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# The limited role of personal goal striving in status attainment

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ABSTRACT

Despite evidence of declining intergenerational mobility, recent studies have shown a rising trend of meritocratic belief (e.g., hard work pays off) among American adults. However, as scholarly attention has been focused on the power of adolescent beliefs (e.g., expectations and aspirations), little is known about the role of adults' hard work in status attainment. Using the Midlife in the United States (MIDUS) survey data, we examine the role of adults' goal striving, which is closely linked to hard work, in status attainment. Our results show that changes in goal striving are positively associated with changes in socioeconomic status among young adults, but such an association is not found among middle-aged or old adults. While persistent goal-striving of those from lower or middle family socioeconomic backgrounds is hardly a game-changer for their status attainment, whether someone from a higher family socioeconomic background works hard and commits to their goal (i.e., persistent goal-striving) does make a difference in their status outcome. The findings of this study suggest that the role of goal striving in status attainment is far more limited than the popular belief in meritocracy describes.

## 1. Introduction

The belief that hard work will eventually pay off, one of the core features of the American Dream, has long been integral to Americans' belief system. The United States is one of the highest-ranking countries in relatively strong popular support for meritocratic beliefs (Duru-Bellat and Tenret, 2012; Kunovich and Slomczynski, 2007). Recent studies have documented a rising trend of meritocratic belief in the United States: Adults today rate hard work as an important socialization value for children more than in the past (Nomaguchi and Milkie 2019). Contrary to these popular beliefs that undergird strong support for meritocracy, recent studies have documented declining intergenerational mobility in income (Chetty et al., 2017) and occupational status (Hout 2018) among adults born in the 80s compared to those born in the 40s. These findings imply that the power of personal merit, often operationalized by personal effort, ability, and/or education (see Breen and Goldthorpe 2001 for a classic discussion), has become weaker during recent decades.

But does hard work toward achievements result in a tangible difference in real life? There is surprisingly limited research on this topic. Building on the classic Wisconsin model of status attainment (e.g., Sewell et al., 1969), previous scholarly attention has focused on the role of adolescent expectations and aspirations in their later achievements. Such research often relies on the presumption that these personal (agentic) beliefs encourage effortful actions toward goal pursuit (e.g., Bozick et al., 2010; Hitlin and Johnson 2015). This academic endeavor has contributed to building "a social psychological theory of the status attainment process" (Otto and Haller

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1979:888). However, by focusing on the role of subjective beliefs about agency, less attention has been directed to more behavioral aspects of exerting agency. Some subjective beliefs (e.g., aspirations and self-efficacy) are linked with positive life outcomes, presumably through aspects such as commitment and goal striving (e.g., Austin and Vancouver 1996 for a review). However, few studies have explicitly examined the direct role of goal striving in status attainment. We know little about the extent to which personal goal-striving of *adults* contributes to status attainment.

Research is also scarce on whether the role of personal goal-striving holds across different socioeconomic and demographic conditions, such as one's family backgrounds and life stages. Different kinds of family backgrounds provide different opportunity structures for individuals to benefit from their efforts, and these opportunity structures may vary over the life course. To the best of our knowledge, no study has demonstrated the relationships between family backgrounds, personal goal striving, and status attainment of adults in different life stages (e.g., young, middle, and old adulthood). This dearth of research is surprising given previous sociological attempts to incorporate goal-oriented behaviors into agency discourse and life-course research, reflected in the literature on planful competence (e.g., Clausen 1991; Shanahan 2000), and the growing attention to the importance of non-cognitive skills, such as perseverance, motivation, and grit, in achieving positive life outcomes (e.g., Duckworth et al., 2007; Liu 2019).

Using data from the longitudinal MIDUS (Midlife in the United States) survey, we examine whether and how personal goal striving contributes to the status attainment of American adults, expanding the empirical focus of goal striving from adolescents to adults. Results show that changes in goal striving are positively associated with changes in socioeconomic status among young adults, but the socioeconomic returns to personal goal striving are not found among middle-aged or old adults. Additional analysis reveals that personal goal striving in those from lower or middle family socioeconomic backgrounds is not associated with any significant change to their socioeconomic attainment. The distinction between the benefit of maintaining moderate or high levels of personal goal striving and the cost of holding consistently low levels of goal striving is only pronounced among individuals with advantaged family backgrounds. This finding suggests that the benefits of goal striving in status attainment are far more limited than what the popular belief in meritocracy holds. Personal goal striving seems to be advantageous only for young adults and those who have enough (parental) resources to make their hard work pay off in the attainment of socioeconomic status.

## 2. Goal-oriented persistence and status attainment in adulthood

The advantages of persistent striving and commitment in goal attainment are well-documented in the literature, particularly in developmental psychology (see Austin and Vancouver 1996 and Massey et al. 2008 for reviews). While the potential significance of persistent striving in life achievements is also implied in classical sociological literature (e.g., Parsons 1949; see also Emirbayer and Mische 1998), it has been rarely linked to status attainment (however, see Hsin and Xie 2017, Liu 2019, and Shanahan et al., 2014 on the role of non-cognitive skills and personality in status attainment). Instead, status attainment research has focused on *subjective beliefs* (e.g., expectations, aspirations, and self-efficacy) in shaping one's life achievement (e.g., Burger et al. 2020; Hitlin and Johnson 2015; Johnson and Reynolds, 2013). These studies imply that individuals' subjective beliefs about themselves are closely linked to sustained effort toward goal attainment. However, these studies have not directly examined the role of persistent goal-striving in status attainment.

The dearth of direct empirical examination of the role of hard work or goal striving is partly due to the methodological difficulties to measure "effort" above and beyond self-reported measures (see Apascaritei et al. 2021 and Palacios-Abad 2021 for recent attempts to measure *objective* effort). Prior psychological research, which encompasses studies on personality (e.g., conscientiousness), non-cognitive skills (e.g., perseverance), and more recently grit, suggests a positive association between persistent goal-striving and status attainment. Those who exhibit a strong goal-striving persistence would invest more effort into their goals and thus are likely to attain better life outcomes than others. There is substantial evidence that those who try to put their plans into action and work hard to stick to the goal they set are more likely to achieve positive life outcomes (e.g., Duckworth et al., 2007; Heckhausen et al., 2013; Palacios-Abad 2021; Tang et al., 2019). We expect that goal-striving persistence, which could closely tap into the effortful actions toward one's goal as a proxy of personal effort, could play a similar role in status attainment.

**Hypothesis 1**. Individuals with a stronger goal-striving persistence will be more likely to attain better socioeconomic status.

## 3. Life course stages and family backgrounds

While we hypothesize a positive association between goal striving and status attainment, we expect this relationship to vary by life stage and family background. Prior studies have documented that adolescents' goal engagement and striving contribute to successful transitions from school to work, including educational and career-related outcomes (e.g., Haase et al., 2008; Tang et al., 2019). Using Australian longitudinal data (Longitudinal Surveys of Australian Youth), Palacios-Abad (2021) demonstrated that students' effort, which is measured by students' performance during the PISA test at the age of 15, predicts their tertiary education at the age of 25. However, some researchers have implied that the role of hard work would vary across different life phases, which have different opportunity structures for goal attainment. Danner et al. (2020) documented that economic returns to persistent effort (the "perseverance of effort" dimension of grit) are higher for younger people than for older people. Persistent striving for one's goal may have a stronger positive impact on status attainment for those who have just entered the labor market and begun developing their career (i.e., those in young adulthood) than those in middle or older adulthood. Compared to individuals at young ages who may have a favorable opportunity structure for goal attainment, older adults are more likely to have a confined set of opportunities to attain any substantial accomplishments in many domains, including career (Wrosch et al., 2000).

