household sample. Individuals with childhood mental health conditions in the couple household with lower degree of financial literacy are for instance associated with a 7.2% higher likelihood of holding non-mortgage debt. In contrast, the interaction coefficient is -9.9%, suggesting that individuals with childhood mental health conditions with higher degree of financial literacy are less likely (-2.7%) to hold non-mortgage debt, relative to their counterparts. Taken together, results presented in this section indicate that financial literacy play an important role in attenuating some of the effects of childhood mental health conditions.

[Insert Table 9 about here]

5.4 Mechanism: Differences in cognitive and non-cognitive abilities

Childhood mental health conditions may affect individuals on multiple cognitive and non-cognitive dimensions, which may contribute to the differences that we document (see Section 2). Specifically, these may affect individuals productivity / earnings, cognitive ability, economic expectations, confidence and discount rate perception. In this Section we explore how childhood mental health conditions correlate with measures of cognitive and non-cognitive abilities.

First, we construct a measure of individuals' cognitive ability based on a word recall test. The interviewer reads a set of 10 words and asks the interviewee to recall as many words as possible. The measure of cognitive ability, $No.of\ Words\ Recalled$, is the number of correctly recalled words. Table 1 documents that individuals recalled on average 5.3 (5.6) words in the single (couple) household sample.

Next, we construct a set of non-cognitive measures. Non-cognitive measures include depression expectation, stock expectation, life span expectation, financial planning horizon and overconfidence. The first three are about individuals' expectations: HRS asks individuals the following three questions: [1] What do you think are the chances that the U.S. economy will experience a major depression sometime during the next 10 years or so? [2] By next year at this time, what is the percent chance that mutual fund shares invested in blue chip stocks like those in the Dow Jones Industrial Average will be worth more than they are today?, and [3] What is the percent chance that you will live to be 85 or more? Respondents answers are reported in percentages, which we recode into decimals. We define these as measures of individuals' [1] *US DEPRESSION EXPECTATION*, [2] *US STOCK EXPECTATION*, and [3] *LIFE SPAN EXPECTATION*. These questions were inconsistently included across survey years and only available for the periods 1998–2008, 2002–2020, and 1998–2020, with 2012 missing.

Related to individuals' life span expectation and investment horizon, HRS also asks individuals about their financial planning horizon. Specifically, respondents were asked about the households' planned saving and spending horizon with the following options: next few months, next year, next few years, next 5-10 years, or longer than 10 years. We create an indicator variable *LONG FINANCIAL PLAN HORIZON* equal to one if respondent's planning horizon is 5-10 years or longer than 10 years and zero otherwise. 39.1% (46.9%) of the single (couple) household sample has a "long financial planning horizon". This variable is asked every survey year from 1998 to 2020 except for 2008 and 2010.

Finally to measure overconfidence, we follow Ke (2021) and compare respondents word recall score to their subjective memory rating. Survey respondents are asked to rate their memory at the survey time as excellent, very good, good, fair or poor. Simultaneously, they execute a memory test, the word recall test as mentioned as a measure of cognitive ability. We seek to identify individuals who incorrectly rate their memory as "better-than-average effect", which is a measure of overconfidence caused by an irrational shift in the perceived mean (Grinblatt & Keloharju, 2009). We first calculate the average number of correct words recalled by survey year and age group. We consider a within survey year and age group average to rule out any changes in difficulty level across survey years and the impact of age on memory. The age groups are the following: $(0, 50)$, $[50, 65)$, $[65, 70)$, $[70, 75)$, $[75, 80)$, $[80, 85)$, $[85, 90)$, and $[90, +\infty)$. *OVERCONFIDENCE* is an indica-

tor variable equal to 1 for those who rated their memory as excellent or very good but performed worse than their survey-year and age-group average in the word recall test. It is zero otherwise. In short, overconfidence measures whether a respondent overrates his or her memory compared to its peer-benchmarked actual performance. Notably, overconfidence has been shown to relate to risk-taking, as overconfident people are more likely to be risk-seeking holding for instance more risky assets (e.g. Barber & Odean, 2001; Scheinkman & Xiong, 2003).

Our results paint an interesting picture. First, we observe that childhood mental health conditions are associated with lower cognitive abilities in column 6 of Table 10 within both the single household sample (Panel A), and the couple household sample (Panel B). Individuals with childhood mental health conditions are associated with a lesser ability to recall worlds. Lower cognitive abilities, possibly driven by the impact of individuals' mental health on their educational experience, may directly translate into lower earnings potential and thus may explain some of the differences in total assets/ home-ownership. Further lower cognitive abilities may also explain the reduced participation in riskier asset classes that may be perceived as more complex.

Second, we also document that childhood mental illness is associated with more pessimistic economic outlook. Column 1 in Table 10 shows that childhood mental health conditions are associated with a statistically and economically significantly higher perceived likelihood of expecting a US depression within both the solo and couple household sample. Similarly, childhood mental illness is also associated with a lower perceived likelihood of experiencing positive stock market performance within the couple household sample (column 2). The relationship between childhood mental illness and more pessimistic economic outlooks may partially explain why we observe a higher proportion in safe assets. Such structural allocational differences may also translate into differences in total asset accumulation.

[Insert Table 10 about here]

Third, childhood mental health conditions are associated with a shorter planing horizon. We observe that childhood mental illness is associated both with shorter life expectations and shorter financial planning horizons across the single and couple household sample (compare columns 3 and 4 in Table 10). Table 11 further suggests that the shorter planing horizon effect may be somewhat stronger for males than females. Shorter planning horizon also align with a shift towards

safer assets and possibly less saving. This result may thus also contribute towards why individuals with childhood mental illness are significantly less likely to be home -owners, as home-ownership is a long-term investment.

Lastly, we also observe for the single household sample that childhood mental illness is associated with a statistically significantly lower likelihood of being overconfident (compare column 5 in Table 10 Panel A). We do not observe a similar difference within the couple household sample (Panel B), which suggests that this dimension may be not be as relevant as the other effects. Further we do not observe significant difference for the interaction coefficient of childhood mental health and gender. Overconfidence, often modeled as an overestimation of the precision of private information signals, results in investors holding more risky assets (e.g. Barber & Odean, 2001; Scheinkman & Xiong, 2003). In line with these findings, the lower likelihood of being overconfident of individuals with childhood mental health conditions may also explain the shift towards safer assets.

[Insert Table 11 about here]

Taken together childhood mental health seems to affect long-term financial outcomes through a variety of factors. Individuals with childhood mental health conditions are economically and statistically significantly associated with lower cognitive abilities, more pessimistic economic outlooks, shorter planning horizons across both single and couple households. We also observe that individuals with childhood mental health conditions within the single household are associated with being less overconfident. The directional effects observed on the cognitive and non-cognitive abilities for individuals with childhood mental health conditions line up with the observed long-term financial outcome differences, specifically having fewer total assets, a lower probability of being a home-owner, a higher proportion of safe assets and a higher likelihood of holding debt.

6 Conclusion

In this paper, we empirically investigate the long-lasting impact of early life mental disorders on asset ownership decisions and debt accumulation, while also examining how these effects vary across racial and gender groups. Individuals who experienced childhood mental health challenges

are significantly less likely to own any assets, accumulate fewer total assets (both unconditionally and conditionally on asset ownership), and are less likely to become homeowners over their lifetimes. Additionally, they tend to accumulate more debt, particularly non-mortgage debt.

