



# What Can Sociology Say About Grit? A Cross-Cultural Exploration of the Relationships between Socioeconomic Status, Sense of Control, and Grit

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## Abstract

Despite growing interest from the public, little attention has been directed toward grit in sociology. By disaggregating grit into its component factors (i.e., perseverance of effort and consistency of interest) on the basis of a measurement test, the author examines the potentially contrasting relations of grit to socioeconomic status. Using survey data from the United States and South Korea, the author finds that those with higher socioeconomic status partially translate their structural advantages into grit, particularly into the perseverance-of-effort dimension of grit in South Korea, via their stronger beliefs in personal control over their lives (i.e., sense of control). This study also reveals a negative association between one's own or parental education and the consistency-of-interest dimension of grit, suggesting that stick-to-it-iveness can be a potential supplementary psychological resource for those who may lack other resources.

## Keywords

grit, sense of control, socioeconomic status, agency, cross-cultural research

Grit, which refers to perseverance and passion toward a long-term goal (Duckworth 2016), has been spotlighted as a predictor of positive life outcomes such as academic achievement, professional success, and subjective well-being (Disabato, Goodman, and Kashdan 2019; Duckworth et al. 2007; Duckworth and Quinn 2009). Grit consists of two dimensions, perseverance of effort (i.e., showing sustained effort and hard work) and consistency of interest (i.e., sticking to a goal; “stick-to-it-iveness”), and is highlighted as one of the “21st-century competencies” (Shechtman et al. 2013:v).

Despite its popularity in and outside academia and its potential relevance for predicting important life outcomes, grit is rarely mentioned in sociology. The lack of attention, or even reluctance, to study grit may stem from concerns regarding the “blaming the victim” (Hitlin and Kwon 2016; Kundu 2017); a lack of individual gumption or hard work is erroneously but popularly considered the reason for a lack of success. This reluctance is also fueled by the presumptions of previous research and the public discourse regarding grit: prior studies have sought to demonstrate the relationship between grit and achievement outcomes while implicitly assuming grit as class-free property, unrelated to a person's structural location that influences

the opportunities and obstacles in one's life. Consistent with this presumption, research on whether and how grit links to structural conditions (i.e., whether socioeconomic inequalities generate disparities in grit) is scarce.

Ultimately, understanding how grit contributes to individual-level stratification depends on disentangling the concept. By disaggregating grit into its component factors (i.e., perseverance of effort and consistency of interest) on the basis of a measurement test, in this study I examine the potentially contrasting relations of grit to socioeconomic status. Some researchers imply that grit can grow through experiences of overcoming struggles (e.g., Gorski 2016; Kundu 2017); those with less advantaged positions are more likely to face setbacks in life and have a relatively confined set of opportunities, and these structural constraints may necessitate them to stick to the project they choose and “hang in there” (e.g., Williams 2012:40). This suggests a negative relationship between one's socioeconomic status and grit, particularly

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grit's consistency-of-interest dimension, which taps into "stick-to-it-iveness." By contrast, prior research on individual-level aspects of stratification (e.g., Kohn 1989; Kohn et al. 1990; Sewell, Haller, and Portes 1969) and agency (e.g., Hitlin and Kwon 2016 for a review) has long documented the link between one's structural positions and subjective beliefs about agency; a person's socioeconomic status is positively related to beneficial psychological functioning, such as a stronger sense of control (see Ross and Mirowsky 2013 for a review), which contributes to positive life outcomes. Grit may translate one's socioeconomic (dis)advantages into stratified life outcomes through its possible linkage to one's sense of control. A belief that one controls one's life outcomes likely encourages a grittier inclination to pursue long-term goals (Bandura 1977; Duckworth et al. 2007), adding precision to links between structural conditions, individual cognitive-level beliefs, and outcomes (Kohn 1989; Sewell et al. 1969). However, we know little about how either or both dimensions of grit (i.e., perseverance of effort and consistency of interest) are linked with one's structural positions, and the little we do know derives only from single-country studies.

The aim of this study was to examine whether and how social advantages and disadvantages translate into two grit components (i.e., perseverance of effort and consistency of interest) in two different countries, the United States and South Korea. These two countries both emphasize hard work (e.g., the purported myth of the American dream in the United States, the Confucian tradition in South Korea, and contemporary neoliberal culture cultivating the meritocratic myths in both countries), which likely captures the perseverance-of-effort dimension of grit, yet they differ in valuing self-orientation and personal goal pursuit over other-orientation and social integration (Markus and Kitayama 1991; Miyamoto et al. 2018), which might be reflected by cultural differences in valuing personal goal striving (i.e., consistency of interest; Datu, Valdez, and King 2016). In this study I assess potentially contradictory relationships between grit's components and socioeconomic status in these two countries and suggest the importance of studying grit in broader cultural contexts beyond a single country, particularly the United States.

### *Grit and Socioeconomic Status*

Grit, the ability to sustain effort and passion for long-term goals, is operationalized as a higher order construct with two lower order dimensions: perseverance of effort and consistency of interest (Duckworth and Quinn 2009). Gritty individuals put persistent effort into valued long-term goals (perseverance of effort) and do not shift their interest to different goals (consistency of interest) even in the face of setbacks. Grit is documented as a predictor of high achievement in diverse fields, including the higher grade point averages of Ivy League undergraduates and National Spelling Bee finalists (Duckworth et al. 2007; Duckworth

and Quinn 2009), better academic performances of high school and college students (Bowman et al. 2015; Li et al. 2018), and better employee work engagement (Suzuki et al. 2015).

