Social mobility and motivational payoff: Achievement motivation is more important in students’ performance and well-being in cultures with high vs. low social mobility

This is a preprint version of the paper. Please refer to the published paper in *Journal of Cross-Cultural Psychology* for the final version.

Nigel Mantou Lou¹,² and Liman Man Wai Li³,⁴

¹ Department of Psychology, University of Victoria, BC
² Centre for Youth and Society, University of Victoria, BC
³ Department of Psychology, The Education University of Hong Kong
⁴ Centre for Psychosocial Health, The Education University of Hong Kong

*Corresponding author information: Liman Man Wai Li, Department of Psychology, The Education University of Hong Kong (e-mail: mwli@eduhk.hk).

Citation:


Abstract

Achievement motivation encompasses a well-establish distinction between the motive to avoid failure (e.g., fear of failure) and the orientation to improve competence (e.g., mastery goal). But how well do they generalize across cultures in understanding students’ performance and well-being? We argue that students’ achievement motivation is less pronounced in societies characterized by low (vs. high) social mobility, where people have fewer opportunities to change their social status. To test this hypothesis, we analyzed a cross-national dataset (n = 498,362 high-school students from 65 regions) using multilevel modeling. The results indicated that societal-level social mobility significantly moderated the role of (a) mastery goals and fear of failure on academic performance and (b) fear of failure on well-being. These associations were stronger in societies with high (vs. low) social mobility, suggesting that students derive greater academic benefits from mastery goals and fear of failure in societies with higher social mobility. In such societies, however, fear of failure also poses a stronger hindrance to students’ well-being. These findings highlight that the same type of motivation may operate differently across cultures, and that socioecological environments may influence the motivational impacts on learning and well-being.

Keywords: Mastery goal, fear of failure, social mobility, culture, motivation
Culture and motivational payoff: Achievement motivation is more important in students’ performance and well-being in cultures with high vs. low social mobility.

Understanding the role of the sociocultural environment in motivation and learning has become an increasingly important issue in educational psychology (King et al., 2018; Lou & Li, 2023; Pintrich, 2003). Scholars have increasingly questioned whether the prevalent motivation constructs (e.g., mastery goals, fear of failure) can encapsulate the experiences of learners around the world and called for more research on cultural influences on these constructs (Heine, 2007; King, 2021; Liem & Elliot, 2018; Pintrich, 2003; Wang et al., 2020). However, few studies offer answers as to how social ecology can enhance or attenuate the effect of achievement motivation on students’ learning, and even fewer on students’ well-being. In this paper, we argue that social mobility (i.e., the extent to which the ecological environment provides fair opportunities for individuals to move up their social status) is a crucial socioecological factor in understanding the effects of achievement motivation. Drawing on the established motivational distinction between fear of failure (FoF) and mastery goals (MG)¹, we explore how well their links to achievement and well-being generalize or vary across diverse cultures and whether social mobility can systematically explain such cultural variations.

Mastery Goals and Fear of Failure in Learning and Well-being

Achievement motivation refers to the reason and direction of behavior in the context of achieving competence (e.g., at school; Atkinson & Feather, 1966). Although achievement motivation is a multidimensional, complex concept, a common distinction is the motive to avoid failure (e.g., FoF) and the motive to master learning (e.g., MG), which are common in achievement contexts (Pintrich, 2003). FoF represents the drive and emotional response to avoid failure or potential poor performance, including external concern about others’ judgment (Covington, 1985; Martin & Marsh, 2003). In contrast, MG represent the intrinsic desire to develop mastery of tasks and improve competence through hard work (McGregor & Elliot, 2005; Sagar & Jowett, 2015). FoF and MG play distinct roles in students’ learning. According to the model of need achievement, although failure-avoidant-oriented students are anxious about learning and use self-defensive strategies, they may be motivated to study due to such fear (Bartels & Ryan, 2013; Covington, 1985). These students may work hard to focus on their performance to avoid failing, although they tend to have negative attitudes toward learning (Busato et al., 2000; Conroy & Elliot, 2004). In contrast, extensive research has shown that mastery-oriented goals are associated with more positive attitudes toward learning and adaptive learning strategies (Elliot & Sommet, 2023; Finney et al., 2004; Harackiewicz et al., 2002).

The consequences of FoF and MG extend beyond learning – they also concern students’ mental health and well-being (Guo et al., 2022; Huang, 2011). In general, FoF tends to be associated with maladaptive psychological outcomes (Tuominen et al., 2020; Yi et al., 2020). Because students with strong FoF tend to be motivated to avoid failures, their well-being and mental health may be compromised due to their anxiety. These students are more likely to have lower self-esteem and report more stress and depressive symptoms when facing difficulties.

¹In this study, we focus on the classic distinction of MG and FoF to understand the cultural variations of their role in shaping students’ learning and well-being. Although there are more nuanced models for achievement goal theories (e.g., the 2x2 framework; Conroy & Elliot, 2004; Elliot and Murayama, 2008), their related constructs were not measured in the most recent PISA data used in this study (see the methods section).
setbacks (Bartels & Ryan, 2013; Conroy, 2001; Conroy et al., 2007). In contrast, MG tends to be associated with positive psychological consequences (Hall et al., 2016; Lou & Noels, 2016). Students who endorse strong MG are more likely to see their purpose in learning and focus on their learning progress. Accordingly, they are more likely to interpret challenges as an opportunity to grow and, thus, experience positive emotions (e.g., hope and enjoyment).

While FoF and MG are widely studied individual factors in students’ learning and well-being, their effects are not uniform across studies. Some studies showed that FoF is a positive contributor to students’ learning and academic success (Busato et al., 2000; Conroy & Elliot, 2004), while others showed no relation (Castella et al., 2013) or even identified negative relations (Wach et al., 2015). Similarly, MG were generally positively correlated with better learning outcomes in some studies (e.g., Guo et al., 2022; King et al., 2021), whereas others did not support this finding (Cho et al., 2018; Hulleman et al., 2010).

The heterogeneity observed in achievement motivation can be attributed, in part, to contextual influences (Linnenbrink-Garcia et al., 2008; Skaalvik & Frederici, 2016). For example, research has shown that MG is linked to more favourable outcomes in a supportive classroom environment (Benita et al., 2014; Senko, 2019). Despite the theoretical and empirical advancement of achievement motivation in relation to learners’ classroom environment, social ecology, a more distal but important context, is largely neglected in the achievement motivation literature (King, 2021). To fill this gap, this study examines how social mobility, as an important socioecological factor, may explain the systematic cultural variations of the effects of FoF and MG on achievement and well-being.

**Socioecological Psychology and Social Mobility**

**Socioecological Psychology**

There has been a resurgence in psychological research in understanding how the socioecological environment and psychological processes influence each other – namely, socioecological psychology (for a review, Oishi, 2014; Oishi et al., 2019). While cultural psychology focuses on how cultural values and practices affect people, socioecological psychology focuses on the role of objective macro conditions (e.g., macroeconomic conditions and demographic structures; Yamagishi & Hashimoto, 2016). Different socioecological factors have been identified that predict a wide range of psychological processes. For instance, relational mobility (i.e., the number of opportunities to form and abandon social relationships afforded by an environment; Yuki & Schug, 2020) and residential mobility (i.e., the frequency of residential moving within an environment; Oishi, 2010) are found to exert direct effects (Lee et al., 2019; Li, L. et al., 2022; Li, W. et al., 2022; Lou & Li, 2017) as well as moderating effects (Wang & Li, 2020) on people’s interpersonal relationships and psychological well-being.