We next proceed to investigate the impact of mediating factors on the observed patterns. We find that the negative relation between childhood mental health conditions and asset ownership, as well as home-ownership, is attenuated in couple households, which points to the mitigating influence of household level social support. Examining how early childhood mental health conditions affect financial decision-making reveals interesting differences based on gender and race/ethnicity, pointing to the importance of coping mechanisms and cultural differences. We also find that financial literacy mitigates some of these economic differences.

Our results indicate that individuals with childhood mental health conditions are less likely to exhibit overconfidence, have shorter life expectancy and financial planning horizons, and possess a pessimistic economic outlook. They are also more likely to exhibit reduced cognitive abilities.

Understanding how childhood mental health conditions influence financial outcomes later in life is valuable, as these conditions can be addressed through treatment and interventions. Our findings underscore the importance of understanding the long run impact of early life mental health conditions not only by health care professionals, but also by financial regulators and social insurance policy makers.

7 Figures & Tables

TABLE 1: SUMMARY STATISTICS

This table reports the summary statistics (mean, standard deviation, and the number of observations) for the Health Retirement Survey (HRS) sample from 1998 to 2020. We report the summary statistics separately by single households and couple households. A single household is a household whose member is never married, divorced, or widowed. A couple household is a household whose members are married. Panel A reports summary statistics at the household member level, i.e. we include all individuals within a household as separate observation. Summary statistics reported at the household member level include demographics in Panel A.1 and cognitive and non-cognitive abilities in Panel A.2. Panel B documents summary statistics at the household level, i.e. we aggregate individual information at the household level. We report summary statistics for financial variables at the household level In Panel B.1.

	Single Household Sample			Couple Household Sample		
	Mean	Standard Deviation	Observations	Mean	Standard Deviation	Observations
Panel A: Household member as unit of observation						
Panel A.1: Demographics						
Childhood Mental Health	0.060	0.238	74,653	0.036	0.186	117,111
Female	0.722	0.448	74,653	0.522	0.500	117,111
Race: White	0.699	0.459	74,653	0.819	0.385	117,111
Race: Black	0.254	0.435	74,653	0.122	0.328	117,111
Race: Asian	0.010	0.100	74,653	0.016	0.126	117,111
Race: Other	0.012	0.107	74,653	0.008	0.090	117,111
Ethnicity: Hispanic	0.119	0.324	74,653	0.129	0.335	117,111
Work in Finance	0.061	0.239	60,347	0.073	0.260	102,315
Childhood Financial Hardship	0.437	0.496	74,653	0.394	0.489	117,111
Panel A.2: Cognitive and Non-cognitive Abilities						
US Depression Expectation	0.510	0.307	16,170	0.463	0.293	30,036
US Stock Expectation	0.447	0.272	47,707	0.484	0.256	76,269
Life Span Expectation	0.468	0.332	61,733	0.489	0.305	102,625
Long Financial Plan Horizon	0.391	0.488	29,856	0.469	0.499	49,855
Overconfidence	0.110	0.312	70,921	0.098	0.297	110,688
No. of Correct Words Recalled	5.255	1.772	71,100	5.616	1.741	111,673
Panel B: Household as unit of observation						
Panel B.1: Financials						
Any Asset	0.603	0.489	74,653	0.703	0.457	67,406
Any Debt	0.374	0.484	74,653	0.473	0.499	67,406
Any Non-mortgage Debt	0.274	0.446	74,653	0.283	0.450	67,406
Home-Owner	0.584	0.493	74,653	0.825	0.380	67,406
Assets ($, in thousands)	73.446	20.347	74,653	153.104	298.901	67,406
Debts ($, in thousands)	17.384	44.535	74,653	37.294	67.499	67,406
Mortgages ($, in thousands)	15.203	43.258	74,653	34.480	65.727	67,406
Non-mortgage Debts ($, in thousands)	2.814	6.855	74,653	2.872	6.917	67,406
% Safe Assets	0.755	0.367	45,028	0.609	0.401	47,448
% Risky Assets	0.084	0.224	45,028	0.119	0.246	47,448
% Retirement Accounts	0.156	0.304	45,028	0.267	0.356	47,448
% Bonds	0.005	0.051	45,028	0.006	0.051	47,448
% Non-mortgage Debt	0.557	0.478	27,941	0.348	0.448	31,890

TABLE 2: PREVALENCE OF CHILDHOOD MENTAL HEALTH

The unit of observations is survey respondent. The sample includes all individuals surveyed biennially from 1998 to 2020. The dependent variable is *Childhood Mental Health*, which is an indicator variable equal to 1 if the individual was diagnosed with mental health conditions in childhood. The independent variables are defined as follows: *Female* is an indicator variable equal to 1 if the individual is female; *Race: Black* is an indicator variable equal to 1 if the individual's race is Black; *Race: Asian* is an indicator variable equal to 1 if the individual's race is Asian or Pacific Islander; *Race: Other* is an indicator variable equal to 1 if the individual's race is Hawaiian, Native American, or Alaskan; *Ethnicity: Hispanic* is an indicator variable equal to 1 if the individual's ethnicity is Hispanic; *Childhood Financial Hardship* is an indicator equal to 1 if the individual experienced financial hardship in childhood. The model is estimated using a linear probability model. In column 3, we include cohort fixed effect. In columns 4 and 5, we include cohort and birth-state-by-birth-year fixed effect. Standard errors are clustered at the birth-state-by-birth-year level. ***1% significance, **5% significance, *10% significance.

	(1)	(2)	(3)	(4)	(5)
	Childhood Mental Health				
Female	0.027***	0.027***	0.031***	0.030***	0.029***
	(0.003)	(0.003)	(0.007)	(0.003)	(0.003)
Race: Black	−0.007**	−0.012***	−0.027***	−0.025***	−0.027***
	(0.004)	(0.004)	(0.008)	(0.004)	(0.006)
Race: Asian	−0.012	−0.010	−0.025*	−0.013	−0.005
	(0.011)	(0.011)	(0.013)	(0.010)	(0.014)
Race: Other	0.033***	0.030***	0.019***	0.019***	0.017**
	(0.005)	(0.005)	(0.005)	(0.006)	(0.008)
Ethnicity: Hispanic	−0.006	−0.012***	−0.025**	−0.020***	−0.021***
	(0.004)	(0.004)	(0.010)	(0.006)	(0.007)
Female X Black					0.004
					(0.007)
Female X Asian					−0.013
					(0.021)
Female X Other Races					0.003
					(0.012)
Female X Hispanic					0.001
					(0.009)
Childhood Financial Hardship		0.042***	0.045***	0.046***	0.046***
		(0.003)	(0.012)	(0.003)	(0.003)
Cohort F.E.	No	No	Yes	Yes	Yes
Birth State X Year F.E.	No	No	No	Yes	Yes
R2	0.005	0.014	0.029	0.116	0.116
N	26,309	26,309	26,309	25,718	25,718