However, researchers have expressed doubts regarding the construct, especially regarding its empirical measurement (see Credé, Tynan, and Harms 2017; also see Jachimowicz et al. 2018 and letters regarding this piece: Credé 2019 and Guo, Tang, and Xu 2019). A meta-analysis by Credé et al. (2017) revealed that the perseverance-of-effort dimension demonstrates stronger predictive power in explaining academic outcomes than do the overall grit scale and the consistency-of-interest dimension. Other researchers have also produced mixed findings: Zissman and Ganzach (2020) found only a trivial effect of grit on academic achievement and wages beyond intelligence, conscientiousness, and socioeconomic background. Danner, Lechner, and Rammstedt (2020) demonstrated that grit (perseverance of effort) showed incremental validity over cognitive abilities, formal education, and sociodemographic factors in predicting personal income and job satisfaction, but this association varies by country.

Despite the extensive research on the consequences of grit and the debate over the concept of grit, current scholarship largely fails to consider the structural contexts that may affect its formation, such as whether socioeconomic inequalities generate inequalities in grit. Grit has gained popularity partly because of the assumption that anyone can cultivate it (e.g., Duckworth 2016). Assuming that grit is not related to structural opportunities and emphasizing it as a strong factor in determining achievement in life may solidify the conservative notion of blaming the victim sparked long ago by debates on a "culture of poverty" and "oppositional culture" (Hitlin and Kwon 2016; Kundu 2017). This approach falls into the trap of attributing the disadvantages of people in poverty (or students who underachieve) to their lack of effort and dismisses structural constraints in their lives.

In previous grit research, individuals' structural conditions, such as family backgrounds, education, and subjective class, are rarely discussed (see O'Neal et al. 2016 and Danner et al. 2020 for rare exceptions focusing on the moderating role of structural conditions in shaping the outcomes of grit). A meta-analysis by Credé et al. (2017) documented a strong positive association between age and grit, although they found weak support for grit's association with other sociodemographic variables, including education, race and ethnicity, and gender. Most grit research relies on selective samples such as students at one college or high school, where respondents likely share relatively homogenous socioeconomic backgrounds, limiting the investigative possibilities (see Danner et al. 2020 and Zissman and Ganzach 2020 for exceptions using representative or less selective samples). Before drawing any conclusion about the sociological utility of grit, we need to scrutinize the link between structural

positions (which can be measured by multiple indicators of socioeconomic status, such as family background, education, and subjective class) and grit.

Grit may grow through multiple experiences of overcoming struggles (e.g., Gorski 2016; Kundu 2017). Those with more privileged socioeconomic status are less likely to encounter various structural barriers in their lives (e.g., Boehm et al. 2015; Mirowsky and Ross 2007) and are more likely to have other resources (e.g., economic, cultural, and social capital; Bourdieu [1986] 2002) that they can use to bounce back from life's vicissitudes. By contrast, structural constraints of individuals with less advantaged positions may necessitate that they rely more on personal effort and determination (e.g., Danner et al. 2020; Liu 2019; Shanahan et al. 2014). For example, Gorski (2016) noted that structural barriers, such as "housing instability, food insecurity, inequitable access to high-quality schools, unjust school policies, and others" (p. 382) may elicit more grit from U.S. students from less advantaged socioeconomic backgrounds than other peers to be able to attend the classes. In another example, Hwang, Lim, and Ha (2018) studied the effect of grit on the academic achievement of nontraditional, female adult students attending the Korean Open University; these female adult students often deal with more diverse constraints, such as studying while working full- or part-time and taking care of family responsibilities (e.g., childcare and housework) than do more traditional students. Individuals who experience more barriers in their goal pursuit may end up developing more grit than others through the experience of dealing with diverse challenges. For those who have fewer resources (e.g., lower education), grit may be considered as a supplementary resource that compensates for their structural disadvantages (e.g., Danner et al. 2020; Shanahan et al. 2014).

In particular, "stick-to-it-iveness" can be more useful (and thus required) for those with fewer resources for goal attainment. Those with other useful resources may feel less pressure to stick to one goal. With more life opportunities, people may find it easier to shift their interests and experiment with other projects (Williams 2012) because they have resources to pursue other goals if they find their original goal seems unachievable. For example, upper-middle- and middle-class people tend to encourage their children to customize and negotiate learning processes (Calarco 2011; Lareau 2011) and participate in more diverse activities through their material, cultural, and social resources (Chin and Phillips 2004). By contrast, the "giving it a try" attitude might be seen as a luxury for those who have more immediate concerns and fewer resources for such experiments. People with limited resources may find it risky (and costly) to shift goals. Therefore, they are more likely to "hang in there" (Williams 2012:40), developing more stick-to-it-iveness than others when pursuing a goal. Building on this literature, I expect a negative association between socioeconomic status and consistency of interest (hypothesis 1).

### *Grit and Subjective Agency Beliefs*

Contrary to the proposed negative relationship between socioeconomic status and grit's consistency-of-interest dimension, literature on individual-level aspects of stratification (Kohn 1989; Sewell et al. 1969), agency (Emirbayer and Mische 1998), and planful competence (Clausen 1991; Shanahan 2000; Shanahan, Hofer, and Miech 2003) suggests the following hypothesis: those with less privileged socioeconomic positions are more likely to experience vicissitudes in life, and multiple experiences of failure and setbacks may hurt their beliefs about their control in life (Ross and Mirowsky 2013), which in turn might reduce their motivation to work hard and remain focused on long-term goals.