**Social Mobility**

One socioecological factor that has recently received extensive research for achievement and well-being (Joshanloo, 2022; Suriyanrattakorn & Chang, 2022) is *social mobility*, which refers to the extent to which a society fosters fair chances for people to advance their socio-economic status (World Economic Forum, 2020). Different indicators of social mobility have been adopted in previous studies. Some studies measured social mobility by asking participants to indicate their perceived social mobility (e.g., Schalember, 2019), which is rather subjective. Some studies measured social mobility by using the intergenerational difference in educational attainment or income (e.g., Garcia-Munoz et al., 2019), which is limited in fully capturing social mobility that is related to a broader range of
domains (e.g., health, education, work, and institutions). To overcome these limitations, the World Economic Forum (2020) adopted a holistic approach and developed the *Global Social Mobility Index*. This index captures access to ten important domains affecting social mobility, including education, health, work, technology, and social protection and institutions (World Economic Forum, 2020). Adopting the socioecological perspective, the present research used the Global Social Mobility Index to indicate societal-level social mobility, which provides a relatively objective and comprehensive assessment of environmental affordance for social mobility.

In high-mobility societies (e.g., Finland and Sweden), individuals, regardless of their background, have more resources to overcome obstacles and a greater chance of succeeding in society, which is an indication of a just society. In contrast, in low-mobility societies (e.g., Morocco, Peru, and Indonesia), disadvantaged individuals would have more constraints to overcome obstacles and find success beyond their families’ economic status. When such inequalities exist within a society, underprivileged individuals, despite being motivated, are less likely to become high-status and generally stay in their current social status.

The degree of societal social mobility is associated with the level of academic performance and well-being across societies (e.g., Bridger & Daly, 2020; Zhang et al., 2020). More importantly, it also moderates individuals’ psychological processes and outcomes in goal pursuit. Joshanloo (2022) found that societal-level social mobility (using the Global Social Mobility Index) weakened the positive relationship between individuals’ orientation for their own goals and life satisfaction among 116 societies. Using the same indicator, Suriyanrattakorn and Chang (2022) found that societal-level social mobility weakened the negative relationship between income equality and life satisfaction in 143 societies. In this study, we aim to understand how social mobility moderates the role of achievement motivation, specifically, fear of failure and mastery goals.

**Social Mobility Moderates the Role of FoF and MG**

It is important to acknowledge that the same type or level of motivation does not necessarily lead to the same learning outcomes across learners, and the motivational payoff differs depending on the interplay between the individual and their learning environment (e.g., Lou & Li, 2023; Silverman et al., 2023; Yeager et al., 2022). Considering the differences in societies varying in social mobility, we predict that achievement motivations are more likely to manifest into learning and psychological outcomes in a high- rather than a low-social-mobility environment.

As presented in Table 1, because a high mobility environment provides more fair opportunities, people, regardless of their background, could advance their socio-economic status. In such an environment, students are more likely to put their achievement goals into learning behaviors, strengthening the positive association between motivation and outcomes. In other words, the high-mobility environment provides the affordance that maximizes the payoff of these academic motives (Jia et al., 2021). This idea is consistent with research showing that individuals’ personal characteristics have a stronger predictive power on behaviors when the context supports the individual factors (Chan, 2020; Li L., 2017). As such, in high-mobility societies, students with MG may increase behaviors to engage in the learning process, while students with high FoF may act by increasing effort to reduce their worry of not reaching their learning outcomes, resulting in more positive consequences. In contrast, a low-mobility environment can attenuate the effects of achievement motivation. In such a society, people have little opportunity to advance their socio-economic status. Subsequently, they may not act toward fulfilling their goals, despite wanting to learn more or wanting to avoid failing, which may attenuate the link between academic motivation and
outcomes. Supporting this idea, recent research shows that growth mindsets, the beliefs that one’s ability can be improved via effort (Dweck & Yeager, 2019), are less effective in predicting students’ performance when students are less likely to overcome educational obstacles due to low social mobility (Jia et al., 2021). Similarly, in a study conducted in Indonesia (a low-mobility society), researchers did not find a positive link between MG and performance (Liem et al., 2012).

We argue that social mobility also moderates the role of achievement motivation in well-being, such that students’ achievement motivations are more likely to guide their well-being in a high (vs. low)-mobility society. In high (vs. low) mobility societies, students’ academic performance is more relevant to their self and identity as the environment provides more affordance for motivated students to act according to their achievement motivation. Accordingly, their emotional responses are more likely to attune to their motivational actions. Thus, students with high FoF may feel more anxious about learning and not reaching their learning outcomes. In contrast, students with MG may feel more positive about the learning process, which may, in turn, affect their overall well-being. In other words, we expect a stronger negative association between FoF and psychological well-being and a stronger positive association between MG and psychological well-being in high (vs. low)-social-mobility societies.

The Present Study

A well-established distinction in the achievement motivation literature is between the motive to avoid failure (e.g., FoF) and success orientation (e.g., MG). Although previous research provides insights into what specific classroom conditions can optimize students’ achievement motives, little is known as to whether both motives are culturally equivalent in understanding students’ academic performance and well-being. This study explores whether the role of FoF and MG in students’ academic achievement and psychological well-being can be generalized across societies with different levels of social mobility. As discussed, social mobility is a key socioecological factor crucial to human motivation and could potentially modulate psychological and achievement outcomes in goal pursuit (e.g., Bridger & Daly, 2020; Zhang et al., 2020). As shown in Table 1, we hypothesize that in societies characterized by a high level of social mobility, achievement motivation will be a more potent contributor to academic achievement and well-being. In contrast, we expect that the effect of achievement motivation will be attenuated in low social-mobility societies.

To test our hypotheses, we analyzed a large-scale open dataset from PISA 2018 (OECD, 2019a). This dataset includes students’ three achievement scores (reading, math, and science), three well-being scores (meaning in life, positive affect, and life satisfaction), and FoF and MG scores. Separate models were conducted for each outcome variable, as previous studies suggested that they are conceptually distinct despite their conceptual relevance (e.g., for academic achievement: Coley et al., 2019; for well-being: Cheng et al., 2022). We retrieved country-level scores for social mobility in the World Economic Forum (2020). In addition, we included individual variables that can potentially obscure the findings, including gender and family income, because they were found to be related to students’ achievement and well-being (Darnon et al., 2018; Sirin, 2005). Controlling for these covariates can potentially help isolate the unique predictive power of students’ FoF and MA. Regarding the societal level, we included the region’s GDP as a covariate because the country’s resources were found to affect students’ motivation and achievement (Zheng et al., 2019) and thus could confound the effect of social mobility. Therefore, including GDP might help better understand the unique country-level effect of social mobility.
### Theoretical Framework and Hypothesis of Social Mobility and Motivational Payoff: Social Mobility’s Influences on the Role of Achievement Motivation in Academic and Mental Health Outcomes

<table>
<thead>
<tr>
<th>Societal mobility</th>
<th>Achievement-relevant socialization</th>
<th>Differences in the manifestation of achievement motivation</th>
<th>Outcome of achievement motivation (Motivational payoff)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High mobility societies (e.g., Norway, Finland, Canada)</td>
<td>There are equal and plenty of opportunities to change in social class and economic status, such as through a supportive educational system. Achievement motivation is instrumentally beneficial to move up in social status.</td>
<td>This environment provides psychological affordance (e.g., maximizing the chance to reach the potential of students), such that students put their achievement goals into learning behaviors, which strengthens the positive consequences. Achievement motivation is more influential on students’ learning outcomes and well-being.</td>
<td>Academic motivation (e.g., fear of failure and mastery goals) has a robust predictive power on academic performance. Achievement motivation has a robust predictive power on well-being. Specifically, mastery goals positively predicts well-being, whereas fear of failure negatively predicts well-being.</td>
</tr>
<tr>
<td>Low mobility societies (e.g., Tukey, Mexico, Brazil, Indonesia)</td>
<td>There are unequal opportunities and access to education, and lack opportunity to overcome obstacles. Achievement motivation provides relatively less benefit for economic and status growth.</td>
<td>This environment provides little psychological affordance (e.g., introducing obstacles to reach the potential of students), such that achievement orientation is less likely to manifest into action, which weakens the positive consequences. Achievement motivation is less likely to translate into learning and well-being outcomes.</td>
<td>Academic motivation (e.g., fear of failure and mastery goals) has a diminished predictive influence on well-being. Achievement motivation (fear of failure and mastery goals) has a diminished predictive power on academic performance.</td>
</tr>
</tbody>
</table>
Methods

Participants

The PISA (OECD, 2019a) is a multi-country assessment of nationally representative samples of 15-year-old students’ academic performance, personal characteristics, and motivational/psychological variables (such as MG and FoF). We used the most recent dataset, which was collected across 79 regions in 2018. The common technical and administrative procedures were ensured by each participating region for data collection. The OECD Secretariat was responsible for monitoring and managing the project implementation worldwide. The data can be retrieved online (https://www.oecd.org/pisa/data/), and readers can refer to the technical support for further detail of participants and the implementation of PISA (OECD, 2019b). Only the regions with available data of societal-level social mobility (n = 65) were included in the present study. As a result, the final sample included 498,362 students (49.9% female participants, Age\text{mean} = 15.79, SD = .29). Table S1 (online supplement) presents the list of all included regions, sample sizes, and the means of the variables used in the present study.