TABLE 3: LONG-TERM FINANCIAL IMPACT OF CHILDHOOD MENTAL HEALTH FOR SINGLE HOUSEHOLDS

The unit of observation in this table is single household × survey wave. The sample includes all the individuals surveyed biennially from 1998 to 2020. A single household is a household whose member is never married, divorced, or widowed. In Panel A, the dependent variables are assets and asset shares. *Any Assets* is an indicator variable equal to 1 if the individual has positive assets and 0 otherwise; *Ln(Asset)* is the logarithm of total household assets; *Home-Owner* is an indicator variable equal 1 if the household has ever owned a home during survey periods. *%Safe Assets*, *%Risky Assets*, *%Retirement Accounts*, *%Bonds*, are the share of safe assets, risky assets, retirement accounts, and bonds relative to total household assets. Columns 1 to 3 include all observations, while columns 4 to 8 condition on positive assets. In Panel B, we focus on households' debt. *Any Debt* is an indicator variable equal to 1 if the household has positive debts and 0 otherwise; *Any Non-mortgage Debt* is an indicator variable equal to 1 if the household has any non-mortgage debt and 0 otherwise; *Ln(Total Debt)* is the logarithm of total household debt, including mortgage and non-mortgage debt; *Ln(Mortgage)* is the logarithm of total mortgage debt; *Ln(Non-mortgage Debts)* is the logarithm of total non-mortgage debt; and *% Non-mortgage Debt* is the share of non-mortgage debt relative to total household debt. Columns 1 to 3 include all observations, while columns 4 to 7 condition on positive debt. The key independent variable is *ChildMentalHealth*, an indicator variable equal to 1 if the solo household member has a childhood mental health condition. All specification include the following controls: Gender, race, ethnicity, age, education, current health status, number of children, working status, household income, transfer from children, transfer to children, and childhood financial situation. In Panel A, we additionally control for *Total Debt*, *Home-Owner* in specifications where *Home-Owner* is not the dependent variable, and *Total Asset* where *Home-Owner* is the dependent variable. In Panel B, additional controls include *Total Asset* and *Home-Owner*. All financial variables are deflated to 2008 dollars. All specifications include cohort fixed effect, county-by-year fixed effect, and birth-state-by-birth-year fixed effect. Standard errors are clustered at the county-by-year level. ***1% significance, **5% significance, *10% significance.

Panel A: Assets and asset allocation

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Full Sample			Asset Holders				
	Any Assets	Ln(Assets)	Home-Owner	Ln(Assets)	%Safe Assets	%Risky Assets	%Retirement Accounts	%Bonds
ChildMentalHealth	-0.018^{**}	-0.372^{***}	-0.087^{***}	-0.314^{***}	0.011	-0.003	-0.009	0.001
	(0.008)	(0.071)	(0.008)	(0.064)	(0.008)	(0.005)	(0.007)	(0.001)
R2	0.397	0.489	0.375	0.546	0.353	0.284	0.301	0.240
N	70,863	70,863	70,863	41,791	41,791	41,791	41,791	41,791
Cohort F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
County X Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Birth State X Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Panel B: Debt and debt composition

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Full Sample			Debt Holders			
	Any Debts	Any Non-Mortgage Debts	Ln(Total Debt)	Ln(Total Debt)	Ln(Mortgage)	Ln(Non-mortgage Debts)	% Non-mortgage Debt
ChildMentalHealth	0.053^{***}	0.064^{***}	0.451^{***}	-0.023	-0.164	0.323^{***}	0.015
	(0.008)	(0.008)	(0.079)	(0.048)	(0.124)	(0.103)	(0.011)
R2	0.306	0.235	0.352	0.519	0.568	0.368	0.555
N	70,863	70,863	70,863	25,421	25,421	25,421	25,421
Cohort F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
County X Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Birth State X Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

TABLE 4: LONG-TERM FINANCIAL IMPACT OF CHILDHOOD MENTAL HEALTH FOR COUPLE HOUSEHOLDS

The unit of observation in this table is couple households × survey wave. The sample includes all the households surveyed biennially from 1998 to 2020. A couple household is a household whose members are married. In Panel A, the dependent variables are assets and asset shares, specifically *Any Assets*, *Ln(Asset)*, *Home-Owner*, *%Safe Assets*, *%Risky Assets*, *%Retirement Accounts*, and *%Bonds*. Columns 1 to 3 include all observations, while columns 4 to 8 condition on positive assets. In Panel B, the we focus on households' debt. The dependent variables are *Any Debt*, *Any Non-mortgage Debt*, *Ln(Total Debt)*, *Ln(Mortgage)*, *Ln(Non-mortgage Debts)*, and *% Non-mortgage Debt*. Columns 1 to 3 include all observations, while columns 4 to 7 condition on positive debt. All variables are at the household level and defined in Table 3. The key independent variable is *ChildMentalHealth*, an indicator variable equal to 1 if at least one of the household members has a childhood mental health condition. All specification include the following controls: Gender, race, ethnicity, age, education, current health status, number of children, working status, household income, transfer from children, transfer to children, and childhood financial situation. In Panel A, we additionally control for *Total Debt*, *Home-Owner* in specifications where *Home-Owner* is not the dependent variable, and *Total Asset* where *Home-Owner* is the dependent variable. In Panel B, additional controls include *Total Asset* and *Home-Owner*. All financial variables are deflated to 2008 dollars. All specifications include cohort fixed effect, county-by-year fixed effect, and birth-state-by-birth-year fixed effect. Standard errors are clustered at the county-by-year level. ***1% significance, **5% significance, *10% significance.

Panel A: Assets and asset allocation

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Full Sample			Asset Holders				
	Any Assets	Ln(Assets)	Home-Owner	Ln(Assets)	%Safe Assets	%Risky Assets	%Retirement Accounts	%Bonds
ChildMentalHealth	−0.005	−0.176**	−0.069***	−0.216***	0.025**	−0.021***	−0.004	0.000
	(0.008)	(0.087)	(0.008)	(0.058)	(0.010)	(0.006)	(0.010)	(0.001)
R2	0.500	0.580	0.457	0.617	0.427	0.348	0.382	0.219
N	62,663	62,663	62,663	43,410	43,410	43,410	43,410	43,410
Cohort F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
County X Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Birth State X Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Panel B: Debt and debt composition

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Full Sample			Debt Holders			
	Any Debts	Any Non-Mortgage Debts	Ln(Total Debt)	Ln(Total Debt)	Ln(Mortgage)	Ln(Non-mortgage Debts)	% Non-mortgage Debt
ChildMentalHealth	0.051***	0.050***	0.490***	−0.090*	−0.554***	0.575***	0.058***
	(0.010)	(0.011)	(0.105)	(0.053)	(0.160)	(0.148)	(0.014)
R2	0.404	0.299	0.451	0.567	0.542	0.406	0.523
N	62,663	62,663	62,663	28,302	28,302	28,302	28,302
Cohort F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
County X Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Birth State X Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