This study extends prior sociological attempts to incorporate the subjective experience of agency with the behavioral facet of agency (e.g., Shanahan et al. 2003). Agency reflects an active and intentional process whereby an individual shapes one's life through choices and behavior within structural constraints (Elder 1994; Emirbayer and Mische 1998). Subjective beliefs about agency—a person's aspirations, expectations, or beliefs that shape one's life outcomes—are documented to be closely linked to one's stratification positions (e.g., Hitlin and Johnson 2015; Kundu 2020; Ross and Mirowsky 2013). In this article I propose grit as a social-psychological variable that is closely linked to the sense of control (Mirowsky and Ross 1991), which is the most widely used measure in sociology that taps into the concept of subjective beliefs about agency. Sense of control, the belief that one has control over one's own life outcomes (Mirowsky and Ross 1991), is documented as an important psychological resource linking one's socioeconomic position (e.g., education, family backgrounds, subjective class) with individual outcomes. For example, the better educated (e.g., Mirowsky and Ross 1998, 2007), those with higher subjective class (e.g., Kraus, Piff, and Keltner 2009), and those whose parents are well educated (e.g., Lewis, Ross, and Mirowsky 1999) tend to report higher levels of sense of control than those with lower socioeconomic status, and a higher sense of control is associated with better life outcomes (for a review, see Ross and Mirowsky 2013).

Grit echoes planful competence, which taps into "goal-directed behaviors" (Shanahan et al. 2003:189). Having subjective beliefs about agency could encourage people to carry out their goals and plans (Bandura 1977; Duckworth et al. 2007). Goal setting and pursuit are involved in the process whereby people "translate" subjective beliefs about agency to attain particular life outcomes, which is implied but rarely investigated in research on stratification, life courses, and agency (see Kundu 2016, who used qualitative data). I expect that individuals who more strongly believe that they have control over their lives (i.e., higher sense of control) would be more likely to have higher levels of grit (hypothesis 2).

Grit's theoretical connection to the sense of control and the well-documented linkage of the sense of control to

socioeconomic status guide us to explore a competing hypothesis about the relationship between socioeconomic status and grit: better socioeconomic conditions provide individuals with smoother, advantageous life trajectories, which contributes to a stronger belief about one's power over life (Ross and Mirowsky 2013) and thus likely encourages a grittier inclination to put persistent effort into one's goals (Duckworth et al. 2007). By contrast, those with less privileged socioeconomic positions are more likely to experience adversities when carrying out their plans, which might erode their beliefs about their control over life outcomes. This lack of belief in agency could also decrease the motivation to remain gritty. I expect an indirect positive relationship between socioeconomic status and grit via positive links to the sense of control (hypothesis 3). The (dis)advantages of socioeconomic conditions could be partially translated into grit through the sense of control.

### *Cross-Cultural Approaches to Grit*

Most psychological research concentrates on Western samples (Henrich, Heine, and Norenzayan 2010), which is also the case with research on grit (Datu et al. 2016; Disabato et al. 2019). Some empirical studies have examined grit in non-Western contexts (e.g., Datu et al. 2016; Hwang et al. 2018; Li et al. 2018; Suzuki et al. 2015), but most of them focused on the outcomes of having grit (i.e., academic performance) in a single country, with very few exceptions (e.g., for exceptions using cross-national data, see Danner et al. 2020; Disabato et al. 2019). We know little about whether or how grit is linked to one's structural conditions in different countries. Individuals are encouraged to engage in the culturally valued way of thinking dominant in their society (Miyamoto et al. 2018) and, like other resources, how a certain psychological resource operates and links to important social indicators could be culturally bound (Disabato et al. 2019).

In this article I focus on two countries that have cultural similarities and differences in valuing the two components of grit, perseverance of effort and consistency of interest. As in the United States, with its myth of the purported American dream (Duru-Bellat and Tenret 2012), the emphasis on personal hard work (which is captured by the perseverance-of-effort dimension of grit) is also found in South Korea, whose Confucian tradition values diligence as a desirable virtue (Kim and Park 2003) and contemporary neoliberal culture cultivates the meritocratic myths (e.g., Littler 2013). Miyamoto et al. (2018) demonstrated that people with higher status in Confucian cultures exhibit stronger autonomy compared with their lower status counterparts, suggesting that stratification patterns in psychological resources may operate similarly across countries (e.g., Kohn et al. 1990). Those with higher socioeconomic status in both countries will likely show a stronger sense of control, which in turn motivates them to develop gritty inclinations to

achieving their goals. Sense of control may translate the benefit of advantageous structural positions to a higher level of grit, particularly the perseverance-of-effort dimension that is commonly valued as a virtue in both societies. Thus, I hypothesize that there are positive associations among socioeconomic status, sense of control, and grit (particularly the perseverance-of-effort dimension) in both country samples (hypothesis 4a).