**Hypothesis 2.** A positive association between persistent goal striving and socioeconomic status attainment will be pronounced only among young adults, not among middle-aged or older adults.

Another important condition that may shape the role of personal goal striving in status attainment is one's family socioeconomic background. The literature on cumulative advantage versus resource substitution (e.g., Diprete and Eirich 2006; Ng-Knight and Schoon 2017; Ross and Mirowsky 2006) suggests two potentially contradictory hypotheses regarding the relationship between goal striving and status attainment. The cumulative advantage thesis suggests that people from better family socioeconomic backgrounds will benefit more from a certain resource than will those from disadvantaged family backgrounds. This is also known as what Diprete and Eirich (2006) refer to as the Blau-Duncan approach to cumulative advantage, which demonstrates "persisting direct and interaction effects of a status variable, where the interaction effects implied group differences in the returns to socioeconomic resources" (p. 273). Having an advantageous family background could lead to multiplicative or boosting benefits (cf. Erola et al., 2018); having more resources available through family background could lead to higher returns from persistence in goal striving. Using data from the German National Educational Panel Study (NEPS), Gil-Hernández (2021) found that in the transition into secondary education, students from higher socioeconomic backgrounds who have lower cognitive skills tend to gain higher returns to conscientiousness, measured by teachers' ratings, than those from lower socioeconomic backgrounds with the same level of cognitive skills. Although students with low achievement are less likely to gain access to the academic track for their secondary education, the (perceived) conscientiousness of those from advantaged socioeconomic backgrounds tends to buffer them from potential downward mobility. However, this benefit of conscientiousness is not found among under-achieving students from less advantaged family backgrounds (Gil-Hernández 2021). In the case of individuals from disadvantaged family backgrounds, their hard work or striving is hardly a game-changer. Thus, whether an individual sustains higher persistent goal striving or lacks persistence may not be a powerful factor determining their status outcomes. It may also be that a sufficient level of resources available from family background is necessary to result in any benefit from persistence.

The resource substitution thesis argues for a compensatory effect of personal goal striving. Research on subjective beliefs about agency suggests that returns to these subjective beliefs are larger for people from less advantaged family backgrounds, compensating for their lack of other resources (e.g., Ng-Knight and Schoon 2017; Schoon and Cook 2021). Danner et al. (2020) demonstrate the moderating effect of educational qualification on the association between the perseverance dimension of grit and labor market outcomes, suggesting that perseverance compensates for the disadvantages of low educational qualifications. Goal commitment and striving could be more important to those from disadvantaged family backgrounds with few parental resources; they may compensate for their status disadvantage by their own commitment and striving toward their goals (e.g., Liu 2019). Stronger goal striving could help individuals from a low socioeconomic status overcome their structural disadvantages and achieve better socioeconomic achievement in later life, "weaken[ing] the ties" between family socioeconomic backgrounds and their later status attainment (Liu 2019:4).

The aforementioned two theories predict the opposite directions of the moderating effect of family socioeconomic backgrounds. Thus, we can, at least, expect that the effect of persistent goal striving on status attainment will differ by family socioeconomic background:

**Hypothesis 3.** Socioeconomic returns to persistent goal striving will differ by family socioeconomic background.

However, there is also contradictory evidence. Damian et al. (2015) found that the role of personality traits is rather limited: "although personality traits may help compensate for background disadvantage to a small extent, they do not usually lead to a 'full catch-up' effect, unlike intelligence" (p. 473). Similar limitations may apply to the role of personal goal striving in status attainment.

## 4. Methods

### *4.1. Data*

The study data are drawn from a national random-digit-dialing sample of respondents who completed both phone and self-administered surveys of waves 1 and 2 from the MIDUS (Midlife in the United States). MIDUS is a national survey that was first conducted between 1995 and 1996 (wave 1), targeting the non-institutionalized, English-speaking adult population (25–74 years old) in the United States, oversampling males and older individuals, of whom 3487 completed the phone survey and 3034 completed both the phone and self-administered mail surveys in wave 1. Nine respondents were excluded from the wave 1 data as they reported their age below the target age (25 years old). Respondents who completed the MIDUS wave 1 phone survey were followed up between 2004 and 2006 (wave 2), and 1805 participants completed both the phone and mail surveys at wave 2; 60 respondents at wave 2 who did not complete the mail survey at wave 1 were excluded. Four additional cases were excluded due to discrepancies in age reporting (those whose age difference between waves 1 and 2 was too greater than the actual interview time interval, i.e., more than 11 years; also see the MIDUS age documentation), yielding a valid sample of 1741 respondents. Multivariate post-stratification weights based on education, race, sex, age, and marital status were provided by MIDUS. A probit regression model of wave 2 participation using sociodemographic variables as well as persistent goal striving observed at wave 1 indicated that those who are younger, non-white, male, not married, have high school or less (vs. college degree or more), and agree with the persistence item 2 ("When faced with a bad situation, I do what I can to change it for the better") were less likely to participate in wave 2. Attrition was taken into account by using an inverse weighting procedure suggested by previous researchers (Andersson and Glanville 2016; Cornwell and Laumann 2015).

Since we are interested in the status attainment measured by respondents' Socioeconomic Index score based on occupational status

(i.e., the weighted index of occupational education and earnings), we limit our analysis to those who have a Socioeconomic Index score (i.e., those who reported their current occupations) at both waves (N = 1021). In wave 1 data, key variables for the analysis had item nonresponse rates of less than 1%, except for family socioeconomic background (parental Socioeconomic Index score) with a nonresponse rate of 5.48%. In wave 2 data, all variables for the analysis had item nonresponse rates less than 1%. Another 75 cases were excluded from analysis due to these missing cases, resulting in a final sample of N = 946.[1]

### 4.2. Measures

*Persistence in goal striving* is measured at waves 1 and 2 as a proxy of personal effort.[2] Respondents were asked to respond to the following statements on a four-point scale ranging from 1 = a lot to 4 = not at all: "When things don't go according to my plans, my motto is, 'Where there's a will, there's a way,'" "When faced with a bad situation, I do what I can to change it for the better," "Even when I feel I have too much to do, I find a way to get it all done," "When I encounter problems, I don't give up until I solve them," and "I rarely give up on something I am doing, even when things get tough." The responses were reverse-coded so that a higher score indicates a higher level of persistent goal striving. The factor score is used in the analysis (Cronbach's alpha = 0.78). A one-unit increase in the persistent goal striving implies a one-standard-deviation increase on the scale.

*Status attainment* is measured at waves 1 and 2 by the Socioeconomic Index score, which refers to the weighted index of occupational education and earnings (Hauser and Warren 1996, see Hauser and Warren 1997 for the published version; see also MIDUS Documentation of Occupation and Industry Coding), provided by MIDUS. Following previous practices (Hauser and Warren 1996; e.g., Shapiro and Keyes 2008), we propose this variable as a proxy for socioeconomic status.[3] Respondents' Socioeconomic Index scores are standardized to simplify interpretation: A one-unit increase implies a one-standard-deviation increase in one's Socioeconomic Index score. For the OLS regression, we created the socioeconomic status change by subtracting the standardized wave 1 Socioeconomic Index score from the standardized wave 2 Socioeconomic Index score.