TABLE 5: LONG-TERM FINANCIAL IMPACT OF CHILDHOOD MENTAL HEALTH BY GENDER

The unit of observation in this table is household × survey wave. The sample includes all households surveyed biennially from 1998 to 2020. In Panel A, the dependent variables are assets and asset shares, specifically *Any Assets*, *Ln(Asset)*, *Home-Owner*, *%Safe Assets*, *%Risky Assets*, *%Retirement Accounts*, and *%Bonds*. Columns 1 to 3 include all observations, while columns 4 to 8 condition on positive assets. In Panel B, the we focus on households' debt. The dependent variables are *Any Debt*, *Any Non-mortgage Debt*, *Ln(Total Debt)*, *Ln(Mortgage)*, *Ln(Non-mortgage Debts)*, and *% Non-mortgage Debt*. Columns 1 to 3 include all observations, while columns 4 to 7 condition on positive debt. All variables are at the household level and defined in Table 3. Panels A.I and B.I analyze the single household sample, while Panels A.II and B.II analyze the couple household sample. The key independent variable is *ChildMentalHealth*, defined in Table 3 for single households, respectively 4 for couple households. The variable is interacted with *Female*, an indicator variable equal to 1 if the individual with childhood mental health conditions is female. All specification include the following controls: Race, ethnicity, age, education, current health status, number of children, working status, household income, transfer from children, transfer to children, and childhood financial situation. In Panel A, we additionally control for *Total Debt*, *Home-Owner* in specifications where *Home-Owner* is not the dependent variable, and *Total Asset* where *Home-Owner* is the dependent variable. In Panel B, additional controls include *Total Asset* and *Home-Owner*. All financial variables are deflated to 2008 dollars. All specifications include cohort fixed effect, county-by-year fixed effect, and birth-state-by-birth-year fixed effect. Standard errors are clustered at the county-by-year level. ***1% significance, **5% significance, *10% significance.

Panel A: Assets and asset allocation

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Full Sample			Asset Holders				
	Any Assets	Ln(Assets)	Home-Owner	Ln(Assets)	%Safe Assets	%Risky Assets	%Retirement Accounts	%Bonds
Panel A.I: Single households								
ChildMentalHealth	−0.008	−0.490***	−0.064***	−0.576***	0.044***	−0.016	−0.029**	0.001
	(0.016)	(0.145)	(0.015)	(0.111)	(0.017)	(0.011)	(0.013)	(0.003)
Female	0.010***	−0.146***	0.015***	−0.369***	0.032***	−0.019***	−0.011***	−0.001*
	(0.004)	(0.039)	(0.004)	(0.029)	(0.005)	(0.003)	(0.004)	(0.001)
ChildMentalHealth	−0.014	0.159	−0.031*	0.363***	−0.045**	0.018	0.027*	−0.000
X Female	(0.018)	(0.164)	(0.017)	(0.134)	(0.019)	(0.012)	(0.015)	(0.003)
R2	0.397	0.489	0.375	0.546	0.353	0.284	0.301	0.240
N	70,863	70,863	70,863	41,791	41,791	41,791	41,791	41,791
Panel A.II: Couple households								
ChildMentalHealth	0.002	−0.211	−0.029**	−0.182*	0.046**	−0.023**	−0.023	0.000
	(0.015)	(0.155)	(0.015)	(0.100)	(0.018)	(0.011)	(0.017)	(0.002)
ChildMentalHealth	−0.010	0.051	−0.058***	−0.049	−0.031	0.003	0.028	−0.000
X Female	(0.018)	(0.183)	(0.017)	(0.124)	(0.022)	(0.013)	(0.020)	(0.003)
R2	0.500	0.580	0.457	0.617	0.427	0.348	0.382	0.219
N	62,663	62,663	62,663	43,410	43,410	43,410	43,410	43,410
Cohort F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
County X Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Birth State X Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Panel B: Debt and debt composition

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Full Sample			Debt Holders			
	Any Debts	Any Non-Mortgage Debts	Ln(Total Debt)	Ln(Total Debt)	Ln(Mortgage)	Ln(Non-mortgage Debts)	% Non-mortgage Debt
Panel B.I: Single households							
ChildMentalHealth	0.050***	0.057***	0.397**	−0.086	−0.087	0.121	0.012
	(0.017)	(0.016)	(0.165)	(0.092)	(0.237)	(0.210)	(0.021)
Female	0.026***	0.030***	0.200***	−0.126***	−0.211***	0.137**	0.021***
	(0.004)	(0.004)	(0.041)	(0.028)	(0.080)	(0.062)	(0.007)
ChildMentalHealth	0.005	0.010	0.072	0.085	−0.104	0.273	0.004
X Female	(0.020)	(0.019)	(0.188)	(0.106)	(0.274)	(0.238)	(0.024)
R2	0.306	0.235	0.352	0.519	0.568	0.368	0.555
N	70,863	70,863	70,863	25,421	25,421	25,421	25,421
Panel B.II: Couple households							
ChildMentalHealth	0.107***	0.117***	1.026***	−0.084	−0.673**	1.099***	0.074***
	(0.018)	(0.019)	(0.189)	(0.091)	(0.271)	(0.247)	(0.023)
ChildMentalHealth	−0.082***	−0.096***	−0.776***	−0.010	0.183	−0.804***	−0.025
X Female	(0.021)	(0.022)	(0.216)	(0.111)	(0.328)	(0.298)	(0.028)
R2	0.405	0.300	0.451	0.567	0.542	0.407	0.523
N	62,663	62,663	62,663	28,302	28,302	28,302	28,302
Cohort F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
County X Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Birth State X Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