However, previous cross-cultural research has also documented cultural differences between the two countries. Compared with the United States, South Korea has been suggested as having a tighter culture in which individuals feel more social pressure to comply with social norms over their own autonomous discretion (Gelfand et al. 2011) and having an other-oriented culture that highlights caring for others and social harmony more than self-focused orientation and the pursuit of personal goals (Markus and Kitayama 1991; Miyamoto et al. 2018; see Hofstede 1980 for an earlier discussion, but also see Oyserman, Coon, and Kimmelmeier 2002 for a critique). Although perseverance is commonly valued in these two cultures, sticking to a personal goal or interest may not be a desirable trait in cultures in which individuals are expected to be attentive to others or social responsibilities (Datu et al. 2016; see Markus and Kitayama 1991 for discussion). This cultural difference could be particularly captured by the consistency-of-interest dimension of grit. Although I expect positive associations among socioeconomic status, sense of control, and the two grit dimensions, having a strong agentic belief will be translated less into consistency of interest than to perseverance of effort in the Korean sample than in the American sample. I hypothesize that the relations of consistency of interest with socioeconomic status and sense of control would be weaker in the Korean sample than in the American sample (hypothesis 4b).

### **Data and Measures**

In this study I used a nationwide sample of adults in the United States ( $n = 546$ ) and South Korea ( $n = 475$ ). Both the U.S. and Korean data were collected between August and October 2017 using Qualtrics, an online survey company with access to national panels of participants in the United States and South Korea who voluntarily opt to participate in survey research. Potential respondents were randomly selected by Qualtrics' sample partners and received an e-mail briefly describing the purpose of the study, the length of the survey, and compensation with a link to the online survey.<sup>1</sup> For the present study, respondents were recruited through quota sampling based on age, gender, and household income

<sup>1</sup>Respondents were compensated by Qualtrics depending on demographics, fielding time, and so on, in the form of points that can be redeemed for gift cards or cash.

**Table 1.** Demographic Statistics.

Variable	United States				South Korea			
	Mean	SD	Range	<i>n</i>	Mean	SD	Range	<i>n</i>
Age (y)	46.45	16.20	18–85	546	42.31	13.70	18–82	475
Female	.50	.50	0–1	546	.50	.50	0–1	475
White	.83	.38	0–1	544				
Married	.49	.50	0–1	544	.53	.50	0–1	475
Subjective class	3.44	1.22	1–5	544	3.29	1.04	1–5	475
Parental education								
Associate's degree or less	.60	.49	0–1	530	.65	.48	0–1	452
Bachelor's degree	.18	.39	0–1	530	.28	.45	0–1	452
Master's degree or higher	.22	.42	0–1	530	.07	.25	0–1	452
Respondent's education								
Associate's degree or less	.56	.50	0–1	544	.41	.49	0–1	475
Bachelor's degree	.27	.44	0–1	544	.51	.50	0–1	475
Master's degree or higher	.17	.38	0–1	544	.08	.27	0–1	475

to recruit samples representative of these demographic characteristics within the general population as possible.<sup>2</sup>

Missing cases in the American sample (23 missing cases including 1 missing on grit and 7 missing on sense of control) were due largely to nonresponses to parental education ( $n = 16$ ). These were treated using a full-information maximum likelihood estimation in Mplus (the MLR estimator; maximum likelihood estimation with robust standard errors), which is also robust for data not normally distributed (Savalei 2010; Yuan and Bentler 2000).<sup>3</sup> When using the MLR estimator in Mplus, cases with missing values for the independent variables are automatically excluded in the estimation. As a result, 17 missing cases (16 missing for parental education and 1 additional missing for race/ethnicity) were excluded in the U.S. main analysis, which reduced the final sample size for the main analysis to 529. The maximum likelihood mean-adjusted estimator was used for the analysis of the Korean data because the Korean data do not have any missing cases for the endogenous variables (grit and sense of control). The maximum likelihood mean-adjusted estimator with listwise deletion was used for the main analysis of the Korean data that have missing values for the independent variable only (23 missing cases for parental education), which reduced the final sample size for the main Korean analysis to 452.

Table 1 summarizes the demographic characteristics of the sample. About half of respondents were women and

married. The average age of the American sample was slightly higher (46 years) than that of the Korean sample (42 years). Fifty-six percent of the American respondents reported having an associate's degree or less, while 51 percent of the Korean respondents reported having a college degree, relatively higher educated than the general population. This educational discrepancy in the Korean sample is likely associated with oversampling younger respondents: Korean respondents younger than 55 years were slightly oversampled due to the difficulties in recruiting participants who were 55 years or older. Thus, I caution against generalizing the present findings to other populations.

### Grit

Grit was measured using the Grit-S scale (Duckworth and Quinn 2009).<sup>4</sup> Building on the theoretical framework that operationalizes grit as a higher order construct consisting of two lower order dimensions, perseverance of effort (hereafter perseverance) and consistency of interest (hereafter consistency), each dimension was measured using four items (e.g., "I finish whatever I begin" for the perseverance dimension, "I often set a goal but later choose to pursue a different one" for the consistency dimension), with responses ranging from 1 ("very much like me") to 5 ("not like me at all"). Responses to the perseverance items were reverse-coded. A higher score on the scale indicates a higher level of grit. Both country samples show high Cronbach's  $\alpha$  reliability scores for the Grit-S scale (see Table 2 for Cronbach's  $\alpha$  values). Grit-S scores in Table 2 were computed by averaging responses to all grit items. Perseverance and consistency scores were computed by averaging responses to each

<sup>2</sup>Boas, Christenson, and Glick (2018) reported that Qualtrics provides a sample closer to a national probability sample on the basis of sociodemographic variables such as age, education, income, and race and ethnicity compared with other online samples, including Amazon Mechanical Turk. Nevertheless, in this study I do not intend to generalize the findings from its data to other populations.

<sup>3</sup>See (Kwon 2021) for the measurement tests using listwise deletion and the maximum likelihood mean-adjusted estimation, which produced similar results.