Measures

PISA Data (OECD, 2019a)

The PISA 2018 used a rigorous procedure in scale development and validation, including ensuring measurement equivalent of the constructs across regions (OECD, 2019b). For the academic performance measures and the single-item life satisfaction, their scores are reported below. For the non-academic-performance measures with multiple items in the present study, including both measures for achievement motivation (mastery goals and fear of failure) and two of the three measures for psychological well-being (meaning in life and positive affect), the PISA 2018 provides a combined, standardized score across all the surveyed regions based on Item-Response Theory (see the technical report for more detail; OECD, 2019b). These standardized scores were computed with a mean value of zero with the data of all responses. Since we only included data with available societal social mobility scores, the mean for the standardized scores in the present study could be non-zero.

Mastery goals. Three items were used to measure students’ mastery goals with a 4-point scale (1 = not at all true; 4 = extremely true). The items are based on a previously validated Achievement Goal Questionnaire (Elliot & Murayama, 2008; e.g., “My goal is to learn as much as possible” and “My goal is to completely master the material presented in my classes”). The values of Cronbach’s alpha ranged from 0.710 (in Vietnam) to 0.913 (in Iceland) across different countries, with a mean of 0.854. As discussed previously, the PISA 2018 provides a standardized mastery goal index combining the responses of these three items. A higher score indicates stronger endorsements of mastery goals (M = .081, SD = 1.04).

Fear of failure. Three items were used to measure students’ general fear of failure with a 4-point scale (1 = strongly disagree; 4 = strongly agree). The items were adapted from the multidimensional fear of failure measure (Conroy et al., 2002; e.g., “When I am failing, I worry about what others think of me” and “When I am failing, I am afraid that I might not have enough talent”). The values of Cronbach’s alpha ranged from 0.702 (in Ukraine) to 0.887 (in Iceland) across regions, with a mean of 0.798. A standardized fear of failure index
for each student was created by PISA 2018, with a higher score indicating greater fear of failure ($M = -0.03$, $SD = .98$).

**Academic achievement.** The test scores in science, reading, and mathematics in PISA 2018 were used to indicate students’ academic achievement. To account for the measurement errors and evaluate the uncertainties associated with the observed data, PISA conducted the latent regressions methods to impute 10 plausible values for the proficiency of each student on each subject based on the student’s posterior distribution (see the technical report for more detail; OECD, 2019b). Given the results with different plausible values were almost identical, as demonstrated in previous studies (Spiezia, 2010), we only used the first plausible value of each subject by following previous work. The mean and the $SD$ of each subject were as follows: Reading: $M = 468.14$, $SD = 102.34$; Science: $M = 468.11$, $SD = 101.43$; Mathematics: $M = 464.29$, $SD = 106.32$.

**Psychological well-being.** Three measures were used to indicate students’ psychological well-being: meaning in life, positive affect, and life satisfaction. To assess meaning in life, participants reported their agreement with three statements, including “My life has clear meaning or purpose” and “I have discovered a satisfactory meaning in life,” on a 4-point scale (1 = strongly disagree; 4 = strongly agree). The values of Cronbach’s alpha ranged from 0.693 (in Vietnam) to 0.915 (in Iceland) across regions, with a mean of 0.840. Three items (i.e., “Happy,” “Joyful,” and “Cheerful”) were used to assess students’ positive affect on a 4-point scale (1 = never; 4 = always). The values of Cronbach’s alpha ranged from 0.593 (in Italy) to 0.891 (in Iceland) across regions, with a mean of 0.804. Separate standardized indices for meaning in life ($M = .12$, $SD = .98$) and positive affect ($M = .12$, $SD = 1.00$) across all the surveyed regions were created. One item was used to assess students’ life satisfaction (“overall, how satisfied are you with your life as a whole these days;” 0 = not at all satisfied; 10 = completely satisfied). Because this was a single-item response, the raw score was used ($M = 7.28$, $SD = 2.54$).

**Societal-level Social Mobility (Moderator)**

The data pertaining to the Global Social Mobility Index 2020 was obtained from the World Economic Forum (2020) as an indicator of societal-level social mobility ($M = 67.18$, $SD = 10.45$, range = 43.7 – 85.2). This indicator was calculated by key determinants of social mobility in one society, covering domains in health, education access, technology access, work opportunities, social welfare systems, and efficient institutions. A higher score indicates that the socioecological environment affords a greater likelihood of promoting social mobility among the members.

**Covariates**

At the student level, students’ sex (male=0; female=1) and their family wealth from the PISA 2018 dataset were entered as covariates. At the societal level, we also controlled for the effect of societal-level affluence (i.e., GDP per capita of each region) obtained from the World Bank (https://data.worldbank.org/). To make the results more interpretable, we divided the value of GDP per capita by 1,000 ($M = 27.27$, $SD = 24.33$).

**Data Analysis**

We conducted multilevel analyses using mixed linear modeling in SPSS. Consistent with the centering procedure recommended by Enders and Tofighi (2007), the student-level
(level 1) continuous variables were centered by the group mean, while the country-level (level 2) continuous variables were centered by the grand mean. The interclass correlations of the outcome variables were as follows: mathematics (.24), science (.21), reading (.19), meaning in life (.05), positive affect (.05), and life satisfaction (.04), all with statistical significance (ps < .002). This result indicated that it was appropriate to conduct multilevel analyses. Separate analyses were performed for each of the six outcome variables. In all the models tested, we specified the intercepts of the outcome variables and the student-level factors (viz., fear of failure, mastery goal, sex, and family wealth) with random effects. This allowed us to account for the variability of these factors at the student level while examining the relationships between these factors and the outcome variables. We also specified the cross-level interactions between two primary factors (i.e., fear of failure and mastery) and societal-level social mobility. ²

Results

The online supplementary presents the correlations between MG and outcome variables (Table S2) and between FoF and outcome variables (Table S3) for each region. The correlations of MG with academic performance and psychological well-being varied widely across societies [math: -.07 ≤ r ≤ .31; science: -.08 ≤ r ≤ .27; reading: -.08 ≤ r ≤ .34; meaning in life: -.26 ≤ r ≤ .42; positive affect: .14 ≤ r ≤ .36; and life satisfaction: -.20 ≤ r ≤ .29]. Similarly, the correlations between FoF and outcome variables varied widely across societies [math: -.14 ≤ r ≤ .17; science: -.13 ≤ r ≤ .17; reading: -.13 ≤ r ≤ .19; meaning in life: -.26 ≤ r ≤ .16; positive affect: -.25 ≤ r ≤ .03; and life satisfaction: -.35 ≤ r ≤ -.01]. These results demonstrated the substantial variations in the role of achievement motivation in shaping students’ academic performance and psychological well-being.

To explain these cultural variations, we further tested the moderating role of societal-level mobility on the effect of achievement motivation with multilevel analyses. Tables 2 and 3 (with unstandardized coefficients) present the results for two models in which MG and FoF were treated as the predictor, respectively. In the main text, we focus on the results related to our research questions (i.e., effects of social mobility, mastery goal, and fear of failure; see Tables 2 and 3 for the effects of covariates). The results remained similar when we included MG and FoF in the same model (see Table S4 in the online supplement).