TABLE 6: LONG-TERM ASSET AND ASSET ALLOCATION OF CHILDHOOD MENTAL HEALTH BY RACE

The unit of observation in this table is household × survey wave. The sample includes all households surveyed biennially from 1998 to 2020. The dependent variables are assets and asset shares, specifically *Any Assets*, *Ln(Asset)*, *Home-Owner*, *%Safe Assets*, *%Risky Assets*, *%Retirement Accounts*, and *%Bonds*. Columns 1 to 3 include all observations, while columns 4 to 8 condition on positive assets. All variables are at the household level and defined in Table 3. Panel A analyzes the single household sample, while Panel B analyzes the couple household sample. The key independent variable is *ChildMentalHealth*, defined in Table 3 for single households, respectively 4 for couple households. For single households, *ChildMentalHealth* is interacted by indicator variables equal to one for the given race/ethnicity of the individual (*Race: Black*, *Race: Asian*, *Race: Other* and *Ethnicity: Hispanic*). For couple households, *ChildMentalHealth* is interacted by indicator variables equal to one based on both households members ethnicity (*All Black households*, *All Asian households*, *Mix & All Other-Race households*, and *All Hispanic households*). All specification include the following controls: Gender, age, education, current health status, number of children, working status, household income, transfer from children, transfer to children, childhood financial situation, and total debt. We additionally control for *Home-Owner* in specifications where *Home-Owner* is not the dependent variable, and *Total Asset* where *Home-Owner* is the dependent variable. All financial variables are deflated to 2008 dollars. All specifications include cohort fixed effect, county-by-year fixed effect, and birth-state-by-birth-year fixed effect. Standard errors are clustered at the county-by-year level. ***1% significance, **5% significance, *10% significance.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Full Sample			Asset Holders				
	Any Assets	Ln(Assets)	Home-Owner	Ln(Assets)	%Safe Assets	%Risky Assets	%Retirement Accounts	%Bonds
Panel A: Single households								
ChildMentalHealth	−0.016*	−0.531***	−0.086***	−0.396***	0.023**	−0.011*	−0.012	0.000
	(0.009)	(0.094)	(0.011)	(0.073)	(0.010)	(0.007)	(0.009)	(0.001)
Race: Black	−0.188***	−2.277***	−0.069***	−1.373***	0.122***	−0.045***	−0.074***	−0.003***
	(0.006)	(0.055)	(0.007)	(0.046)	(0.006)	(0.004)	(0.005)	(0.001)
Race: Asian	−0.046**	−0.617***	0.020	−0.352***	0.055***	−0.048***	−0.004	−0.003**
	(0.018)	(0.188)	(0.019)	(0.124)	(0.020)	(0.014)	(0.018)	(0.001)
Race: Other	−0.008	−0.303***	−0.006	−0.375***	0.031***	−0.001	−0.032***	0.002*
	(0.007)	(0.064)	(0.008)	(0.058)	(0.007)	(0.005)	(0.007)	(0.001)
Ethnicity: Hispanic	−0.128***	−1.461***	−0.034***	−0.800***	0.072***	−0.035***	−0.034***	−0.004***
	(0.009)	(0.082)	(0.009)	(0.065)	(0.009)	(0.005)	(0.008)	(0.001)
ChildMentalHealth	0.018	0.752***	−0.020	0.685***	−0.060***	0.033***	0.023	0.004
X Black	(0.020)	(0.174)	(0.020)	(0.195)	(0.021)	(0.012)	(0.018)	(0.004)
ChildMentalHealth	−0.125*	−0.842	0.034	1.016*	−0.054	−0.010	0.069	−0.005
X Asian	(0.068)	(0.695)	(0.088)	(0.617)	(0.110)	(0.024)	(0.100)	(0.005)
ChildMentalHealth	−0.027	−0.345*	−0.017	−0.293	0.034	0.005	−0.041**	0.002
X Other	(0.025)	(0.199)	(0.023)	(0.205)	(0.025)	(0.014)	(0.019)	(0.006)
ChildMentalHealth	−0.006	0.286	0.035	0.006	−0.048*	0.018	0.032	−0.002
X Hispanic	(0.024)	(0.201)	(0.025)	(0.211)	(0.025)	(0.013)	(0.021)	(0.003)
R2	0.397	0.489	0.375	0.546	0.354	0.284	0.301	0.240
N	70,863	70,863	70,863	41,791	41,791	41,791	41,791	41,791
Cohort F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
County X Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Birth State X Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Full Sample				Asset Holders		
	Any Assets	Ln(Assets)	Home-Owner	Ln(Assets)	%Safe Assets	%Risky Assets	%Retirement Accounts	%Bonds
Panel B: Couple households								
ChildMentalHealth	0.004	−0.196*	−0.046***	−0.285***	0.039***	−0.028***	−0.011	−0.000
	(0.010)	(0.108)	(0.010)	(0.069)	(0.012)	(0.008)	(0.012)	(0.001)
All Black Family	−0.151***	−2.264***	−0.017**	−1.291***	0.152***	−0.065***	−0.085***	−0.002
	(0.009)	(0.086)	(0.008)	(0.065)	(0.011)	(0.006)	(0.010)	(0.002)
All Asian Family	−0.049***	−0.786***	−0.030*	−0.183	0.018	−0.014	−0.001	−0.003
	(0.018)	(0.196)	(0.017)	(0.114)	(0.022)	(0.015)	(0.019)	(0.002)
Mix & All Other-Race Family	−0.044***	−0.692***	−0.021***	−0.401***	0.045***	−0.008	−0.037***	0.001
	(0.007)	(0.067)	(0.006)	(0.049)	(0.009)	(0.005)	(0.008)	(0.001)
All Hispanic Family	−0.174***	−2.064***	0.030**	−0.873***	0.057***	−0.044***	−0.011	−0.002
	(0.011)	(0.112)	(0.012)	(0.079)	(0.014)	(0.009)	(0.012)	(0.002)
ChildMentalHealth	−0.081**	−0.477	−0.174***	0.254	−0.058	0.039	0.007	0.013
X All Black Family	(0.033)	(0.313)	(0.025)	(0.273)	(0.043)	(0.029)	(0.035)	(0.009)
ChildMentalHealth	0.036	2.330***	0.281***	3.119***	−0.306***	0.151**	0.159**	−0.004
All Asian Family	(0.066)	(0.811)	(0.054)	(0.476)	(0.087)	(0.065)	(0.076)	(0.005)
ChildMentalHealth	0.004	0.021	−0.021	0.011	−0.031	0.013	0.019	−0.001
X Mix & All Other-Race Family	(0.022)	(0.218)	(0.020)	(0.154)	(0.026)	(0.015)	(0.023)	(0.003)
ChildMentalHealth	−0.014	0.149	−0.022	0.006	0.025	−0.011	−0.012	−0.001
X All Hispanic Family	(0.028)	(0.255)	(0.030)	(0.231)	(0.036)	(0.018)	(0.033)	(0.003)
R2	0.500	0.580	0.458	0.618	0.427	0.348	0.382	0.219
N	62,663	62,663	62,663	43,410	43,410	43,410	43,410	43,410
Cohort F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
County X Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Birth State X Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