<sup>4</sup>The Korean version of the questions on grit and sense of control was translated using the translation-back-translation method (Brislin 1970).

**Table 2.** Descriptive Statistics, Cronbach's  $\alpha$  Values, and Correlations between Key Variables.

	Mean	SD	Minimum	Maximum	$\alpha$	n	Correlation			
							1	2	3	4
United States										
1. Grit-S	3.53	.65	1	5	.74	545	—			
2. Grit-perseverance	3.78	.80	1	5	.78	545	.69***	—		
3. Grit-consistency	3.28	.94	1	5	.85	546	.79***	.10*	—	
4. Sense of control	.57	.56	-1.25	2	.70	539	.48***	.33***	.38***	—
South Korea										
1. Grit-S	3.19	.57	1	4.875	.75	475	—			
2. Grit-perseverance	3.23	.74	1	5	.77	475	.81***	—		
3. Grit-consistency	3.14	.70	1	5	.71	475	.79***	.28***	—	
4. Sense of control	.43	.41	-.875	2	.57	475	.25***	.26***	.13**	—

\* $p < .05$ , \*\* $p < .01$ , and \*\*\* $p < .001$ .

dimension (also see Table 2 for the Cronbach's  $\alpha$  value of each dimension).<sup>5</sup>

### Sense of Control

Sense of control was measured using the Sense of Control Scale (Mirowsky and Ross 1991). Following previous practices, responses to the statements on claiming control over life outcomes (e.g., "I can do just about anything I really set my mind to") were coded to range from -2 ("strongly disagree") to 2 ("strongly agree"). Responses to the statements on a lack of control (e.g., "I have little control over the bad things that happen to me") were reverse-coded. A higher score on the scale indicates a higher level of the sense of control. Cronbach's  $\alpha$  reliability scores were .70 for the American sample and .57 for the Korean sample, slightly lower than the conventional criteria (see the "Results" section for the analytic strategy for handling this issue).

### Socioeconomic Status

Multiple measures of socioeconomic status were used in the present study, following prior research documenting the

<sup>5</sup>The correlation between the two grit dimensions is lower than that reported by Credé et al. (2017) in their meta-analysis. The majority of the empirical studies included by Credé et al. relied on samples of students who attended one high school or college, reflecting the empirical focus of previous grit research. The lower correlation in the present study may be related to the different characteristics of the sample, as general adult samples are likely to have more heterogeneous characteristics than prior samples. Prior studies based on general adult samples have reported slightly lower correlations (ranging from .02 to .33) between the grit dimensions (e.g., Abuhassan and Bates 2015; Disabato et al. 2019). However, these studies used the Grit-O scale (Duckworth et al. 2007). Thus, it is not clear whether the present study's lower correlations between the two dimensions stem from the use of a general adult sample or not. This calls for more future research on general adult samples using the Grit-S scale across countries to better understand this issue.

importance of these measures in shaping one's psychological functioning (e.g., Kraus et al. 2009; Lewis et al. 1999; Ross and Mirowsky 2013). Parental education, as a proxy of socioeconomic background, was measured by the highest level of education of a respondent's mother or father, ranging from 1 ("less than high school") to 8 ("doctorate degree"). Respondent's education was measured by a respondent's highest level of school completed and used the same eight categories as parental education. Both measures were recoded into three educational categories: associate's degree or below, bachelor's degree, and master's degree or above. Subjective class identification was included to measure individuals' subjective perceptions of socioeconomic status beyond objective conditions (Kraus et al. 2009). This variable ranges from 1 ("lower class") to 6 ("upper class"). As there were only a few cases in the upper-class category (7 cases in the Korean sample and 20 cases in the American sample), it was combined with the fifth category, "upper middle class." As a sensitivity analysis, the main model was reestimated with the original six categories, and it produced similar results.

Several demographic variables that relate to both grit and sense of control (e.g., Duckworth and Quinn 2009; Ross and Mirowsky 2013) were included as covariates: age, gender (1 = female, 0 = male), race/ethnicity (1 = white, 0 = other in the United States), and marital status (1 = married, 0 = not married). Tables 1 and 2 present the descriptive statistics and Cronbach's  $\alpha$  values for key measures.

## Results

Prior to the main analysis, I conducted a confirmatory factor analysis to determine the factor structure of the Grit-S scale for each country sample and a multigroup confirmatory factor analysis to test the measurement invariance of the grit scale across the two country samples using Mplus 8.3. An insignificant  $\chi^2$  statistic ( $p > .05$ ), comparative fit index (CFI) and Tucker-Lewis index (TLI) of .95 or more, root mean square error of approximation (RMSEA) of .06 or less, and standardized root mean square residual (SRMR) of .08 or less indicate a good fit

**Table 3.** Unstandardized Coefficients and Robust Standard Errors from the Structural Equation Model Predicting Grit Dimensions.