*Family socioeconomic background* is measured at wave 1 by the parental Socioeconomic Index (SEI) score. The parental Socioeconomic Index score is coded using the highest score among either mother's or father's Socioeconomic Index scores. To examine the nonlinear role of childhood socioeconomic background in status attainment, three quantiles of parental Socioeconomic Index scores are used in the analysis (1 = low family socioeconomic background, 2 = middle family socioeconomic background, 3 = high family socioeconomic background).

To examine the role of persistent goal striving in status attainment across life stages, we grouped respondents into three *age groups* using their age at wave 1: "younger age group (aged 25 to 30)," likely to have just started to build their socioeconomic status; "middle age group (aged 31 to 49)," who are actively engaged in their career development; and "old age group (aged 50 or older)," who have already spent 20 or more years in their career and are likely to have begun to plan retirement.[4] We made this decision because the relative importance of factors affecting one's status attainment would vary across life course stages (e.g., Danner et al., 2020; Heckhausen et al., 2019; Wrosch et al., 2000). In addition to these key variables, gender (1 = female), race/ethnicity (1 = white), marital status (1 = married), self-rated physical health (five-point scale), and the highest level of education completed (0 = high school or less, 1 = some college (including associate degree), 2 = college degree or more) are included as covariates. See Table 1 for descriptive statistics.

### 4.3. Analysis plan

We begin our analysis with a fixed-effects estimation to address the following two questions: (1) Is personal goal-striving socioeconomically rewarded, as popular beliefs in meritocracy presume? To reiterate, does personal goal-striving show any contribution to later status attainment, controlling for family background, educational credentials, and other sociodemographic factors? (2) Is everyone's goal striving rewarded, or is the benefit of persistent goal striving in status attainment constrained by other factors, such as life stages and family backgrounds?

The fixed-effects estimation uses within-individual variance, allowing us to remove potential unobserved, time-constant individual characteristics such as intelligence (Andreβ et al. 2013).[5] Despite this advantage, fixed-effects estimation has clear limitations. Since fixed-effects estimation uses only within-individual variance in estimation, individuals without any variation in our variables of interest would not contribute to the estimation of parameters (Andreβ et al. 2013). This means that the parameter estimates are

[1] Information about the original target sample is presented in Appendix B (see Table B1). The final working sample (N = 946) after the list-wise deletion of missing cases does not substantively differ from the original target sample (N = 1021) on key variables.

[2] We should note that our measure taps into the self-reported tendencies of personal goal-striving as a proxy for personal effort. We acknowledge that our measure does not directly observe personal effort shown in action, limiting our understanding about whether a person who reports this attitudinal tendency of persistent goal striving actually enacts it in action.

[3] Prior studies often refer it to as occupational prestige or occupational status (e.g., Pudrovska 2015). However, in this study, we follow Hauser and Warren (1996) and previous practices (e.g., Shapiro and Keyes 2008) that refer it to as socioeconomic status and propose to use it as a proxy measure for socioeconomic status for our study.

[4] We tested different age cut-offs for this age grouping. See 5.2 Sensitivity analysis for the results.

[5] The fixed-effects model controls for unobserved, time-constant heterogeneity by treating "subject-specific intercepts … as fixed" (Rabe-Hesketh and Skrondal 2012: 257) in the model. For this reason, fixed-effects model is also called the fixed-intercept model (Ibid).

**Table 1**
Descriptive statistics (unweighted).

| | All Ages ($N = 946$) | | | | Age 25–30 in W1 ($N = 113$) | | | | Age 31–49 in W1 ($N = 574$) | | | | Age 50 or above in W1 ($N = 259$) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M | SD | Min | Max | M | SD | Min | Max | M | SD | Min | Max | M | SD | Min | Max |
| Age at W1 | 43.37 | 10.24 | 25 | 72 | 27.64 | 1.69 | 25 | 30 | 40.65 | 5.31 | 31 | 49 | 56.26 | 5.36 | 50 | 72 |
| Age at W2 | 52.54 | 10.20 | 33 | 81 | 36.86 | 1.87 | 33 | 40 | 49.84 | 5.29 | 40 | 59 | 65.37 | 5.33 | 58 | 81 |
| Female | 0.49 | 0.50 | 0 | 1 | 0.48 | 0.50 | 0 | 1 | 0.47 | 0.50 | 0 | 1 | 0.53 | 0.50 | 0 | 1 |
| White | 0.92 | 0.27 | 0 | 1 | 0.92 | 0.27 | 0 | 1 | 0.92 | 0.28 | 0 | 1 | 0.92 | 0.27 | 0 | 1 |
| **Family background** | | | | | | | | | | | | | | | | |
| Low family SES | 0.34 | 0.47 | 0 | 1 | 0.23 | 0.42 | 0 | 1 | 0.32 | 0.47 | 0 | 1 | 0.42 | 0.50 | 0 | 1 |
| Middle family SES | 0.43 | 0.49 | 0 | 1 | 0.47 | 0.50 | 0 | 1 | 0.44 | 0.50 | 0 | 1 | 0.39 | 0.49 | 0 | 1 |
| High family SES | 0.23 | 0.42 | 0 | 1 | 0.30 | 0.46 | 0 | 1 | 0.24 | 0.43 | 0 | 1 | 0.19 | 0.39 | 0 | 1 |
| Married at W1 | 0.67 | 0.47 | 0 | 1 | 0.54 | 0.50 | 0 | 1 | 0.71 | 0.46 | 0 | 1 | 0.65 | 0.48 | 0 | 1 |
| Married at W2 | 0.70 | 0.46 | 0 | 1 | 0.74 | 0.44 | 0 | 1 | 0.73 | 0.45 | 0 | 1 | 0.63 | 0.48 | 0 | 1 |
| **Education at W1** | | | | | | | | | | | | | | | | |
| High school or less | 0.30 | 0.46 | 0 | 1 | 0.28 | 0.45 | 0 | 1 | 0.28 | 0.45 | 0 | 1 | 0.36 | 0.48 | 0 | 1 |
| Some college | 0.30 | 0.46 | 0 | 1 | 0.35 | 0.48 | 0 | 1 | 0.32 | 0.47 | 0 | 1 | 0.24 | 0.43 | 0 | 1 |
| College degree or more | 0.40 | 0.49 | 0 | 1 | 0.37 | 0.49 | 0 | 1 | 0.40 | 0.49 | 0 | 1 | 0.41 | 0.49 | 0 | 1 |
| **Education at W2** | | | | | | | | | | | | | | | | |
| High school or less | 0.30 | 0.46 | 0 | 1 | 0.26 | 0.44 | 0 | 1 | 0.28 | 0.45 | 0 | 1 | 0.34 | 0.47 | 0 | 1 |
| Some college | 0.27 | 0.44 | 0 | 1 | 0.30 | 0.46 | 0 | 1 | 0.28 | 0.45 | 0 | 1 | 0.23 | 0.42 | 0 | 1 |
| College degree or more | 0.44 | 0.50 | 0 | 1 | 0.44 | 0.50 | 0 | 1 | 0.44 | 0.50 | 0 | 1 | 0.43 | 0.50 | 0 | 1 |
| Health at W1 | 3.70 | 0.86 | 1 | 5 | 3.70 | 0.85 | 2 | 5 | 3.68 | 0.85 | 1 | 5 | 3.74 | 0.89 | 2 | 5 |
| Health at W2 | 3.71 | 0.87 | 1 | 5 | 3.85 | 0.80 | 1 | 5 | 3.71 | 0.86 | 1 | 5 | 3.66 | 0.90 | 1 | 5 |
| Persistence at W1 (factor score) | 0.02 | 1.02 | −3.80 | 1.40 | −0.18 | 0.93 | −2.45 | 1.40 | −0.03 | 1.05 | −3.80 | 1.40 | 0.21 | 0.95 | −2.36 | 1.40 |
| Persistence at W2 (factor score) | −0.02 | 0.98 | −3.44 | 1.40 | −0.11 | 0.93 | −2.41 | 1.40 | −0.07 | 1.02 | −3.44 | 1.40 | 0.14 | 0.91 | −2.05 | 1.40 |
| Status attainment at W1 (z score) | −0.02 | 1.01 | −2.22 | 2.67 | −0.06 | 1.03 | −1.85 | 2.65 | 0.01 | 0.98 | −1.92 | 2.67 | −0.06 | 1.07 | −2.22 | 2.67 |
| Status attainment at W2 (z score) | 0.02 | 0.99 | −2.22 | 2.67 | 0.03 | 0.90 | −1.77 | 2.65 | 0.06 | 0.95 | −2.16 | 2.67 | −0.08 | 1.11 | −2.22 | 2.67 |
| Change in status from W1 to W2 | 0.04 | 0.77 | −2.74 | 2.73 | 0.09 | 0.87 | −2.22 | 2.54 | 0.05 | 0.74 | −2.68 | 2.73 | −0.02 | 0.79 | −2.74 | 2.54 |