Academic Achievement

Mastery goals as the predictor. Overall, the score of individual-level MG was positively associated with their academic achievement in all subjects (Math: b = 7.60, p < .001, 95%CI = [5.99, 9.22]; Science: b = 6.88, p < .001, 95%CI = [5.22, 8.55]; Reading: b = 7.48, p < .001, 95%CI = [5.63, 9.33]). Societal-level social mobility was also positively associated with each domain of academic achievement (Math: b = 4.46, p < .001, 95%CI = [3.25, 5.68]; Science: b = 3.76, p < .001, 95%CI = [2.52, 5.00]; Reading: b = 3.42, p < .001, 95%CI = [2.22, 4.63]).

²We appreciate a reviewer’s suggestion of ruling out the effect of other potential cultural factors, such as individualism, in the analysis. Therefore, we conducted an additional analysis controlling for the effect of country-level individualism and its interactions with individuals’ fear of failure and mastery goals. When we only controlled for the main effect of individualism, the moderating effect of societal social mobility remained similar. When we also controlled for the interaction with individualism, the moderating effect of societal social mobility on mastery goals was weakened and became non-significant (see Tables S5 and S6 in the online supplement).
The interaction between individual’s MG and societal-level social mobility was also significant in predicting each domain of academic achievement (Math: $b = .22, p = .005, 95\% CI = [.07, .38]$; Science: $b = .23, p = .005, 95\% CI = [.07, .39]$; Reading: $b = .26, p = .005, 95\% CI = [.08, .44]$) (see Figures 1a-c). Follow-up simple-slope analyses revealed a stronger positive association between MG and academic performance in societies with higher social mobility (1SD above the mean; Math: $b = 9.95, p < .001, 95\% CI = [7.67, 12.24]$; Science: $b = 9.31, p < .001, 95\% CI = [6.95, 11.66]$; Reading: $b = 10.22, p < .001, 95\% CI = [7.62, 12.82]$) than in societies with lower social mobility (1SD below the mean; Math: $b = 5.25, p < .001, 95\% CI = [2.94, 7.57]$; Science: $b = 4.46, p < .001, 95\% CI = [2.08, 6.84]$; Reading: $b = 4.74, p = .001, 95\% CI = [2.10, 7.38]$).

**Figure 1**
Social Mobility Predicted Stronger Correlations between Mastery Goals and (a) Math, (b) Science, and (c) Reading

![Graph showing correlation between social mobility and academic achievement](image)
CULTURE & MOTIVATIONAL PAYOFF

b) Correlation between Mobility Goals and Science Scores

Social Mobility

Correlation

c) Correlation between Mobility Goals and Reading Scores

Social Mobility

Correlation
Table 2
Summary of the Two-level Multilevel Analysis with Mastery Goals as the Predictor and Social Mobility as the Moderator

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Math</th>
<th>Science</th>
<th>Reading</th>
<th>Meaning in life</th>
<th>Positive affect</th>
<th>Life satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Societal level†</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP</td>
<td>-0.36</td>
<td>-0.25</td>
<td>-0.07</td>
<td>-0.001</td>
<td>-0.001</td>
<td>-0.005</td>
</tr>
<tr>
<td></td>
<td>[-0.89, -0.17]</td>
<td>[-0.79, -0.29]</td>
<td>[-0.59, -0.46]</td>
<td>[-0.001, -0.004]</td>
<td>[-0.003, -0.004]</td>
<td>[-0.01, -0.004]</td>
</tr>
<tr>
<td>Social Mobility</td>
<td>4.46***</td>
<td>3.76***</td>
<td>3.42***</td>
<td>-0.013***</td>
<td>-0.01*</td>
<td>0.004</td>
</tr>
<tr>
<td></td>
<td>[3.25, 5.68]</td>
<td>[2.52, 5.00]</td>
<td>[2.22, 4.63]</td>
<td>[-0.019, -0.007]</td>
<td>[-0.02, -0.002]</td>
<td>[-0.02, -0.03]</td>
</tr>
<tr>
<td>Individual level†</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family wealth</td>
<td>16.15***</td>
<td>13.80***</td>
<td>13.72***</td>
<td>0.035***</td>
<td>0.07***</td>
<td>0.18***</td>
</tr>
<tr>
<td></td>
<td>[14.13, 18.16]</td>
<td>[11.77, 15.83]</td>
<td>[11.36, 16.07]</td>
<td>[0.027, 0.043]</td>
<td>[0.06, 0.08]</td>
<td>[0.15, 0.21]</td>
</tr>
<tr>
<td>Gender (male = 0; female = 1)</td>
<td>-7.44***</td>
<td>-0.02</td>
<td>25.86***</td>
<td>-0.14***</td>
<td>-0.04**</td>
<td>-0.54***</td>
</tr>
<tr>
<td></td>
<td>[-9.22, -5.65]</td>
<td>[-1.92, 1.87]</td>
<td>[23.94, 27.78]</td>
<td>[-0.17, -0.12]</td>
<td>[-0.07, -0.01]</td>
<td>[-0.62, -0.47]</td>
</tr>
<tr>
<td>Mastery goals</td>
<td>7.60***</td>
<td>6.88***</td>
<td>7.48***</td>
<td>0.29***</td>
<td>0.23***</td>
<td>0.52***</td>
</tr>
<tr>
<td></td>
<td>[5.99, 9.22]</td>
<td>[5.22, 8.55]</td>
<td>[5.63, 9.33]</td>
<td>[0.27, 0.31]</td>
<td>[0.22, 0.25]</td>
<td>[0.47, 0.56]</td>
</tr>
<tr>
<td>Cross-level interaction†‡</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social mobility × Mastery goals</td>
<td>0.22**</td>
<td>0.23**</td>
<td>0.26**</td>
<td>0.0004</td>
<td>-0.0004</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>[0.07, 0.38]</td>
<td>[0.07, 0.39]</td>
<td>[0.08, 0.44]</td>
<td>[-0.002, -0.002]</td>
<td>[-0.002, -0.001]</td>
<td>[-0.004, -0.01]</td>
</tr>
</tbody>
</table>

R²‡ 26% 23% 22% 14% 11% 11%

Note. *p < .05; **p < .01; ***p < .001. Unstandardized coefficients are reported.
† The degree of freedom for both societal- and individual-level predictors as well as the interaction was estimated based on the number of level-2 units (i.e., the number of societies; n ~ 65 societies) instead of the number of level-1 units (i.e., the number of all participants), as the intercepts and the effect of individual-level predictors were specified to be random.
‡ The explained variance was estimated by R package “r2mlm” (Shaw et al., 2020) following the procedures in Rights and Sterba (2020) with cases with missing values of any variables removed.
Fear of failure as the predictor. Overall, students’ FoF was positively associated with each domain of academic achievement (Math: $b = 1.70, p = .004, 95\% CI = [.57, 2.83]$; Science: $b = 2.98, p < .001, 95\% CI = [1.76, 4.20]$; Reading: $b = 4.07, p < .001, 95\% CI = [2.76, 5.38]$). Societal-level social mobility was also positively associated with each domain of academic achievement (Math: $b = 4.54, p < .001, 95\% CI = [3.29, 5.78]$; Science: $b = 3.83, p < .001, 95\% CI = [2.55, 5.11]$; Reading: $b = 3.51, p < .001, 95\% CI = [2.26, 4.75]$).