TABLE 7: LONG-TERM DEBT ACCUMULATION OF CHILDHOOD MENTAL HEALTH BY RACE

The unit of observation in this table is household × survey wave. The sample includes all households surveyed biennially from 1998 to 2020. The dependent variables are *Any Debt*, *Any Non-mortgage Debt*, *Ln(Total Debt)*, *Ln(Mortgage)*, *Ln(Non-mortgage Debts)*, and *% Non-mortgage Debt*. Columns 1 to 3 include all observations, while columns 4 to 7 condition on positive debt. All variables are at the household level and defined in Table 3. Panel A analyzes the single household sample, while Panel B analyzes the couple household sample. The key independent variable is *ChildMentalHealth*, defined in Table 3 for single households, respectively 4 for couple households. For single households, *ChildMentalHealth* is interacted by indicator variables equal to one for the given race/ethnicity of the individual (*Race: Black*, *Race: Asian*, *Race: Other* and *Ethnicity: Hispanic*). For couple households, *ChildMentalHealth* is interacted by indicator variables equal to one based on both households members ethnicity (*All Black households*, *All Asian households*, *Mix & All Other-Race households*, and *All Hispanic households*). All specification include the following controls: Gender, age, education, current health status, number of children, working status, household income, transfer from children, transfer to children, childhood financial situation, total asset, and home-owner. All financial variables are deflated to 2008 dollars. All specifications include cohort fixed effect, county-by-year fixed effect, and birth-state-by-birth-year fixed effect. Standard errors are clustered at the county-by-year level. ***1% significance, **5% significance, *10% significance.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Full Sample			Debt Holders			
	Any Debts	Any Non-Mortgage Debts	Ln(Total Debt)	Ln(Total Debt)	Ln(Mortgage)	Ln(Non-mortgage Debts)	% Non-mortgage Debt
Panel A: Single households							
ChildMentalHealth	0.063***	0.072***	0.570***	0.037	−0.251	0.530***	0.023
	(0.011)	(0.011)	(0.103)	(0.060)	(0.163)	(0.137)	(0.014)
Race: Black	0.013**	0.026***	0.054	−0.139***	−0.642***	0.464***	0.053***
	(0.006)	(0.006)	(0.058)	(0.038)	(0.103)	(0.082)	(0.009)
Race: Asian	−0.044**	−0.053***	−0.355*	−0.064	0.400	−0.361	−0.043*
	(0.019)	(0.018)	(0.195)	(0.105)	(0.296)	(0.273)	(0.026)
Race: Other	0.002	0.000	0.001	−0.012	0.121	−0.085	−0.013
	(0.007)	(0.007)	(0.067)	(0.048)	(0.126)	(0.105)	(0.011)
Ethnicity: Hispanic	−0.027***	−0.014	−0.305***	−0.201***	−0.528***	0.260**	0.042***
	(0.009)	(0.009)	(0.084)	(0.058)	(0.155)	(0.124)	(0.013)
ChildMentalHealth	−0.040*	−0.045**	−0.347*	0.106	0.568**	−0.599***	−0.050**
X Black	(0.021)	(0.021)	(0.193)	(0.115)	(0.274)	(0.213)	(0.023)
ChildMentalHealth	0.054	0.158	−0.519	−1.812***	−2.661**	−0.304	0.225**
X Asian	(0.098)	(0.103)	(0.803)	(0.567)	(1.212)	(1.017)	(0.098)
ChildMentalHealth	−0.073***	−0.030	−0.872***	−0.415***	−0.765**	−0.019	0.064**
X Other	(0.026)	(0.026)	(0.237)	(0.143)	(0.375)	(0.287)	(0.032)
ChildMentalHealth	0.062**	0.035	0.571**	−0.021	0.591*	−0.410	−0.049*
X Hispanic	(0.025)	(0.026)	(0.232)	(0.133)	(0.335)	(0.284)	(0.029)
R2	0.306	0.235	0.352	0.520	0.569	0.368	0.556
N	70,863	70,863	70,863	25,421	25,421	25,421	25,421
Panel B: Couple households							
ChildMentalHealth	0.081***	0.077***	0.746***	−0.137**	−0.574***	0.702***	0.062***
	(0.013)	(0.013)	(0.135)	(0.068)	(0.205)	(0.182)	(0.018)
All Black Family	0.033***	0.046***	0.260**	−0.095*	−0.391**	0.498***	0.035**
	(0.010)	(0.010)	(0.103)	(0.057)	(0.171)	(0.144)	(0.015)
All Asian Family	−0.028	−0.033	−0.229	0.014	−0.085	−0.017	0.008
	(0.022)	(0.021)	(0.244)	(0.104)	(0.307)	(0.313)	(0.025)
Mix & All Other-Race Family	0.002	0.011	0.062	0.125***	0.086	0.310***	−0.000
	(0.007)	(0.007)	(0.075)	(0.041)	(0.121)	(0.107)	(0.010)
All Hispanic Family	−0.034***	0.001	−0.521***	−0.404***	−0.890***	0.468***	0.064***
	(0.012)	(0.012)	(0.127)	(0.065)	(0.197)	(0.161)	(0.016)
ChildMentalHealth	−0.088**	−0.103***	−0.690*	0.262	0.480	−0.902*	−0.070
X All Black Family	(0.037)	(0.037)	(0.368)	(0.180)	(0.602)	(0.515)	(0.053)
ChildMentalHealth	0.252***	0.064	3.447***	1.339***	2.860**	−0.615	−0.185*
X All Asian Family	(0.083)	(0.089)	(0.949)	(0.297)	(1.123)	(1.284)	(0.098)
ChildMentalHealth	−0.049*	−0.023	−0.415	0.122	−0.309	0.172	0.033
X Mix & All Other-Race Family	(0.026)	(0.027)	(0.266)	(0.138)	(0.399)	(0.361)	(0.034)
ChildMentalHealth	−0.065**	−0.060*	−0.730**	−0.278	−0.003	−0.541	−0.017
X All Hispanic Family	(0.032)	(0.033)	(0.334)	(0.191)	(0.531)	(0.457)	(0.045)
R2	0.405	0.300	0.452	0.568	0.542	0.407	0.523
N	62,663	62,663	62,663	28,302	28,302	28,302	28,302
Cohort F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
County X Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Birth State X Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

TABLE 8: CHILDHOOD MENTAL HEALTH, FINANCIAL LITERACY, AND ASSET ALLOCATION

The unit of observation in this table is household × survey wave. The sample includes all households surveyed biennially from 1998 to 2020. The dependent variables are assets and asset shares, specifically *Any Assets*, *Ln(Asset)*, *Home-Owner*, *%Safe Assets*, *%Risky Assets*, *%Retirement Accounts*, and *%Bonds*. Columns 1 to 3 include all observations, while columns 4 to 8 condition on positive assets. All variables are at the household level and defined in Table 3. Panel A analyzes the single household sample, while Panel B analyzes the couple household sample. The key independent variable is *ChildMentalHealth*, defined in Table 3 for single households, respectively 4 for couple households. *ChildMentalHealth* is interacted with *Work in Finance*, which is an indicator variable equal to 1 if the individual (at least one household member) has ever worked in the finance industry for the single household sample (the couple household sample). All specification include the following controls: Gender, race, age, education, current health status, number of children, working status, household income, transfer from children, transfer to children, childhood financial situation, and total debt. We additionally control for *Home-Owner* in specifications where *Home-Owner* is not the dependent variable, and *Total Asset* where *Home-Owner* is the dependent variable. All financial variables are deflated to 2008 dollars. All specifications include cohort fixed effect, county-by-year fixed effect, and birth-state-by-birth-year fixed effect. Standard errors are clustered at the county-by-year level. ***1% significance, **5% significance, *10% significance.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	All Samples			Asset Holders				
	Any Assets	Ln(Assets)	Home-Owner	Ln(Assets)	%Safe Assets	%Risky Assets	%Retirement Accounts	%Bonds
Panel A: Single Households								
ChildMentalHealth	−0.013	−0.246***	−0.099***	−0.220***	0.006	−0.001	−0.007	0.002*
	(0.009)	(0.084)	(0.010)	(0.070)	(0.010)	(0.006)	(0.008)	(0.001)
Work in Finance	0.025***	0.590***	0.046***	0.503***	−0.043***	−0.004	0.046***	0.000
	(0.009)	(0.090)	(0.009)	(0.058)	(0.010)	(0.006)	(0.009)	(0.001)
ChildMentalHealth	0.017	−0.226	0.100***	−0.341	−0.062	0.036	0.033	−0.007**
X Work in Finance	(0.036)	(0.338)	(0.035)	(0.274)	(0.041)	(0.024)	(0.036)	(0.003)
R2	0.405	0.497	0.390	0.553	0.363	0.300	0.309	0.220
N	56,867	56,867	56,867	34,857	34,857	34,857	34,857	34,857
Panel B: Coupled Households								
ChildMentalHealth	0.012	−0.047	−0.065***	−0.208***	0.015	−0.009	−0.006	0.000
	(0.011)	(0.112)	(0.010)	(0.071)	(0.013)	(0.008)	(0.012)	(0.002)
Work in Finance	0.014**	0.429***	0.006	0.418***	−0.055***	0.017***	0.041***	−0.002*
	(0.007)	(0.076)	(0.006)	(0.045)	(0.009)	(0.006)	(0.008)	(0.001)
ChildMentalHealth	0.006	0.376	0.082***	0.447**	0.047	−0.066**	0.006	0.012**
X Work in Finance	(0.035)	(0.380)	(0.031)	(0.221)	(0.047)	(0.029)	(0.045)	(0.005)
R2	0.523	0.602	0.500	0.639	0.457	0.373	0.417	0.256
N	48,479	48,479	48,479	34,476	34,476	34,476	34,476	34,476
Cohort F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
County X Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Birth State X Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Full Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