calculated based only on the variables that change across waves—in our study, age, education, marital status, health, persistent goal-striving, and status attainment. Thus, for example, only those whose persistence changes between the two waves contribute to these results. It is also important to note that this analysis does not clarify the causal relationship between persistent goal striving and status attainment. The changes in status may equally well lead in reverse fashion to changes in persistence.

The second analysis considers the predictive margins of socioeconomic status change based on the tertiles of persistent goal striving across two waves. The new grouping based on persistence tertiles contains those whose persistence tertile has increased from wave 1 to wave 2 ("persistence gain"; persistence tertile in wave 1 < persistence tertile in wave 2, N = 195), those whose persistence tertile has decreased across two waves ("persistence depletion"; persistence tertile in wave 1 > persistence tertile in wave 2, N = 229), and those whose persistence tertile has remained the same across two waves (i.e., "persistence maintained"; persistence tertile in wave 1 = persistence tertile in wave 2, N = 522). We further divided this maintainer group into three groups depending on their persistence tertile: "stable low persistence" includes those who report the lowest persistence tertile in both waves (N = 211), "stable moderate persistence" includes those who hold moderate (the second tertile) persistence in both waves (N = 137), and "stable high persistence" includes those who hold the highest persistence tertile in both waves (N = 174). Using these five groups, we clarify whether and how family backgrounds shape the contribution of persistence in goal striving to their socioeconomic status change. If persistence is beneficial, these benefits should be particularly clear among those who have remained consistently highly persistent.

## 5. Results

### 5.1. Socioeconomic returns to persistent goal striving across life stages and family backgrounds

Table 2 presents the results of the fixed-effects regression model to examine whether and how the changes in persistent goal striving are associated with the changes in the status attained. The findings suggest that the role of persistence in goal striving seems to be important only for young adults: A one-standard-deviation increase in persistent goal striving is associated with a 0.166-standard-deviation increase in the socioeconomic status for those in young adulthood (M2.1), supporting Hypothesis 1 and Hypothesis 2. The increased persistence in goal striving of young people appears to be rewarded independent of their family backgrounds. However, this significant role of persistence is not found among older groups (ages 31 to 49, ages 50 or over). The benefit of increased persistent goal striving is only salient among young people (aged 25–30), who might have more favorable opportunity structures than older people (i.e., more or better chances to accrue socioeconomic status over 10 years).

**Table 2**
Fixed-effects regression of status attainment on persistent goal striving.

| Variables | Pooled Model | | Age 25–30 in W1 | | Age 31–49 in W1 | | Age 50 or above in W1 | |
|---|---|---|---|---|---|---|---|---|
| | M1.1 | M1.2 | M2.1 | M2.2 | M3.1 | M3.2 | M4.1 | M4.2 |
| Age | 0.008** | 0.008** | | | | | | |
| | (0.003) | (0.003) | | | | | | |
| Married | 0.116 | 0.118 | 0.555* | 0.559* | −0.019 | −0.011 | −0.080 | −0.076 |
| | (0.102) | (0.101) | (0.239) | (0.242) | (0.087) | (0.087) | (0.310) | (0.313) |
| **Education**[a] | | | | | | | | |
| High school or less | −0.071 | −0.079 | −0.066 | −0.119 | −0.062 | −0.086 | −0.193 | −0.185 |
| | (0.143) | (0.141) | (0.403) | (0.398) | (0.180) | (0.180) | (0.165) | (0.164) |
| Some college | −0.224 | −0.222 | −0.290 | −0.330 | −0.272 | −0.274 | −0.064 | −0.076 |
| | (0.140) | (0.138) | (0.350) | (0.356) | (0.180) | (0.178) | (0.145) | (0.145) |
| Health | 0.052 | 0.047 | −0.080 | −0.088 | 0.065 | 0.055 | 0.082 | 0.075 |
| | (0.030) | (0.030) | (0.092) | (0.094) | (0.036) | (0.038) | (0.050) | (0.050) |
| Persistent goal striving | 0.033 | 0.135 | 0.166* | 0.173 | 0.002 | 0.109 | −0.023 | −0.082 |
| | (0.027) | (0.070) | (0.072) | (0.127) | (0.035) | (0.097) | (0.045) | (0.151) |
| **Interactions**[b] | | | | | | | | |
| Persistence*Low Family SES | | −0.095 | | −0.143 | | −0.078 | | 0.108 |
| | | (0.081) | | (0.175) | | (0.114) | | (0.165) |
| Persistence*Middle Family SES | | −0.152 | | 0.054 | | −0.174 | | −0.004 |
| | | (0.080) | | (0.165) | | (0.107) | | (0.168) |
| Constant | −0.665** | −0.649** | −0.096 | −0.040 | −0.211 | −0.171 | −0.339 | −0.315 |
| | (0.245) | (0.246) | (0.471) | (0.472) | (0.197) | (0.201) | (0.283) | (0.283) |
| N of observations | 1892 | 1892 | 226 | 226 | 1148 | 1148 | 518 | 518 |
| R-Squared | | | | | | | | |
| Within | 0.029 | 0.034 | 0.166 | 0.174 | 0.018 | 0.025 | 0.016 | 0.020 |
| Between | 0.109 | 0.092 | 0.035 | 0.031 | 0.187 | 0.160 | 0.299 | 0.256 |
| Overall | 0.087 | 0.075 | 0.044 | 0.041 | 0.150 | 0.130 | 0.238 | 0.200 |

***p < .001, **p < .01, *p < .05 (two-tailed tests).
Note. Unstandardized coefficients appear above robust standard errors in parentheses. Regressions are weighted using multivariate post-stratification weights provided by MIDUS, adjusted for attrition at wave 2 using an inverse weighting procedure. White, female, and family socioeconomic backgrounds are invariant across waves and are thus omitted from the results.
[a] Reference: College degree or more.
[b] Reference: Persistence*High Family SES.