The interaction between individuals’ FoF and societal-level social mobility was also significant in predicting each domain of academic achievement (Mathematics: $b = .18, p = .002, 95\% CI = [.07, .28]$; Science: $b = .22, p < .001, 95\% CI = [.11, .34]$; Reading: $b = .28, p < .001, 95\% CI = [.15, .40]$) (see Figures 2a-c). Follow-up simple-slope analyses revealed a significant positive association between FoF and academic performance in societies with higher social mobility (Math: $b = 3.53, p < .001, 95\% CI = [1.92, 5.15]$; Science: $b = 5.31, p < .001, 95\% CI = [3.57, 7.05]$; Reading: $b = 6.97, p < .001, 95\% CI = [5.10, 8.85]$). In contrast, the results showed a non-significant association for each domain of academic achievement in societies with lower social mobility (Math: $b = -.14, p = .865, 95\% CI = [-1.73, 1.46]$; Science: $b = .65, p = .453, 95\% CI = [-1.07, 2.37]$; Reading: $b = 1.16, p = .215, 95\% CI = [-0.69, 3.01]$).

Figure 2
Social Mobility Predicted Stronger correlations between fear of failure and (a) Math, (b) Science, and (c) Reading

![Figure 2: Social Mobility Predicted Stronger correlations between fear of failure and (a) Math, (b) Science, and (c) Reading](Image)
<table>
<thead>
<tr>
<th>Predictors</th>
<th>Math Coefficient [95% CI]</th>
<th>Science Coefficient [95% CI]</th>
<th>Reading Coefficient [95% CI]</th>
<th>Meaning in life Coefficient [95% CI]</th>
<th>Positive affect Coefficient [95% CI]</th>
<th>Life satisfaction Coefficient [95% CI]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Societal level†</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP</td>
<td>-.34 [-.89, .21]</td>
<td>-.23 [-.79, .34]</td>
<td>-.06 [-.60, .49]</td>
<td>.001 [-.002, .004]</td>
<td>.0003 [-.003, .004]</td>
<td>-.006 [-.015, .004]</td>
</tr>
<tr>
<td>Social Mobility</td>
<td>4.54*** [3.29, 5.78]</td>
<td>3.83*** [2.55, 5.11]</td>
<td>3.51*** [2.26, 4.75]</td>
<td>-.01*** [-.02, -.007]</td>
<td>-.01* [-.02, -.001]</td>
<td>.001 [-.02, .02]</td>
</tr>
<tr>
<td><strong>Individual level†</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender (male = 0; female = 1)</td>
<td>-6.69*** [-8.63, -4.74]</td>
<td>.16 [23.57, 27.64]</td>
<td>.84*** [.07, .02]</td>
<td>.05*** [.03, .08]</td>
<td>-.29*** [-.36, -.23]</td>
<td></td>
</tr>
<tr>
<td>Fear of Failure</td>
<td>1.70** [.57, 2.83]</td>
<td>2.98*** [1.76, 4.20]</td>
<td>4.07*** [2.76, 5.38]</td>
<td>-.11*** [-.13, -.09]</td>
<td>-.15*** [-.17, -.14]</td>
<td>-.50*** [-.53, -.47]</td>
</tr>
<tr>
<td><strong>Cross-level interaction†</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social mobility × Fear of Failure</td>
<td>.18** [.07, .28]</td>
<td>.22*** [.11, .34]</td>
<td>.28*** [.15, .40]</td>
<td>-.004*** [-.01, -.003]</td>
<td>-.003*** [-.004, -.002]</td>
<td>-.01*** [-.014, -.008]</td>
</tr>
</tbody>
</table>

R²†  25%  22%  22%  7%  8%  10%  

Note. *p < .05; **p < .01; ***p < .001. Unstandardized coefficients are reported.
† The degree of freedom for both societal- and individual-level predictors as well as the interaction was estimated based on the number of level-2 units (i.e., the number of societies; n ~ 65 societies) instead of the number of level-1 units (i.e., the number of all participants), as the intercepts and the effect of individual-level predictors were specified to be random.
‡The explained variance was estimated by R package “r2mlm” (Shaw et al., 2020) following the procedures in Rights and Sterba (2020) with cases with missing values of any variables removed.
Psychological Well-being

Mastery goals as the predictor. Overall, the individual-level score of MG was positively associated with each aspect of psychological well-being (Meaning in life: $b = .29$, $p < .001$, 95%CI = [.27, .31]; Positive affect: $b = .23$, $p < .001$, 95%CI = [.22, .25]; Life satisfaction: $b = .52$, $p < .001$, 95%CI = [.47, .56]). Societal-level social mobility was negatively associated with meaning in life ($b = -.013$, $p < .001$, 95%CI = [-.019, -.007]) and positive affect ($b = -.01$, $p = .046$, 95%CI = [-.02, -.0002]), whereas it was not significantly associated with life satisfaction ($b = .004$, $p = .669$, 95%CI = [.02, .03]).

The interaction between individual’ MG and societal-level social mobility was not significant in predicting each aspect of psychological well-being (Meaning in life: $b = .00004$, $p = .966$, 95%CI = [.002, .002]; Positive affect: $b = -.0004$, $p = .533$, 95%CI = [-.001, .001]; Life satisfaction: $b = .001$, $p = .693$, 95%CI = [.004, .01]).

Fear of failure as the predictor. Overall, students’ FoF was negatively associated with each aspect of psychological well-being (Meaning in life: $b = -.11$, $p < .001$, 95%CI = [-.12, -.09]; Positive affect: $b = -.15$, $p < .001$, 95%CI = [-.17, -.14]; Life satisfaction: $b = -.50$, $p < .001$, 95%CI = [-.54, -.47]). Societal-level social mobility was negatively associated with meaning in life ($b = -.01$, $p < .001$, 95%CI = [-.02, -.007]) and positive affect ($b = -.01$, $p = .029$, 95%CI = [-.02, -.001]), but not with life satisfaction: ($b = .001$, $p = .907$, 95%CI = [.02, .02]).

The interaction between individuals’ FoF and societal-level social mobility was significant in predicting each aspect of psychological well-being (Meaning in life: $b = -.04$, $p < .001$, 95%CI = [-.01, -.003]; Positive affect: $b = -.03$, $p < .001$, 95%CI = [-.04, -.002]; Life satisfaction: $b = -.01$, $p < .001$, 95%CI = [-.014, -.008]) (see Figures 3a-c). Follow-up simple-slope analyses revealed a stronger negative association between FoF failure and psychological well-being in societies with higher social mobility (Meaning in life: $b = -.16$, $p < .001$, 95%CI = [-.18, -.13]; Positive affect: $b = -.19$, $p < .001$, 95%CI = [-.21, -.17]; Life satisfaction: $b = -.62$, $p < .001$, 95%CI = [-.67, -.57]) than in societies with lower social mobility (Meaning in life: $b = -.06$, $p < .001$, 95%CI = [-.09, -.04]; Positive affect: $b = -.12$, $p < .001$, 95%CI = [-.14, -.10]; Life satisfaction: $b = -.39$, $p < .001$, 95%CI = [-.43, -.34]).

Figure 3. The Moderating Effect of Social Mobility on the Link between Fear of Failure and a) Meaning in Life, b) Positive Affect, and c) Life Satisfaction.
Discussion

Achievement motivation is a key to students’ academic success and well-being, but this claim may not be equivalent across cultures (King, 2021; Liem & Elliot, 2018). The goal of this study is to understand whether social mobility can explain such cultural variations. Using a global dataset across 65 regions, we examined whether social mobility moderated the effect of fear of failure (FoF) and mastery goals (MG) on academic performance and psychological well-being. Consistent with our hypotheses, FoF and MG were less prominent contributors to students’ academic performance (in all math, science, and literacy scores) in low- (vs. high-) mobility societies. Regarding well-being outcomes (meaning in life, positive affect, and life satisfaction), FoF consistently and negatively predicted all well-being scores, but the associations were more robust in high-mobility societies. MG also positively predicted students’ well-being, but social mobility did not significantly moderate these links.