Measurement model	United States			South Korea		
<b>Grit-perseverance</b>						
Pers4	1.000 (constrained)			1.000 (constrained)		
Pers1	.446*** (.061)			.338*** (.056)		
Pers2	.938*** (.045)			.777*** (.045)		
Pers3	.928*** (.045)			.917*** (.054)		
Cons4	.250*** (.046)			.275*** (.056)		
<b>Grit-consistency</b>						
Cons3	1.000 (constrained)			1.000 (constrained)		
Cons1	.833*** (.051)			1.748*** (.242)		
Cons2	.952*** (.051)			2.143*** (.299)		
Cons4	.927*** (.049)			1.821*** (.282)		
<b>Sense of control</b>						
Control-good	1.000 (constrained)			1.000 (constrained)		
Control-bad	.697*** (.085)			1.322*** (.329)		
Structural model	Sense of control	Grit-perseverance	Grit-consistency	Sense of control	Grit-perseverance	Grit-consistency
Sense of control		.632*** (.083)	.589*** (.113)		1.108*** (.252)	.256* (.099)
Subjective class	.081** (.025)	-.006 (.034)	-.003 (.037)	.052* (.021)	.048 (.048)	.001 (.019)
Parental education <sup>a</sup>						
Associate's degree or less	.084 (.075)	.029 (.100)	.290* (.114)	-.075 (.063)	.194 (.182)	.014 (.074)
Bachelor's degree	.160 (.088)	.024 (.110)	.141 (.133)	-.142* (.070)	.212 (.188)	.101 (.080)
Respondent's education <sup>a</sup>						
Associate's degree or less	-.006 (.091)	-.216 (.116)	.391** (.136)	.003 (.065)	.090 (.177)	.085 (.079)
Bachelor's degree	-.020 (.093)	-.206 (.118)	.426** (.139)	-.044 (.064)	.243 (.169)	.192* (.081)
Age	.010*** (.002)	.002 (.003)	.009** (.003)	.000 (.002)	.009* (.004)	.008*** (.002)
Female	.144* (.056)	.089 (.076)	.026 (.079)	-.044 (.037)	.003 (.094)	.029 (.038)
White	.019 (.082)	.000 (.098)	.116 (.110)			
Married	-.076 (.054)	.004 (.077)	-.173* (.080)	.037 (.042)	-.179 (.100)	-.046 (.042)
Fit indices	$\chi^2(94) = 164.611, p < .001,$ RMSEA = .038 (90% CI = .028-.047), CFI = .965, TLI = .949, SRMR = .040			$\chi^2(87) = 168.784, p < .001,$ RMSEA = .046 (90% CI = .035-.056), CFI = .938, TLI = .911, SRMR = .045		

Note: CFI = comparative fit index; CI = confidence interval; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual; TLI = Tucker-Lewis index.

<sup>a</sup>Reference: master's degree or higher.

\* $p < .05$ , \*\* $p < .01$ , and \*\*\* $p < .001$ .

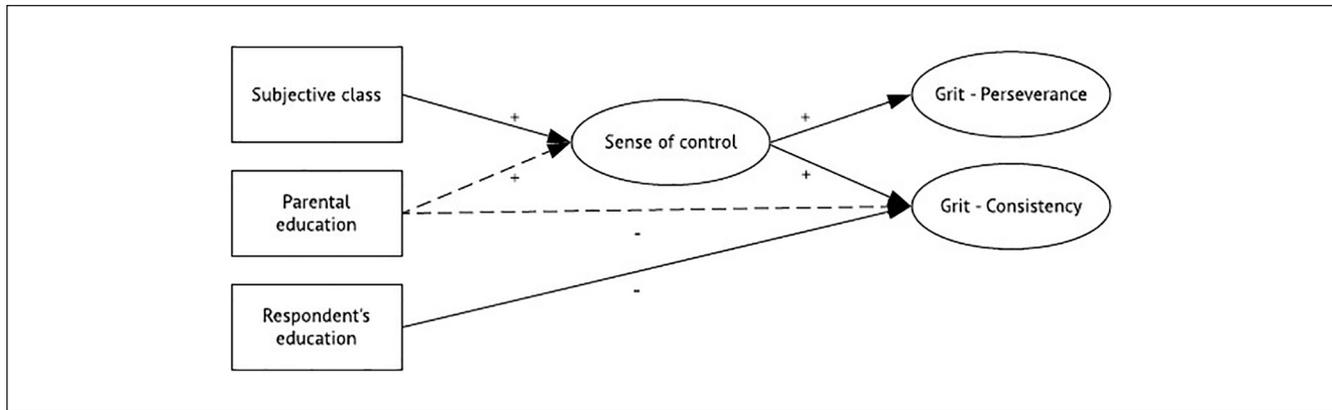
to data (Hu and Bentler 1999). Values of .90 for the CFI and TLI are often suggested as acceptable fit (Bentler 1990).

The results support the two-factor structure of the grit scale with two correlated latent constructs (perseverance and consistency) without a higher order latent variable. A better fitted model loads consistency item 4 (“I have difficulty maintaining my focus on projects that take more than a few months to complete”) on both dimensions ( $\chi^2 = 40.412, df = 18, p < .05$ , RMSEA = .048, CFI = .982, TLI = .973, and SRMR = .051 for the American data;  $\chi^2 = 57.986, df = 18, p < .05$ , RMSEA = .068, CFI = .956, TLI = .932, and SRMR = .053 for the Korean data).<sup>6</sup> The results of the multigroup confirmatory

<sup>6</sup>Allowing for the cross-loading is guided by practices of previous researchers (e.g., Byrne 2008; Byrne and van de Vijver 2010). The measurement model without the cross-loading produced similar results in the measurement invariance test and main analysis (results available upon request).

factor analysis using the full-information maximum likelihood estimation support the partial metric invariance of this two-factor grit model ( $\Delta S-B\chi^2 = 8.627, \Delta df = 6, p > .05, \Delta CFI = -.001$ ), suggesting that respondents in the two samples responded similarly to the Grit-S items.