The effect of persistence in goal striving seems to vary only marginally by family background (M1.2): Controlling for other factors, the effect of persistent goal striving is 0.152 standard deviations higher for those from higher socioeconomic backgrounds than for those from middle-class backgrounds, but is of borderline significance (B = −0.152, p = .058). Fig. 1 visually assesses the moderating effect of family backgrounds on the relationship between personal goal striving and socioeconomic status from Model 1.2 (M1.2) of Table 2. The figure shows that a positive relationship between persistent goal striving and socioeconomic status is clearer for those from higher socioeconomic backgrounds than middle or low socioeconomic backgrounds—having a lower level of persistent goal striving seems to be more detrimental to those from high socioeconomic backgrounds than to those from middle or low socioeconomic backgrounds. Increased persistent goal striving likely benefits people from high socioeconomic backgrounds slightly more than those from middle or low socioeconomic backgrounds. These findings partly support Hypothesis 3 that socioeconomic returns to persistent goal striving differ by family socioeconomic background, and more specifically, the cumulative advantage thesis; however, the 95% confidence intervals for three family background groups largely overlap, making it difficult to draw any clear conclusion about the moderating role of family backgrounds.

In the second analysis, we ran the ordinary least squares regression of the socioeconomic status change between waves 1 and 2 using the aforementioned five groups (stable low persistence, stable moderate persistence, stable high persistence, persistence depletion, persistence gain). We obtained predictive margins (i.e., average adjusted predictions) with 95% confidence intervals for the socioeconomic status changes by this new grouping and family backgrounds to illustrate and compare the magnitude of the relationships between the level of persistent goal-striving and socioeconomic status changes across different family backgrounds. In Fig. 2, we examine the interaction term between this persistence grouping and family background to determine whether the benefit of persistent goal striving in status attainment is conditioned by one's family background.

Fig. 2 indicates that changes in hard work of those from low- or middle-status family backgrounds do not offer any substantial benefits to their changes in status attainment. Confidence intervals of all predictive margins in the low and middle family socioeconomic background groups overlap regardless of their persistent goal striving, suggesting that persistent goal striving is not a determining factor that distinguishes their status attainment outcomes. By contrast, those from higher-status family backgrounds can benefit from their goal striving at some levels. The result shows that individuals who maintained their persistent goal striving at a moderate ("High family socioeconomic background # Stable moderate persistence") or high level ("High family socioeconomic background # Stable high persistence") and those whose persistent goal striving increased ("High family socioeconomic background # Persistence gain") tended to obtain better socioeconomic status change than those who maintained low persistent goal striving ("High family socioeconomic background # Stable low persistence"). This finding confirms Hypothesis 3 and further suggests that the value of personal goal striving appears to be realized only for those who have enough (parental) resources to benefit one's personal striving.

One unexpected finding is that those from higher-status family backgrounds who maintained moderate persistence in goal striving across the two waves gained the most in terms of socioeconomic status, slightly more than those who maintained the highest tertile of persistence across both waves. This finding is in line with personality studies that suggest a so-called "dark side" of one's tendency to put persistent effort and striving for goals, such as conscientiousness (e.g., Boyce et al. 2010; Smith et al. 2018) and grit (e.g., Houston et al. 2021): Too high conscientiousness may not be beneficial for job performance when flexibility or change is required (Smith et al. 2018).

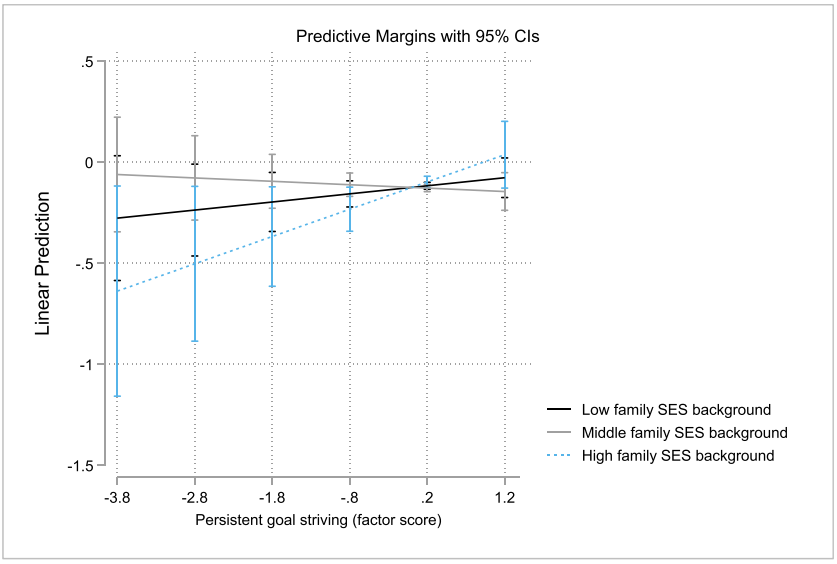


**Fig. 1.** Predictive margins for Model 1.2 of Table 2. Note. The bars in the figure represent 95% confidence intervals.

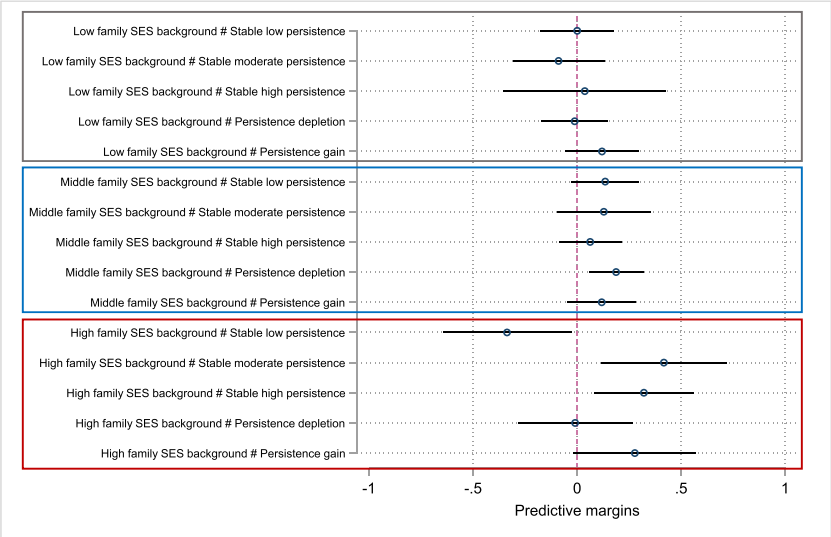


**Fig. 2.** Predictive margins of socioeconomic status change by family background and persistent goal striving. Note: We controlled for age groups, white, female, married, health, and education at wave 1 in the OLS regression of socioeconomic status change. Regressions are weighted using multivariate post-stratification weights provided by MIDUS, adjusted for attrition at wave 2 using an inverse weighting procedure. The bars in the figure represent 95% confidence intervals.

Instead, moderate levels of conscientiousness could rather help individuals to perform their tasks at an optimal level (Carter et al. 2018).[6]

Another interesting finding is that the benefit of having persistence as well as the cost of not having persistence is demonstrated more clearly among individuals from higher family socioeconomic backgrounds. The lack of persistent goal striving is even more detrimental for those from high family socioeconomic backgrounds than those from middle family socioeconomic backgrounds, as Fig. 2 shows that individuals with higher family socioeconomic background who sustain low persistence ("High family socioeconomic background # Stable low persistence") exhibit more negative status changes than those with middle family socioeconomic background who sustain low persistence ("Middle family socioeconomic background # Stable low persistence") and those whose persistence dropped ("Middle family socioeconomic background # Persistence depletion") across the two waves.