Implications for Achievement Motivation Theories

Our findings challenge the notion that achievement motivation (FoF and MG in this study) serves as an equally important predictor of academic performance across cultures. The correlations observed between FoF and performance (from -.14 to .19) and between MG and performance (from -.07 to .34) showed considerable variation across regions (see Tables S2 and S3). These results emphasize the importance of considering socio-cultural contexts when evaluating the effect of achievement motivation. Specifically, our study revealed that in low-mobility societies, where people have fewer fair chances to improve their social status, both FoF and MG were less relevant to students’ achievement. This finding corroborates the idea that students’ internal attributes, such as mindsets, are less important drivers for achievement outcomes in low-mobility societies (Jia et al., 2021). This socioecological approach to motivation enriches the perspectives of educational psychologists, to examine the relevance and generalization of achievement motivation theories beyond Western societies, allowing for a more nuanced examination of the applicability and generalizability of achievement motivation theories beyond Western societies, where social mobility tends to be relatively high. For example, researchers should reconsider the extent to which the mainstream achievement motivation research from the US and Canada can fully represent the motivational processes of students worldwide. Notably, in this present study, Canada and the US are ranked relatively high in social mobility (14th and 27th) among the 65 regions.

This study also clarifies the double-edged sword effect of FoF. While FoF positively predicts students’ academic performance in many regions, it compromises their psychological well-being in most regions surveyed in this study. This finding supports the notion that FoF is generally a maladaptive motivational drive, given its emotional toll on students (Busato et al., 2000; Conroy & Elliot, 2004). Importantly, this double-edged sword effect of FoF is more pronounced in high-mobility societies, where motivation also yields greater benefits for learning outcomes. This finding contributes to the ongoing debates regarding how FoF, and performance goals by extension, should be viewed by educators (Harackiewicz et al., 2002; Midgley et al., 2001). As such, the evaluation of whether FoF is detrimental may depend on the specific outcomes being considered (performance vs. well-being) and the contextual factors at play.

In contrast to FoF, MG demonstrated consistent positive associations with both achievement and psychological well-being across most regions. Notably, the effect of MG on well-being is not moderated by social mobility, which is also inconsistent with the findings of
FoF. This discrepancy suggests that FoF may reflect an affect-based motivation rooted in external concern (i.e., fear of judgment), making its connection with emotional outcomes more susceptible to environmental influences (e.g., McGregor & Elliot, 2005; Martin & Marsh, 2003; Pekrun, 2017). In learning environments that provide equal opportunities for all students, who possess high levels of FoF may find it challenging to attribute their failures to external circumstances. As a result, the impact on their emotional well-being becomes more pronounced and threatening. In contrast, MG represents a goal-based, intrinsic orientation, and thus the socioecological environment may not undermine this internal process of emotions. Even in societies with limited social mobility, students who enjoy the learning process (a sign of mastery goal) still feel happier and more meaningful in life than students who do not.

Finally, our findings underscore the value of adopting the socioecological approach when examining achievement motivation, as it serves as a key indicator of modern societies. While educational psychologists often emphasize the importance of a supportive immediate environment, including factors such as autonomy support and mastery-structured classrooms, it is crucial to recognize that a supportive environment extends beyond the confines of the classroom. Extending previous studies suggesting that MG are more adaptive when the environment provides support (Benita et al., 2014), this study further demonstrated that students benefit more from endorsing MG in a high-mobility environment that is supportive of students’ learning.

Implications for Policies and Practices

This study provides implications for culturally relevant and responsive educational practices. Previous research emphasized the importance of fostering MG among students. However, our study highlights the need to consider the societal environment. In societies that do not promote an opportunity for improvement, the promotion of mastery goals may have limited impacts on students’ academic performance, although it may still provide mental health benefits. Furthermore, interventions promoting mastery goals (e.g., mindset intervention; TARGET intervention) may be more effective in high-mobility societies (Jia et al., 2021). Future cross-cultural research should investigate this hypothesis, examining the differential effects of mastery-goal interventions across societies with varying levels of social mobility. Moreover, our findings confirm the importance of not promoting FoF among students. Despite its positive association with academic performance, FoF compromises students’ well-being, particularly in high-mobility societies.

This study also has implications for educational policies. Recognizing the intricate relationship between a country’s education and its social ecology (including economics, population density, equality, etc.), our findings demonstrated that a high-mobility society is more beneficial for students’ academic achievement than a low-mobility society. In societies that provide fair opportunities for people to enhance their status, one would anticipate that highly motivated students would generally achieve higher levels of academic performance. In contrast, societies with low social mobility may undermine the potential of highly motivated students to succeed. Therefore, in low-mobility societies, prioritizing equality may benefit the achievement for the whole society. When students are provided with equitable resources and support, they are more likely to thrive academically, which can indirectly promote scientific and economic growth (World Economic Forum, 2020). Hence, when the educational system should not only focus on fostering positive material goals among students, but also prioritize the provision of equal opportunities for students to succeed.
Limitations and Future Directions

The results of this study should be interpreted with caution. First, although we controlled for relevant factors (the regions’ GDP and individualism score, and participants’ family income and gender), future research may consider manipulating mobility (e.g., priming students’ perceptions of mobility; see Jia et al., 2021; Sagioglou et al., 2019) and achievement motivation to understand how the causal effect of achievement motivation is moderated by mobility. Second, this study focused on FoF and MG as two representative constructs for achievement motivation. However, student motivation is a multidimensional construct; thus, researchers can explore whether these motivation × mobility effects can be applied to other achievement motivational concepts (e.g., performance goals, intrinsic motivation). Third, the effect of achievement motivation varied greatly across regions, and most fell within the range of small to moderate effect size (|.07| ≤ rs ≤ .42|). One possible reason could be that the brief scales might fail to capture the full constructs (e.g., FoF, MG, well-being), which is often a trade-off in large-scale surveys. Another possibility could be that the effect of achievement motivation might be susceptible to other individual (e.g., motivational beliefs), micro-environmental (e.g., school context), and socio-cultural (e.g., cultural values) factors. For instance, it was found that individuals’ perceived socioeconomic mobility exerted a greater influence on motivating low-(vs. high)-socioeconomic-status students to work harder (Browman et al., 2017). Following these findings, future research can explore the interplay of perceived status, social mobility, and achievement motivation on learning outcomes.

Conclusions

This study, based on a global analysis, provides compelling evidence that social mobility systematically explains cultural variations in the effects of FoF and MG. These findings suggest that we should be cautious when applying FoF and MG to explain learners’ differences in adaptive-versus-maladaptive patterns of achievement motivations, particularly in low-mobility societies. To further advance our understanding of the cultural differences and universality of motivational constructs, future research should explore how other socioecological factors (e.g., political ideology and gender equality) influence the motivational payoff among diverse student populations. By expanding our understanding of these socioecological influences, we can develop more culturally relevant and responsive educational practices that address the specific needs and challenges of students across different cultural contexts.

References

Busato, V. V., Prins, F. J., Elshout, J. J., & Hamaker, C. (2000). Intellectual ability, learning style, personality, achievement motivation and academic success of psychology students in higher


Supplementary Material

for

Culture and motivational payoff: Achievement motivation is more important in students’ performance and well-being in cultures with high vs. low social mobility

Table S1
The Descriptive Statistics of the Major Variables in Each Country/Region