Next, I performed a structural equation modeling analysis to examine the relationships among socioeconomic status, sense of control, and grit dimensions using Mplus 8.3 (see Table 3; also see Figure 1 for a simplified path diagram summarizing the results). The measurement model included sense of control and grit. The purpose of including sense of control in the measurement model was to partly address the low Cronbach's  $\alpha$  for sense of control in the Korean sample. Following Mirowsky and Ross (2007), sense of control as a latent variable was measured using two subscales: claiming control over good outcomes (“control-good”) and claiming control over bad outcomes (“control-bad”). The fit indices of the main model were



**Figure 1.** Simplified path diagram.

Note: Solid lines are statistically significant paths in both country samples, and dashed lines are statistically significant paths in one country (parental education → sense of control in the Korean sample; parental education → consistency in the American sample) at  $p < .05$ .

good for the American data and acceptable for the Korean data (see Table 3).

More socioeconomically advantaged respondents who identified with higher classes tended to show stronger beliefs in their control over life outcomes compared with the less advantaged in both country samples. In addition, Korean respondents whose parents are more highly educated (holding a master's degree or higher) tended to report a higher sense of control than those whose parents have a college degree only. These findings are consistent with previous findings that show a positive relationship between socioeconomic status (i.e., subjective class and parental education) and sense of control (Kraus et al. 2009; Lewis et al. 1999).

In both country samples, people who have higher levels of sense of control tended to show stronger perseverance and consistency in their goal attainment compared with those who believe that external factors shape their lives (i.e., lower levels of sense of control; hypothesis 2). As hypothesized, the link between sense of control and consistency of interest is less strong in the Korean data, given that its path coefficient is much smaller than that of perseverance (hypothesis 4b). In South Korea, having a strong agentic belief seems to translate more to perseverance in goal pursuit than to sustained interests.

I further examined if the positive effect of socioeconomic status is translated to grit dimensions via the sense of control. Among three socioeconomic indicators (parental education, subjective class, and respondents' education), subjective class showed the only significant indirect effect on the two dimensions of grit (hypothesis 3) in both samples (hypothesis 4a). Standardized path coefficients were .072 for perseverance and .062 for consistency in the American sample and .067 for perseverance and .039 for consistency in the Korean sample (see Table A1 in the Appendix). Although the effects were small, this may suggest potential evidence for the sense of control as a partial mediator between subjective class identification and grit. The perception that one has a better

socioeconomic condition provides the person with a stronger belief in one's agency over life, and this belief helps the person persevere and sustain one's passion for a particular goal.

Although perseverance seems not to have a direct relationship with socioeconomic status indicators, a negative association between higher education and the consistency dimension of grit was found (hypothesis 1): respondents in our American sample who have a college degree or less tended to report more consistency than those with a master's degree or higher. In addition, respondents whose parents' education level is that of an associate's degree or less tended to report higher levels of consistency than those with more highly educated parents (i.e., a master's degree or higher). This tendency was also found in the Korean sample: Korean respondents with only a college degree showed more consistency than those with more advanced degrees. The results suggest that people who hold higher degrees (and Americans whose parents are well educated) may less likely develop and rely on stick-to-it-iveness than those of a less privileged status; they are less likely to confront adversities in life or have more resources (e.g., their higher educational credentials) to use in navigating life challenges and to experiment with a broader horizon of life opportunities.

Figure 1 summarizes the findings of the present study. As hypothesized, a positive association was found between socioeconomic status (subjective class in both countries and parental education in Korea) and sense of control, as well as positive associations between sense of control and two grit dimensions (perseverance of effort and consistency of interest) in both countries. These findings suggest that the advantages of having better socioeconomic conditions can translate into higher grit through a greater sense of control. However, a direct negative association between education (and parental education in the United States) and grit's consistency dimension found in both country samples suggests a potentially contradictory relationship between grit and socioeconomic status.

## Discussion and Conclusions

By disaggregating grit into its component factors, this study demonstrates potential contradictory relationships of grit with socioeconomic status: positive relationships among subjective class, sense of control, and grit and a negative association between one's own or one's parents' education and the consistency dimension of grit.

This study demonstrated that grit is indirectly linked to subjective class via sense of control, although this effect is weak. Through the sense of control, grit could partly transform the advantages of occupying a privileged socioeconomic position into goal-directed behaviors. This finding is in keeping with what planful competence literature (Clausen 1991; Shanahan et al. 2003) has illustrated: the exertion of human agency requires goal-setting and goal-directed actions. Previous studies on subjective beliefs about agency have presumed these goal-directed behaviors but rarely incorporated in their empirical measurements. Grit could potentially guide the investigation of important sociological questions regarding the social-psychological processes of status attainment by focusing on how subjective beliefs can be translated into advantageous long-term actions.

Another finding shows that people who are highly educated or have parents who are highly educated tend to report less stick-to-it-iveness (i.e., consistency of interest) than others. As discussed, those with a more privileged status could enjoy the freedom, or even feel more entitled, to "give it a try" and try out different projects and interests (e.g., Chin and Phillips 2004; Williams 2012) because they have useful economic, cultural, and social resources (e.g., Bourdieu [1986] 2002) that could help them bounce back from failures. By contrast, people with a less privileged status may find it difficult to change their interests and experiment with other projects because of their limited resources; instead, they may try to (or even be encouraged to) compensate for their lack of resources by sticking to the projects in which they have already invested their limited resources. This finding suggests that the consistency dimension of grit could function as a supplementary psychological resource that might help those lacking other beneficial resources persevere in the current stratified system (e.g., Liu 2019; Shanahan et al. 2014). However, whether people with less privileged status are rewarded by sticking to one project for long is an open question. Danner et al. (2020) found that higher levels of perseverance compensate for low educational qualifications, showing greater returns to perseverance for the less educated, but we do not know if the same mechanism happens with the consistency dimension of grit.