### 5.2. Sensitivity analysis

#### 5.2.1. Family background and age groups

Further analysis was undertaken to assess our results using different formats of our key variables, family backgrounds and age groups, which were introduced as variables with three categories (i.e., tertiles) in the analysis. First, we tested our fixed-effects regression models using quartiles of family background. Using quartiles of family background does not change our main finding. One major difference is that the interaction effect between the third quartile of family background (vs. the highest quartile of family background) and persistent goal striving turns out to be significant in the pooled model (all ages). When using the family background variable as a continuous variable, the main effect of persistent goal striving among young respondents remains the same, while the interaction effect between family backgrounds and persistent goal striving on status attainment in the pooled model (all ages), which was marginally significant in the original model, becomes non-significant. Next, we tested our fixed-effects regression models using different age cutoffs. The significant main effect of persistent goal striving on status attainment disappears when we extend our young adult group to those between 25 and 34 years old (N = 207 out of 946) and to those between 25 and 39 years old (N = 354 out of 946). This implies that the utility of having persistent striving is limited only to very young adulthood when people are at the very beginning of their career.

#### 5.2.2. Personal earnings

To verify the robustness of our results, we reassessed our fixed-effects models using personal earnings as an outcome variable. We examined the earnings returns to goal striving and whether family background moderates the relationship between goal striving and one's earnings. It may be argued that occupational standing cannot change much during later adulthood, which is why we do not find goal striving to be beneficial after the age when occupational careers typically peak. This would not be true for earnings, which typically peak much later during the life course (Cheng and Song 2019; Härkönen et al. 2016). Earnings do not have a theoretical

[6] Carter et al. (2014) suggest that "moderately conscientious, high-performing individuals are likely to be productive, and therein attractive to other employers, as well as motivated to move on to better or more fulfilling jobs" (p. 577).

maximum, either, as is the case for our Socioeconomic Index, which is the weighted index of occupational education and earnings. Thus, in the case of earnings, potential ceiling effects should not bias our findings. Appendix A presents a detailed description of the analysis and results.

In keeping with the main results using Socioeconomic Index scores, the fixed-effects regression results using personal earnings confirm that persistence in goal striving is an important resource only for young adults (ages 25 to 30). By contrast, it is less beneficial for older adults' earnings income (ages 31 to 49, age 50 or over). The increase in persistent striving seems to marginally relate to the increase in personal earnings in older adulthood (age 50 or over) for those from higher family socioeconomic backgrounds than for those from lower family socioeconomic backgrounds ($B = -0.510$, $p = .069$). Older respondents from advantaged family backgrounds (the highest among the three quantiles of family socioeconomic background) benefited more from holding persistence in their later earnings attainment than those from lower family socioeconomic backgrounds.

## 6. Discussion and conclusions

The findings of this paper suggest that the role of goal striving in status attainment is far more limited than what the widely shared meritocratic myth describes. Our fixed-effects regression results show that changes in goal striving are positively associated with changes in socioeconomic status among young adults, but not among those in middle and old adulthood. Young adulthood seems to be the only critical period when increasing one's persistent goal striving offers some level of socioeconomic returns regardless of family background. One's persistent striving seems not to make any critical contribution to attaining a better socioeconomic status for older adults, net of other factors.

Another important factor that conditions the socioeconomic returns to personal goal striving is family background. The graph of the predictive margins (i.e., Fig. 2) suggests that having or not having goal-oriented persistence does not make a considerable difference in the status attainment of those from middle or low socioeconomic backgrounds: They do not gain much from their hard work. This finding suggests that, despite a recent rise in meritocratic beliefs (e.g., Mijs 2018), the persistent goal striving of those from less advantaged backgrounds may hardly weaken the link between family background and status attainment.

We found that both the benefit of demonstrating the optimal level of persistence and the cost of lacking persistence are clearly shown only among those from higher family socioeconomic backgrounds. Those from more advantaged family backgrounds tend to enjoy more agency or autonomy to author their life via their own hard work. In a culture with strong meritocratic beliefs, moral value is often attached to the achievement that is (seemingly) earned by one's hard work and personal striving (e.g., Weber [1904–5]2002). For example, Khan (2011) demonstrated how elite schools in the U.S. emphasize meritocratic elements like hard work in their education, trying to de-emphasize the linkage to family resources (e.g., cultural or social capital). Given the cultural emphasis and moral recognition related to personal effort, people from higher family socioeconomic backgrounds seem to gain more returns to showing hard work but also more likely to be penalized when they fail to manifest adequate personal goal striving despite the parental resources available to them.

One unexpected finding among those from high socioeconomic backgrounds was that individuals with stable moderate persistence in goal striving tend to achieve the most, followed by those with stable high persistence and those with increased persistence. While there is a well-established positive relationship between conscientiousness and outcomes such as job performance, personality scholars also suggested that stronger persistence or conscientiousness is not always more beneficial for life outcomes. Documenting a link to perfectionism that could lead to psychological maladjustment such as burnout (e.g., Carter et al., 2014; Houston et al., 2021; Stoeber et al. 2009), prior studies suggest that excessive conscientiousness could be detrimental to psychological well-being and job performance. The findings of the present study seem to support this psychological research on the downside of positive psychological traits like conscientiousness and grit (e.g., Boyce et al., 2010; Houston et al., 2021).

We should note that we focus on the relative importance of goal striving in different life phases by separately investigating the relationships in three different age groups, but not on distinguishing age, cohort, and period effects that might be entangled in this mechanism (Glenn 2003 for a review). While we found that the role of personal goal striving is only clearly shown among young respondents in our sample, the current data do not allow us to disentangle age and cohort effects. We discussed our findings in terms of life stages, but we were unable to rule out the possibility that the different roles of goal striving in status attainment across age groups (or life stages) could be also related to different structural opportunities that each cohort group might experience. However, given prior empirical studies that show a stronger tie between family background and later income and occupational attainment among the recent cohort than among the previous cohort (e.g., Chetty et al., 2017; Hout 2018), our findings might provide better support to age effects than cohort effects. Longitudinal data with multiple waves are needed to clearly distinguish age and cohort effects in understanding the role of personal goal striving.

In addition, we were unable to clarify the causal ordering of the relationships between persistent goal striving and status attainment. This study builds on previous status attainment and personality research that suggests that persistent goal striving contributes to status attainment. However, we cannot dismiss the possibility that changes in persistence could be a reflection of changes in socioeconomic status. Our data do not allow us to clearly distinguish these issues. Alternatively, different kinds of family backgrounds may provide different environments of socialization, whereby some learn to value hard work and goal striving more than others independent of their true benefits in attainment. Furthermore, several researchers have noted a discrepancy between one's self-reported hard work (i.e., what people say they do) and objective hard work (i.e., what people actually do): Khan and Jerolmack (2013) found a strong discrepancy between what elite school students say and what they do in an ethnographic study (Khan 2011). In a recent study using experiment data collected from primary school students in Spain, Apascaritei et al. (2021) found that self-reported measures of effort show only limited correlations with actual effort as measured in laboratory experiments. The same discrepancy could hold

among adult populations. Since our self-reported measure does not directly observe personal effort as a behavior, it limits our capability to clarify whether people who report this attitudinal tendency of persistent goal striving actually enact it. Future research should be undertaken to develop more accurate measures of hard work or effort among adult populations.