<table>
<thead>
<tr>
<th>Country/Region</th>
<th>n</th>
<th>Social mobility</th>
<th>MG</th>
<th>FoF</th>
<th>Math</th>
<th>Science</th>
<th>Reading</th>
<th>MiL</th>
<th>PA</th>
<th>LS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
<td>6359</td>
<td>55.6</td>
<td>0.65</td>
<td>-0.24</td>
<td>437.55</td>
<td>416.78</td>
<td>406.82</td>
<td>0.58</td>
<td>0.52</td>
<td>8.6</td>
</tr>
<tr>
<td>Argentina</td>
<td>11975</td>
<td>57.3</td>
<td>-0.24</td>
<td>-0.11</td>
<td>391.53</td>
<td>417.59</td>
<td>415.03</td>
<td>0.06</td>
<td>0.07</td>
<td>7.3</td>
</tr>
<tr>
<td>Australia</td>
<td>14273</td>
<td>75.1</td>
<td>0.05</td>
<td>0.25</td>
<td>491.62</td>
<td>502.07</td>
<td>502.47</td>
<td>-0.11</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Austria</td>
<td>6802</td>
<td>80.1</td>
<td>0.04</td>
<td>-0.27</td>
<td>502.76</td>
<td>492.57</td>
<td>486.4</td>
<td>0.16</td>
<td>0.12</td>
<td>7.21</td>
</tr>
<tr>
<td>Belgium</td>
<td>8475</td>
<td>80.1</td>
<td>0.11</td>
<td>-0.19</td>
<td>510.95</td>
<td>502.42</td>
<td>495.31</td>
<td>0.00</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Brazil</td>
<td>10691</td>
<td>52.1</td>
<td>0.55</td>
<td>0.03</td>
<td>384.28</td>
<td>406.52</td>
<td>415.79</td>
<td>0.09</td>
<td>0.06</td>
<td>7.05</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>5294</td>
<td>63.8</td>
<td>-0.23</td>
<td>-0.13</td>
<td>439.78</td>
<td>426.19</td>
<td>423.33</td>
<td>0.04</td>
<td>0.16</td>
<td>7.16</td>
</tr>
<tr>
<td>Canada</td>
<td>22653</td>
<td>76.1</td>
<td>0.21</td>
<td>0.24</td>
<td>503.45</td>
<td>509.89</td>
<td>509.47</td>
<td>--</td>
<td>-0.07</td>
<td>--</td>
</tr>
<tr>
<td>Chile</td>
<td>7621</td>
<td>60.3</td>
<td>0.33</td>
<td>0.10</td>
<td>434.28</td>
<td>460.01</td>
<td>469.80</td>
<td>0.15</td>
<td>0.19</td>
<td>7.12</td>
</tr>
<tr>
<td>Colombia</td>
<td>7522</td>
<td>50.3</td>
<td>0.45</td>
<td>-0.20</td>
<td>399.98</td>
<td>421.57</td>
<td>422.32</td>
<td>0.45</td>
<td>0.23</td>
<td>7.57</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>7221</td>
<td>61.6</td>
<td>0.53</td>
<td>-0.23</td>
<td>402.51</td>
<td>413.76</td>
<td>425.58</td>
<td>0.46</td>
<td>0.33</td>
<td>7.95</td>
</tr>
<tr>
<td>Croatia</td>
<td>6609</td>
<td>66.7</td>
<td>-0.10</td>
<td>-0.22</td>
<td>462.76</td>
<td>471.43</td>
<td>477.53</td>
<td>0.17</td>
<td>0.26</td>
<td>7.67</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>7019</td>
<td>74.7</td>
<td>-0.06</td>
<td>-0.03</td>
<td>515.14</td>
<td>513.64</td>
<td>506.77</td>
<td>-0.25</td>
<td>-0.13</td>
<td>6.92</td>
</tr>
<tr>
<td>Denmark</td>
<td>7657</td>
<td>85.2</td>
<td>0.45</td>
<td>-0.05</td>
<td>497.42</td>
<td>479.78</td>
<td>489.06</td>
<td>0.02</td>
<td>0.24</td>
<td>--</td>
</tr>
<tr>
<td>Estonia</td>
<td>5316</td>
<td>73.5</td>
<td>-0.20</td>
<td>-0.17</td>
<td>523.27</td>
<td>530.36</td>
<td>523.7</td>
<td>-0.05</td>
<td>-0.18</td>
<td>7.18</td>
</tr>
<tr>
<td>Finland</td>
<td>5649</td>
<td>83.6</td>
<td>-0.12</td>
<td>-0.19</td>
<td>508.18</td>
<td>519.43</td>
<td>519.94</td>
<td>0.06</td>
<td>-0.12</td>
<td>7.61</td>
</tr>
<tr>
<td>France</td>
<td>6308</td>
<td>76.7</td>
<td>-0.18</td>
<td>0.07</td>
<td>487.23</td>
<td>485.46</td>
<td>484.27</td>
<td>0.11</td>
<td>0.26</td>
<td>7.15</td>
</tr>
<tr>
<td>Georgia</td>
<td>5572</td>
<td>55.6</td>
<td>0.44</td>
<td>-0.33</td>
<td>400.71</td>
<td>384.06</td>
<td>381.16</td>
<td>0.09</td>
<td>-0.13</td>
<td>7.56</td>
</tr>
<tr>
<td>Germany</td>
<td>5451</td>
<td>78.8</td>
<td>0.01</td>
<td>-0.38</td>
<td>502.01</td>
<td>504.3</td>
<td>500.85</td>
<td>0.11</td>
<td>0.08</td>
<td>7.03</td>
</tr>
<tr>
<td>Greece</td>
<td>6403</td>
<td>59.8</td>
<td>-0.08</td>
<td>-0.08</td>
<td>453.67</td>
<td>454.96</td>
<td>460.48</td>
<td>0.03</td>
<td>-0.05</td>
<td>6.98</td>
</tr>
<tr>
<td>Hungary</td>
<td>5132</td>
<td>65.8</td>
<td>-0.22</td>
<td>-0.10</td>
<td>489.03</td>
<td>487.27</td>
<td>483.04</td>
<td>-0.18</td>
<td>0.20</td>
<td>7.12</td>
</tr>
<tr>
<td>Iceland</td>
<td>3296</td>
<td>82.7</td>
<td>0.25</td>
<td>0.00</td>
<td>494.61</td>
<td>473.62</td>
<td>473.07</td>
<td>-0.09</td>
<td>-0.09</td>
<td>7.34</td>
</tr>
<tr>
<td>Indonesia</td>
<td>12908</td>
<td>49.3</td>
<td>0.45</td>
<td>-0.16</td>
<td>401.00</td>
<td>414.64</td>
<td>390.10</td>
<td>0.53</td>
<td>0.35</td>
<td>7.35</td>
</tr>
<tr>
<td>Ireland</td>
<td>5577</td>
<td>75.0</td>
<td>-0.12</td>
<td>0.20</td>
<td>499.33</td>
<td>495.03</td>
<td>518.04</td>
<td>-0.17</td>
<td>-0.09</td>
<td>6.73</td>
</tr>
<tr>
<td>Israel</td>
<td>6623</td>
<td>68.1</td>
<td>0.29</td>
<td>--</td>
<td>464.19</td>
<td>464.48</td>
<td>471.95</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Italy</td>
<td>11785</td>
<td>67.4</td>
<td>-0.22</td>
<td>-0.03</td>
<td>494.96</td>
<td>475.76</td>
<td>480.55</td>
<td>-0.10</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Japan</td>
<td>6109</td>
<td>76.1</td>
<td>-0.30</td>
<td>0.38</td>
<td>528.21</td>
<td>528.97</td>
<td>502.91</td>
<td>-0.40</td>
<td>-0.13</td>
<td>6.19</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>19507</td>
<td>64.8</td>
<td>0.47</td>
<td>-0.31</td>
<td>439.91</td>
<td>413.75</td>
<td>404.49</td>
<td>0.35</td>
<td>0.50</td>
<td>8.50</td>
</tr>
<tr>
<td>Korea</td>
<td>6650</td>
<td>71.4</td>
<td>0.06</td>
<td>0.19</td>
<td>526.54</td>
<td>520.47</td>
<td>515.58</td>
<td>0.09</td>
<td>0.03</td>
<td>6.50</td>
</tr>
<tr>
<td>Latvia</td>
<td>5303</td>
<td>69.0</td>
<td>-0.33</td>
<td>-0.10</td>
<td>494.51</td>
<td>485.52</td>
<td>475.62</td>
<td>-0.07</td>
<td>0.03</td>
<td>7.15</td>
</tr>
<tr>
<td>Country</td>
<td>n</td>
<td>LS</td>
<td>MG Fear of failure</td>
<td>MiL Meaning in life</td>
<td>PA Positive affect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>-------</td>
<td>-------</td>
<td>--------------------</td>
<td>--------------------</td>
<td>-------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithuania</td>
<td>6885</td>
<td>70.5</td>
<td>0.02</td>
<td>-0.09</td>
<td>482.19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Luxembourgh</td>
<td>5230</td>
<td>79.8</td>
<td>-0.03</td>
<td>-0.14</td>
<td>483.89</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malaysia</td>
<td>6111</td>
<td>62.0</td>
<td>0.37</td>
<td>0.35</td>
<td>441.45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malta</td>
<td>3363</td>
<td>75.0</td>
<td>0.22</td>
<td>0.24</td>
<td>472.88</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>7299</td>
<td>52.6</td>
<td>0.57</td>
<td>0.06</td>