TABLE 9: CHILDHOOD MENTAL HEALTH, FINANCIAL LITERACY, AND DEBT ACCUMULATION

The unit of observation in this table is household × survey wave. The sample includes all households surveyed biennially from 1998 to 2020. The dependent variables are *Any Debt*, *Any Non-mortgage Debt*, *Ln(Total Debt)*, *Ln(Mortgage)*, *Ln(Non-mortgage Debts)*, and *% Non-mortgage Debt*. Columns 1 to 3 include all observations, while columns 4 to 7 condition on positive debt. All variables are at the household level and defined in Table 3. Panel A analyzes the single household sample, while Panel B analyzes the couple household sample. The key independent variable is *ChildMentalHealth*, defined in Table 3 for single households, respectively 4 for couple households. *ChildMentalHealth* is interacted with *Work in Finance*, which is an indicator variable equal to 1 if the individual (at least one household member) has ever worked in the finance industry for the single household sample (the couple household sample). All specification include the following controls: Gender, race, age, education, current health status, number of children, working status, household income, transfer from children, transfer to children, childhood financial situation, total asset and home-owner. All financial variables are deflated to 2008 dollars. All specifications include cohort fixed effect, county-by-year fixed effect, and birth-state-by-birth-year fixed effect. Standard errors are clustered at the county-by-year level. ***1% significance, **5% significance, *10% significance.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	All Samples			Debt Holders			
	Any Debts	Any Non-Mortgage Debts	Ln(Total Debt)	Ln(Total Debt)	Ln(Mortgage)	Ln(Non-mortgage Debts)	% Non-mortgage Debt
Panel A: Single Households							
ChildMentalHealth	0.062***	0.071***	0.536***	−0.017	−0.177	0.344***	0.015
	(0.010)	(0.010)	(0.097)	(0.053)	(0.141)	(0.118)	(0.012)
Work in Finance	0.017*	0.020**	0.283***	0.289***	0.584***	0.238*	−0.038***
	(0.009)	(0.009)	(0.090)	(0.051)	(0.141)	(0.125)	(0.012)
ChildMentalHealth	−0.070*	−0.036	−0.579	−0.017	0.246	0.459	−0.009
X Work in Finance	(0.040)	(0.041)	(0.400)	(0.200)	(0.514)	(0.494)	(0.044)
R2	0.315	0.246	0.361	0.529	0.576	0.379	0.563
N	56,867	56,867	56,867	22,443	22,443	22,443	22,443
Panel B: Couple Households							
ChildMentalHealth	0.068***	0.072***	0.654***	−0.112*	−0.718***	0.570***	0.069***
	(0.013)	(0.014)	(0.133)	(0.061)	(0.187)	(0.176)	(0.016)
Work in Finance	0.002	−0.018**	0.097	0.183***	0.549***	−0.398***	−0.046***
	(0.009)	(0.009)	(0.090)	(0.046)	(0.137)	(0.133)	(0.012)
ChildMentalHealth	−0.102**	−0.099**	−1.051**	−0.130	0.628	−0.914	−0.067
X Work in Finance	(0.042)	(0.043)	(0.443)	(0.239)	(0.724)	(0.701)	(0.064)
R2	0.430	0.325	0.476	0.592	0.565	0.426	0.549
N	48,479	48,479	48,479	23,976	23,976	23,976	23,976
Cohort F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
County X Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Birth State X Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Full Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

TABLE 10: CHILDHOOD MENTAL HEALTH AND COGNITIVE AND NON-COGNITIVE ABILITIES

The unit of observation is individuals (within households) × survey wave. The sample includes all the individuals surveyed biennially from 1998 to 2020. Panel A analyzes the single household sample, while Panel B analyzes the couple household sample. The dependent variables in columns 1 to 5 are measures of non-cognitive abilities and include: *US Depression Expectation*, which is the probability (in decimals) that an individual believes the U.S. economy will experience a major depression within the next 10 years; *US Stock Expectation*, which is the probability (in decimals) that an individual believes mutual fund shares invested in blue chip stocks will be worth more in one year than today; *Life Span Expectation* is the probability (in decimals) that an individual expects to live to age 85 or more; *Financial Plan Horizon* is an indicator variable equal to 1 if the individual's planned family's saving and spending horizon is 5 years or longer; and *Overconfidence* is an indicator variable equal to 1 if an individual rated his memory as very good or excellent, but performed below the age-survey year average in the word-recall test. The dependent variable in column 6 *No. of Words Recalled* is the number of words recalled in a word recall test and measures individuals cognitive abilities. The key independent variable, *ChildMentalHealth*, is an indicator variable equal to 1 if the individual has childhood mental health conditions. Controls include gender, race, ethnicity, age, education, number of children, current health status, working status, household income, household asset, household debt, transfer from children, transfer to children, home-ownership, and childhood financial hardship. Dollar values are all deflated to 2008 dollars. All the specifications include cohort fixed effect, county-by-year fixed effect, and birth-state-by-birth-year fixed effect. Standard errors are clustered at the county-by-year level. ***1% significance, **5% significance, *10% significance.

	(1)	(2)	(3)	(4)	(5)	(6)
	Non-cognitive					Cognitive
	US Depression Expectation	US Stock Expectation	Life Span Expectation	Long Financial Plan Horizon	Overconfidence	No. of Words Recalled
Panel A: Single households						
ChildMentalHealth	0.037^{**}	0.006	-0.026^{***}	-0.049^{***}	-0.023^{***}	-0.164^{***}
	(0.014)	(0.007)	(0.007)	(0.014)	(0.006)	(0.032)
R2	0.288	0.186	0.282	0.208	0.149	0.364
N	14,337	42,111	55,081	26,109	63,823	63,972
Panel B: Couple households						
ChildMentalHealth	0.041^{**}	-0.014^{*}	-0.031^{***}	-0.049^{**}	0.004	-0.068^{*}
	(0.016)	(0.008)	(0.009)	(0.019)	(0.008)	(0.041)
R2	0.299	0.211	0.267	0.205	0.136	0.317
N	15,782	40,369	55,234	26,315	60,191	60,691
Cohort F.E.	Yes	Yes	Yes	Yes	Yes	Yes
County X Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Birth State X Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes

TABLE 11: CHILDHOOD MENTAL HEALTH AND COGNITIVE AND NON-COGNITIVE ABILITIES BY GENDER

The unit of observation is individuals (within households) × survey wave. The sample includes all the individuals surveyed biennially from 1998 to 2020. Panel A analyzes the single household sample, while Panel B analyzes the couple household sample. The dependent variables in columns 1 to 5 are measures of non-cognitive abilities and include: *US Depression Expectation*, *US Stock Expectation*, *Life Span Expectation*, *Financial Plan Horizon*, and *Overconfidence*. The dependent variable in column 6 *No. of Words Recalled* measures individuals cognitive abilities. All dependent variables are defined in Table 10. The key independent variable, *ChildMentalHealth*, is an indicator variable equal to 1 if the individual has childhood mental health conditions. The variable is interacted with *Female*, an indicator variable equal to 1 if the individual with childhood mental health conditions is female. Controls include race, ethnicity, age, education, number of children, current health status, working status, household income, household asset, household debt, transfer from children, transfer to children, home-ownership, and childhood financial hardship. Dollar values are all deflated to 2008 dollars. All the specifications include cohort fixed effect, county-by-year fixed effect, and birth-state-by-birth-year fixed effect. Standard errors are clustered at the county-by-year level. ***1% significance, **5% significance, *10% significance.