This study also showed that linkages of consistency of interest to socioeconomic status and sense of control are less clear in the Korean sample. Datu et al. (2016) argued that consistency of interest may operate differently in cultures in which one's interests tend to be more influenced by others'

expectations. Sticking to one's personal project long term could be less encouraged in these cultures, as people tend to feel more pressure to meet social expectations (Gelfand et al. 2011) and are more frequently interrupted with social responsibilities to care for others (Miyamoto et al. 2018). This cultural aspect may partly explain the relatively weak and small associations of consistency of interest with other key variables in the Korean sample. However, the two-country sample in the present study does not allow a direct examination of how culture may influence these relationships. Future studies with data collection on these measures from multiple countries could better illuminate the role of culture.

This study had several limitations. This study relied on data collected from respondents who voluntarily registered for the online panel of the survey company. It is important to note that the results of the present study, therefore, should not be generalized to other populations beyond the present sample. Previous psychological studies on grit relied mostly on highly selective populations, such as student samples from one college or high school in a single country that were likely composed of individuals with homogeneous socioeconomic backgrounds. The current cross-cultural data collected from more general, less selective populations from a wider range of socioeconomic backgrounds have an advantage over previous work. Despite this advantage, the nonprobability sample is a clear limitation. This calls for future research with a probability sample across different countries.

Because of the cross-sectional data, this research could not clarify the causality issue. For example, grit may lead to stronger beliefs about personal control and higher class identification. The interpretation of the mediation in this article requires the assumption that personal sense of control precedes grit. Although the research hypotheses are built on a classic theoretical discussion that holds that individuals who believe they have control over their life outcomes tend to put more effort into their goals (Bandura 1977; Ross and Mirowsky 2013; Skinner 1996), longitudinal data are needed to clarify the causal ordering and mediating role of a sense of control. Moreover, the indicators of socioeconomic status might capture different snapshots of the socioeconomic status of those in different age groups. For example, the educational attainment of respondents in their early 20s can be underestimated, as they may not have yet completed their education when they took the survey, meaning that they reported a lower level of education than they may attain later. By contrast, their response to subjective class may capture their family background more than their own, while the responses of older respondents may capture their own class. This calls for future research using longitudinal data with appropriate measures of socioeconomic status to clarify the link between socioeconomic status and psychological resources across life courses. To the best of my knowledge, no prior studies have explored the relationships among the sense of control, grit, and relevant socioeconomic status in more than a single country. With this strength of the present

study, though limited, the results of this study provide suggestive evidence for the sociological relevance of grit.

There are ongoing debates about the measurement of grit (e.g., Credé 2019; Guo et al. 2019; Jachimowicz et al. 2018) and whether grit predicts positive life outcomes above and beyond factors such as conscientiousness (e.g., Zissman and Ganzach 2020). For example, there is a possible acquaintance bias, as all consistency items were worded negatively while all perseverance items were worded positively (Bowman et al. 2015:641). Researchers have also pointed out that the current grit measurement largely neglects the important conceptual element of grit, namely, perseverance and passion “even in the face of setback,” as only one perseverance item, “Setbacks don’t discourage me,” captures this element (Zissman and Ganzach 2020:7). These concerns are likely related to the low reliability and validity of the grit scale found in grit research. Future research on grit needs to improve its measurement to better encapsulate its theoretical construct and allow a more rigorous evaluation of its utility.

Incorporating grit into a sociological discussion of agency—to date based mostly on the subjective sense of control—potentially improves the theory and measurement of the confusing concept of agency, which involves cognition, emotion, and temporality (see Emirbayer and Mische 1998). Grit may operate as a measurable “engine” when one believes in one’s agentic capacity (toward oneself; i.e., sense of control). Thus, grit helps explain how this subjective measure of agency is linked to goal attainment over time, which contributes to stratified life outcomes. Kundu (2016) suggested that grit alone is not sufficient for success. Incorporating subjective orientations about agency is important in fostering grit, especially among students from disadvantaged backgrounds (see also Kundu and Noguera 2014).

To develop grit, one may invest in developing a sense of control, as it motivates a potential gritty inclination, especially perseverance of effort, which is more closely linked to better life achievements (e.g., Credé et al. 2017; Danner et al. 2020). Research on the sense of control has found that individuals with disadvantaged socioeconomic status, such as individuals with lower levels of education, unemployed individuals, or those with low-status jobs with little autonomy, and identifying with lower classes, are more likely to experience the situations in which effortful action does not affect outcomes (Kraus et al. 2009; Lewis et al. 1999; Ross and Mirowsky 2013). Thus, a more fundamental way of reducing inequalities in sense of control and grit as beneficial psychological resources would be to turn our attention and social investment to offering more opportunities in the form of resources, more autonomy in the workplace, and increased social support to individuals from disadvantaged backgrounds to increase their sense of control (Lachman, Agrigoroaei, and Rickenbach 2015). Grit can be developed, maintained, strengthened, or reduced throughout the life course as individuals face different challenges and

opportunities and develop subjective perceptions about their agency by navigating the stratified opportunity structure.

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### Supplemental Material

Supplemental material for this article is available online.

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