Our study expands the social psychological theory of status attainment (the Wisconsin model of status attainment; e.g., Otto and Haller 1979; Sewell et al., 1969). The majority of prior empirical studies tested the role of expectations, aspirations, and agentic beliefs (e.g., self-efficacy) in status attainment. We expanded this theory to include personal goal striving, which potentially translates these subjective beliefs into agentic action. The general assumption has been that goal striving would have an independent, positive impact on attainment. Even if the social environment could limit one's chances to pursue goals, the benefits would be there for those who manage to do so. This study found that this assumption is not quite accurate: The benefit of personal goal striving is rather conditional on structural barriers. The findings of the present study offer a caveat to overemphasizing personal striving or hard work as a critical game-changer and attributing underachievement and failure to personal effort. Despite American adults' beliefs in meritocracy, one's personal goal striving does little to weaken the linkage between family background and later status attainment. People benefit from hard work only if they have social environments that can enable its materialization.

How can we make the benefit of one's striving more equally distributed across different socioeconomic and sociodemographic conditions? Individuals should be given more opportunities to transform their hard work into beneficial outcomes, and these opportunities should be equally distributed to everyone regardless of their socioeconomic condition through fairness-based public policy that promotes equity. In addition, more experience with the situations where personal hard work influences life outcomes beyond external factors (e.g., stratification, discrimination) could encourage people to develop and manifest stronger personal striving toward their life goals. It remains an open question whether this is possible anywhere, however: This calls for future research using comparative perspectives to extend the findings of our study beyond the U.S. by examining the role of hard work in different cultural and societal contexts.

The present study could also be discussed in relation to the recent discourse on the crisis of the middle class. Meritocratic ideology in the United States (and in other countries) encourages the middle class to work hard to get ahead in life. However, our findings show that the middle class does not seem to benefit from their striving toward goals. This potentially suggests that removing structural barriers might not be enough to resolve the disjunction between meritocratic ideology and what we found from the current data. This leaves us with another question: Is hard work (or merit) a fair index for determining the distribution of socioeconomic returns? In contemporary societies where the majority of the general public believes in meritocracy or relies on the rhetoric of meritocracy to describe their own success (e.g., as a post-hoc explanation), the "presumption that mobility should be determined by 'merit', 'talent' and 'hard work' … can justify and legitimate [huge and escalating economic inequalities]" (Mijs and Savage 2020:403). This calls for further research on the disjunction between meritocratic ideology and how meritocracy works on the ground.

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## Appendix A. Fixed-effects regression using personal earnings

As a robustness check, we estimated the earnings returns to goal striving, and examined whether family background moderates the relationship between goal striving and one's earnings. We used the respondent's personal earnings income in the past 12 months before taxes. We took a natural log of personal earnings, which automatically drops those with zero income or less. Among 1741 respondents who completed both phone and mail surveys in both waves, respondents who did not respond to the personal earnings question ($n = 58$ in wave 1; $n = 288$ in wave 2) and who reported zero income or less ($n = 275$ in wave 1; $n = 361$ in wave 2) were excluded from the analysis, resulting in a sample of $N = 1025$. In wave 1 data, key variables for the analysis had item nonresponse rates of less than one percent, except for family socioeconomic background (parental SEI score), which had a 5.85% nonresponse rate. In wave 2 data, all variables for the analysis had an item nonresponse rate of less than one percent. Finally, 77 cases were excluded from analysis due to missing data, resulting in a final sample of $N = 948$.

The fixed-effects regression results using personal earnings confirm our main finding using Socioeconomic Index scores: Persistence in goal striving is an important resource for young adults (age 25–30) who have just entered the labor market. The change in persistence is positively associated with the change in their personal earnings only in this age group, and this benefit of persistence does not vary across different family socioeconomic backgrounds. In keeping with the main results using the Socioeconomic Index scores, persistence in goal striving seems to be less useful for older adults' earnings income (age 31–49, 50 or over). One's persistent striving seems not to make any critical contribution to one's personal earnings, net of other factors including family backgrounds. However, for those in older adulthood (age 50 or over), persistence in goal striving seems to relate to greater personal earnings for those from higher family socioeconomic backgrounds than from lower family socioeconomic backgrounds, although this effect is

marginally significant (B = −0.510, p = .069). Old adults from advantaged family backgrounds (the highest of the three quantiles of family background) benefit more from persistence in their later earnings attainment than those from lower family socioeconomic backgrounds.

**Table A1**
Fixed-effects regression of personal earnings on persistent goal striving

| Variables | Pooled Model | | Age 25–30 in W1 | | Age 31–49 in W1 | | Age 50 or above in W1 | |
|---|---|---|---|---|---|---|---|---|
| | M1.1 | M1.2 | M2.1 | M2.2 | M3.1 | M3.2 | M4.1 | M4.2 |
| Age | 0.041*** | 0.041*** | | | | | | |
| | (0.004) | (0.004) | | | | | | |
| Married | 0.176 | 0.177 | 0.778*** | 0.786*** | 0.069 | 0.072 | −0.018 | −0.013 |
| | (0.092) | (0.092) | (0.193) | (0.191) | (0.112) | (0.113) | (0.236) | (0.238) |
| **Education** [a] | | | | | | | | |
| High school or less | −0.238 | −0.242 | 0.058 | 0.074 | −0.475** | −0.488** | −0.426 | −0.433 |
| | (0.164) | (0.164) | (0.472) | (0.473) | (0.162) | (0.164) | (0.387) | (0.393) |
| Some college | −0.203 | −0.204 | −0.840* | −0.836* | −0.257 | −0.261 | 0.012 | 0.069 |
| | (0.149) | (0.149) | (0.353) | (0.337) | (0.157) | (0.157) | (0.351) | (0.345) |
| Health | 0.029 | 0.028 | −0.035 | −0.037 | 0.042 | 0.039 | −0.038 | −0.007 |
| | (0.041) | (0.041) | (0.108) | (0.109) | (0.054) | (0.055) | (0.109) | (0.106) |
| Persistent goal striving | 0.040 | 0.079 | 0.273* | 0.198 | −0.050 | −0.068 | −0.053 | 0.214 |
| | (0.040) | (0.083) | (0.124) | (0.230) | (0.048) | (0.091) | (0.100) | (0.239) |
| **Interactions** [b] | | | | | | | | |
| Persistence*Low family SES | | −0.054 | | 0.090 | | 0.084 | | −0.510 |
| | | (0.113) | | (0.310) | | (0.130) | | (0.280) |
| Persistence*Middle family SES | | −0.045 | | 0.115 | | −0.021 | | 0.002 |
| | | (0.100) | | (0.292) | | (0.115) | | (0.291) |
| Constant | 8.228*** | 8.235*** | 9.851*** | 9.847*** | 10.354*** | 10.367*** | 10.231*** | 10.084*** |
| | (0.271) | (0.269) | (0.546) | (0.545) | (0.258) | (0.262) | (0.463) | (0.458) |
| N of observations | 1896 | 1896 | 242 | 242 | 1134 | 1134 | 520 | 520 |
| R-Squared | | | | | | | | |
| Within | 0.130 | 0.131 | 0.201 | 0.203 | 0.015 | 0.017 | 0.011 | 0.038 |
| Between | 0.000 | 0.000 | 0.020 | 0.019 | 0.088 | 0.078 | 0.023 | 0.038 |
| Overall | 0.004 | 0.004 | 0.050 | 0.048 | 0.068 | 0.061 | 0.018 | 0.036 |

***p < .001, **p < .01, *p < .05 (two-tailed tests).
Note. Unstandardized coefficients appear above robust standard errors in parentheses. Regressions are weighted using multivariate post-stratification weights provided by MIDUS, adjusted for attrition at Wave 2 using an inverse weighting procedure. White, female, and family socioeconomic backgrounds are invariant across waves, and are thus omitted from the results.
[a] Reference: College degree or more.
[b] Reference: Persistence*High Family SES.