	(1)	(2)	(3)	(4)	(5)	(6)
			Non-cognitive			Cognitive
	US Depression Expectation	US Stock Expectation	Life Span Expectation	Long Financial Plan Horizon	Overconfidence	No. of Words Recalled
Panel A: Single households						
ChildMentalHealth	0.064**	−0.008	−0.049***	−0.085***	−0.028**	−0.032
	(0.028)	(0.013)	(0.012)	(0.027)	(0.013)	(0.062)
Female	0.038***	−0.043***	0.057***	−0.011	−0.047***	0.625***
	(0.008)	(0.004)	(0.004)	(0.008)	(0.003)	(0.016)
ChildMentalHealth	−0.037	0.019	0.031**	0.049	0.008	−0.177**
X Female	(0.033)	(0.015)	(0.015)	(0.032)	(0.014)	(0.070)
R2	0.288	0.186	0.283	0.208	0.149	0.364
N	14,337	42,111	55,081	26,109	63,823	63,972
Panel B: Couple households						
ChildMentalHealth	0.026	−0.023*	−0.047***	−0.063**	0.014	−0.023
	(0.026)	(0.012)	(0.014)	(0.030)	(0.015)	(0.067)
Female	0.030***	−0.051***	0.057***	−0.045***	−0.034***	0.603***
	(0.006)	(0.003)	(0.003)	(0.008)	(0.003)	(0.017)
ChildMentalHealth	0.024	0.015	0.026	0.023	−0.016	−0.073
X Female	(0.032)	(0.016)	(0.018)	(0.039)	(0.018)	(0.087)
R2	0.299	0.211	0.267	0.205	0.136	0.317
N	15,782	40,369	55,234	26,315	60,191	60,691
Cohort F.E.	Yes	Yes	Yes	Yes	Yes	Yes
County X Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Birth State X Year F.E.	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
StdError	County X Year	County X Year	County X Year	County X Year	County X Year	County X Year

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A Appendix

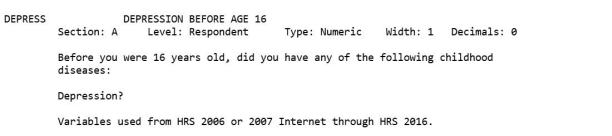
TABLE A.I: VARIABLE DEFINITIONS

We report the variable definitions for demographic, financial, cognitive and non-cognitive, and other variables here.

Variable Name	Variable Definition
Panel A: Demographic variables	
Gender	Gender of the respondents: Male or Female
Race	Race of the respondents: White, Black, Asian or Pacific Islanders, or Others, including Native American, Native Alaskan, and other races
Ethnicity	Ethnicity of the respondents: Hispanic or Non-Hispanic
Age	Age of the respondents: Below 65 years, 65 years, or Above 65 years
Education	Education level of the respondents: Less than 12 years, 12 years, Between 13 and 15 years, or More than 15 years
Number of Children	The number of children a household has
Childhood Mental Health	Take value of 1 if respondent was diagnosed depression or other psychological problem before the age of 16 and 0 otherwise
Adverse Health Status	Take value of 1 if respondent rated his/her overall health as poor and 0 otherwise
Working Status	Take value of 1 if respondent was in the working for a job in the given survey year and 0 otherwise
Work in Finance	Take value of 1 if respondent has ever worked in the finance industry either in the survey year or for the last job
Childhood Financial Hardship	Take value of 1 if respondent regarded himself/herself was poor financially or moved to different places or received help from relatives due to financial difficulties before the age of 16 and 0 otherwise
Panel B: Financial variables	
Household Income	Total 2008 US dollar value of wages, unemployment/worker's compensations, veteran benefits, retirement pensions, annuity income, supplemental security income, social security income, business income, rent income, etc.
Risky Assets	Total 2008 US dollar value of stock or stock mutual funds
Safe Assets	Total 2008 US dollar value of savings and checking accounts, money market funds, CDs, government bonds, T bills, and rights in a trust or estate
Retirement Accounts	Total 2008 US dollar value of retirement accounts (IRAs), Keogh accounts, 401Ks, or similar defined contribution pension plans
Bonds	Total 2008 US dollar value of corporate, municipal, government or foreign bonds, or bond funds exclusive of government saving bonds or treasury bills
Transfer From Children	Total 2008 US dollar value of money received from children
Transfer To Children	Total 2008 US dollar value of money provided to children
Mortgage	Total 2008 US dollar value of the first-home mortgage and second-home mortgage
Non-mortgage Debts	Total 2008 US dollar value of debts other than the mortgages, including redit card balances, medical debts, life insurance policy loans, loans from relatives, and so forth
Home-Owner	Take value of 1 if respondent has ever owned a home during sample period and 0 otherwise
Panel C: Cognitive and Noncognitive variables	
Number of Words Recalled	Number of words recalled correctly from a word memory test with 10 words
US Depression Expectation	The chances that the U.S. economy will experience a major depression sometime during the next 10 years or so, ranging from 0 to 1
US Stock Expectation	The chances that mutual fund shares invested in blue chip stocks like those in the Dow Jones Industrial Average will be worth more than they are today, ranging from 0 to 1
Life Span Expectation	The chances that will live to be 85 or more, ranging from 0 to 1
Long Financial Plan Horizon	Take value of 1 if respondent planned family's saving and spending for the next 5-10 years or longer than 10 years and 0 otherwise
Overconfidence	Take value of 1 if respondent overrated his or her memory level and 0 otherwise

FIGURE A.I: CHILDHOOD MENTAL HEALTH PROBLEM QUESTIONS IN HRS CODEBOOK

We construct the core variable of interest *CHILDHOOD MENTAL HEALTH* equal to 1 if an individual self-reports that he or she was diagnosed with depression or other psychological problems before the age of 16. The snapshots of the two questions asked in the surveys - depression and other psychological problems - are exhibited below.



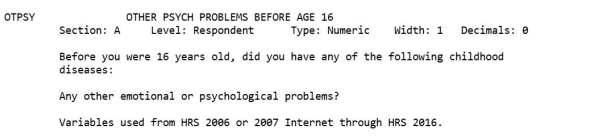
```
DEPRESS             DEPRESSION BEFORE AGE 16
        Section: A     Level: Respondent      Type: Numeric    Width: 1   Decimals: 0

        Before you were 16 years old, did you have any of the following childhood
        diseases:

        Depression?

        Variables used from HRS 2006 or 2007 Internet through HRS 2016.
```

(A) CHILDHOOD MENTAL HEALTH CONDITION: DEPRESSION



```
OTPSY               OTHER PSYCH PROBLEMS BEFORE AGE 16
        Section: A     Level: Respondent      Type: Numeric    Width: 1   Decimals: 0

        Before you were 16 years old, did you have any of the following childhood
        diseases:

        Any other emotional or psychological problems?

        Variables used from HRS 2006 or 2007 Internet through HRS 2016.
```

(B) CHILDHOOD MENTAL HEALTH CONDITION: OTHER PSYCHOLOGICAL PROBLEMS