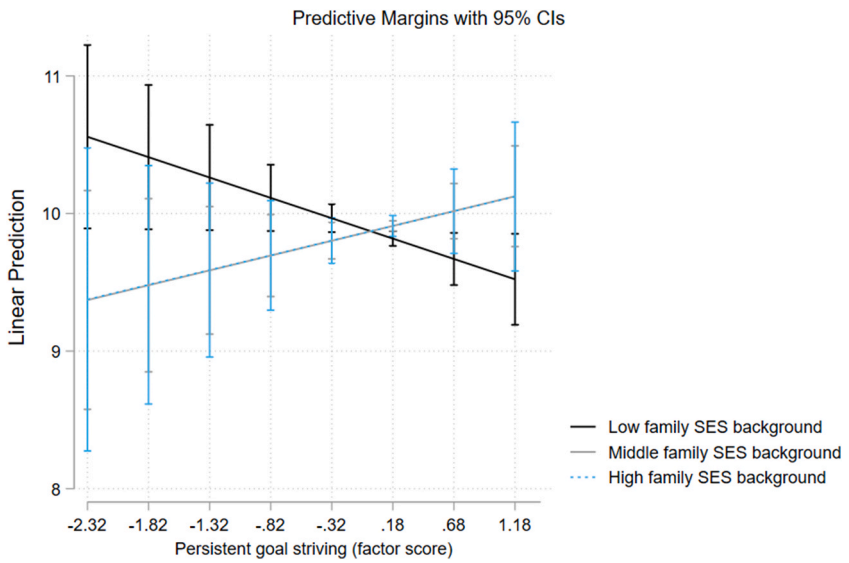


**Fig. A1.** Predictive margins for Model 4.2 of Table A1

## Appendix B. Descriptive statistics of the original target sample

To help the readers compare our final working sample to the original target sample, we included the descriptive statistics of the original target sample in this appendix. Since our study focuses on status attainment measured by the respondent's Socioeconomic Index scores (i.e., the weighted index of occupational education and earnings), the original target sample includes those who reported their current occupations at both waves (N = 1021). Table B1 presents raw scores of key variables used in the analysis. We found that the final working sample (N = 946) after the list-wise deletion of missing cases does not substantively differ from the original target sample (N = 1021).

**Table B1**
Descriptive Statistics of the Original and Final Samples (Unweighted)

| | Original target sample (N = 1021) | | | | | Final sample (N = 946) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Variable | N | Mean | Std. Dev. | Min | Max | N | Mean | Std. Dev. | Min | Max |
| Age at Wave 1 | 1021 | 43.34 | 10.27 | 25 | 72 | 946 | 43.37 | 10.24 | 25 | 72 |
| Age at Wave 2 | 1021 | 52.51 | 10.22 | 33 | 81 | 946 | 52.54 | 10.20 | 33 | 81 |
| Female (=1) | 1021 | 0.50 | 0.50 | 0 | 1 | 946 | 0.49 | 0.50 | 0 | 1 |
| White (=1) | 1021 | 0.92 | 0.28 | 0 | 1 | 946 | 0.92 | 0.27 | 0 | 1 |
| Family background | 965 | 39.37 | 14.09 | 9.56 | 80.53 | 946 | 39.32 | 14.06 | 9.56 | 80.53 |
| Married (=1) at Wave 1 | 1021 | 0.66 | 0.47 | 0 | 1 | 946 | 0.67 | 0.47 | 0 | 1 |
| Married (=1) at Wave 2 | 1019 | 0.69 | 0.46 | 0 | 1 | 946 | 0.70 | 0.46 | 0 | 1 |
| **Education at W1** | | | | | | | | | | |
| High school or less | 1020 | 0.30 | 0.46 | 0 | 1 | 946 | 0.30 | 0.46 | 0 | 1 |
| Some college | 1020 | 0.30 | 0.46 | 0 | 1 | 946 | 0.30 | 0.46 | 0 | 1 |
| College degree or more | 1020 | 0.40 | 0.49 | 0 | 1 | 946 | 0.40 | 0.49 | 0 | 1 |
| **Education at W2** | | | | | | | | | | |
| High school or less | 1020 | 0.30 | 0.46 | 0 | 1 | 946 | 0.30 | 0.46 | 0 | 1 |
| Some college | 1020 | 0.26 | 0.44 | 0 | 1 | 946 | 0.27 | 0.44 | 0 | 1 |
| College degree or more | 1020 | 0.44 | 0.50 | 0 | 1 | 946 | 0.44 | 0.50 | 0 | 1 |
| Health at Wave 1 | 1021 | 3.69 | 0.85 | 1 | 5 | 946 | 3.70 | 0.86 | 1 | 5 |
| Health at Wave 2 | 1021 | 3.71 | 0.87 | 1 | 5 | 946 | 3.71 | 0.87 | 1 | 5 |
| Status attainment at Wave 1 | 1021 | 41.49 | 14.71 | 9.56 | 80.53 | 946 | 41.48 | 14.64 | 9.56 | 80.53 |
| Status attainment at Wave 2 | 1021 | 42.02 | 14.48 | 9.56 | 80.53 | 946 | 42.04 | 14.36 | 9.56 | 80.53 |
| Persistence item 1 at Wave 1 | 1018 | 3.20 | 0.74 | 1 | 4 | 946 | 3.21 | 0.74 | 1 | 4 |
| Persistence item 2 at Wave 1 | 1019 | 3.47 | 0.64 | 1 | 4 | 946 | 3.49 | 0.62 | 1 | 4 |
| Persistence item 3 at Wave 1 | 1017 | 3.24 | 0.80 | 1 | 4 | 946 | 3.24 | 0.79 | 1 | 4 |
| Persistence item 4 at Wave 1 | 1018 | 3.12 | 0.76 | 1 | 4 | 946 | 3.13 | 0.75 | 1 | 4 |
| Persistence item 5 at Wave 1 | 1017 | 3.21 | 0.79 | 1 | 4 | 946 | 3.22 | 0.78 | 1 | 4 |
| Persistence item 1 at Wave 2 | 1016 | 3.24 | 0.75 | 1 | 4 | 946 | 3.25 | 0.74 | 1 | 4 |
| Persistence item 2 at Wave 2 | 1017 | 3.46 | 0.63 | 1 | 4 | 946 | 3.48 | 0.62 | 1 | 4 |
| Persistence item 3 at Wave 2 | 1015 | 3.24 | 0.80 | 1 | 4 | 946 | 3.25 | 0.78 | 1 | 4 |
| Persistence item 4 at Wave 2 | 1015 | 3.06 | 0.74 | 1 | 4 | 946 | 3.07 | 0.73 | 1 | 4 |
| Persistence item 5 at Wave 2 | 1014 | 3.17 | 0.79 | 1 | 4 | 946 | 3.17 | 0.79 | 1 | 4 |

Note: The Socioeconomic Index scores (family background and status attainment) presented in this table are unstandardized.

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