<td>415.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moldova</td>
<td>5367</td>
<td>59.6</td>
<td>0.10</td>
<td>-0.04</td>
<td>420.97</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morocco</td>
<td>6814</td>
<td>43.7</td>
<td>0.30</td>
<td>-0.15</td>
<td>367.89</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td>4765</td>
<td>82.4</td>
<td>-0.22</td>
<td>-0.40</td>
<td>515.19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Zealand</td>
<td>6173</td>
<td>74.3</td>
<td>0.07</td>
<td>0.26</td>
<td>496.52</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Norway</td>
<td>5813</td>
<td>83.6</td>
<td>0.40</td>
<td>--</td>
<td>501.29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panama</td>
<td>6270</td>
<td>51.4</td>
<td>0.61</td>
<td>-0.07</td>
<td>354.14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peru</td>
<td>6086</td>
<td>49.9</td>
<td>0.38</td>
<td>-0.2</td>
<td>401.82</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philippines</td>
<td>7233</td>
<td>51.7</td>
<td>0.35</td>
<td>0.16</td>
<td>351.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td>5625</td>
<td>69.1</td>
<td>0.01</td>
<td>0.02</td>
<td>516.94</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portugal</td>
<td>5932</td>
<td>72.0</td>
<td>0.01</td>
<td>-0.01</td>
<td>493.22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Romania</td>
<td>5075</td>
<td>63.1</td>
<td>0.09</td>
<td>-0.27</td>
<td>430.93</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Russian Federation</td>
<td>7608</td>
<td>64.7</td>
<td>-0.21</td>
<td>-0.15</td>
<td>488.96</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>6136</td>
<td>57.1</td>
<td>0.43</td>
<td>-0.33</td>
<td>376.71</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serbia</td>
<td>6609</td>
<td>63.8</td>
<td>-0.01</td>
<td>-0.31</td>
<td>448.99</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Singapore</td>
<td>6676</td>
<td>74.6</td>
<td>0.32</td>
<td>0.50</td>
<td>566.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>5965</td>
<td>68.5</td>
<td>-0.33</td>
<td>0.01</td>
<td>489.93</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vietnam</td>
<td>5377</td>
<td>57.8</td>
<td>-1.04</td>
<td>-0.02</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slovenia</td>
<td>6401</td>
<td>76.4</td>
<td>-0.30</td>
<td>-0.02</td>
<td>497.26</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>35943</td>
<td>70.0</td>
<td>-0.10</td>
<td>-0.10</td>
<td>490.69</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td>5504</td>
<td>83.5</td>
<td>0.01</td>
<td>-0.01</td>
<td>502.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Switzerland</td>
<td>5822</td>
<td>82.1</td>
<td>0.00</td>
<td>-0.25</td>
<td>516.67</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
<td>8633</td>
<td>55.4</td>
<td>0.26</td>
<td>0.19</td>
<td>437.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>6890</td>
<td>51.3</td>
<td>-0.05</td>
<td>0.12</td>
<td>452.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ukraine</td>
<td>5998</td>
<td>61.2</td>
<td>-0.35</td>
<td>-0.22</td>
<td>455.91</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>13818</td>
<td>74.4</td>
<td>-0.11</td>
<td>0.28</td>
<td>496.74</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>4838</td>
<td>70.4</td>
<td>0.31</td>
<td>0.14</td>
<td>473.14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uruguay</td>
<td>5263</td>
<td>67.1</td>
<td>0.16</td>
<td>-0.08</td>
<td>416.38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-S-J-Z (China)</td>
<td>12058</td>
<td>61.5</td>
<td>0.06</td>
<td>0.01</td>
<td>592.43</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moscow Region (RUS)</td>
<td>2016</td>
<td>64.7</td>
<td>-0.27</td>
<td>-0.18</td>
<td>495.66</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tatarstan (RUS)</td>
<td>5816</td>
<td>64.7</td>
<td>-0.12</td>
<td>-0.15</td>
<td>477.22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. n = sample size; MG = Mastery goals; FoF = Fear of failure; MiL = Meaning in life; PA = Positive affect; LS = Life satisfaction.
<table>
<thead>
<tr>
<th>Country/Region</th>
<th>Math</th>
<th>Science</th>
<th>Reading</th>
<th>Mil</th>
<th>PA</th>
<th>LS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
<td>0.08***</td>
<td>0.15***</td>
<td>0.14***</td>
<td>0.33***</td>
<td>0.21***</td>
<td>0.20***</td>
</tr>
<tr>
<td>Argentina</td>
<td>-0.02</td>
<td>0.01</td>
<td>0.01</td>
<td>0.33***</td>
<td>0.22***</td>
<td>0.21***</td>
</tr>
<tr>
<td>Australia</td>
<td>0.14***</td>
<td>0.10***</td>
<td>0.13***</td>
<td>0.35***</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Austria</td>
<td>0.06***</td>
<td>0.07***</td>
<td>0.10***</td>
<td>0.29***</td>
<td>0.22***</td>
<td>0.19***</td>
</tr>
<tr>
<td>Belgium</td>
<td>-0.00</td>
<td>0.01</td>
<td>0.05***</td>
<td>0.28***</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Brazil</td>
<td>0.09***</td>
<td>0.10***</td>
<td>0.13***</td>
<td>0.29***</td>
<td>0.25***</td>
<td>0.17***</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>0.07***</td>
<td>0.08***</td>
<td>0.07***</td>
<td>0.38***</td>
<td>0.28***</td>
<td>0.20***</td>
</tr>
<tr>
<td>Canada</td>
<td>0.12***</td>
<td>0.09***</td>
<td>0.11***</td>
<td>--</td>
<td>0.28***</td>
<td></td>
</tr>
<tr>
<td>Chile</td>
<td>0.05***</td>
<td>0.01</td>
<td>0.00</td>
<td>0.34***</td>
<td>0.25***</td>
<td>0.23***</td>
</tr>
<tr>
<td>Colombia</td>
<td>0.01</td>
<td>0.00</td>
<td>0.02</td>
<td>0.30***</td>
<td>0.18***</td>
<td>0.16***</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>-0.03*</td>
<td>-0.05***</td>
<td>-0.02</td>
<td>0.36***</td>
<td>0.24***</td>
<td>0.21***</td>
</tr>
<tr>
<td>Croatia</td>
<td>0.01</td>
<td>0.02</td>
<td>0.02</td>
<td>0.28***</td>
<td>0.21***</td>
<td>0.22***</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>0.13***</td>
<td>0.09***</td>
<td>0.12***</td>
<td>0.20***</td>
<td>0.19***</td>
<td>0.18***</td>
</tr>
<tr>
<td>Denmark</td>
<td>0.10***</td>
<td>0.11***</td>
<td>0.16***</td>
<td>0.26***</td>
<td>0.26***</td>
<td>--</td>
</tr>
<tr>
<td>Estonia</td>
<td>0.16***</td>
<td>0.19***</td>
<td>0.18***</td>
<td>0.26***</td>
<td>0.17***</td>
<td>0.22***</td>
</tr>
<tr>
<td>Finland</td>
<td>0.18***</td>
<td>0.21***</td>
<td>0.18***</td>
<td>0.30***</td>
<td>0.29***</td>
<td>0.24***</td>
</tr>
<tr>
<td>France</td>
<td>0.05***</td>
<td>0.05**</td>
<td>0.06***</td>
<td>0.27***</td>
<td>0.18***</td>
<td>0.19***</td>
</tr>
<tr>
<td>Georgia</td>
<td>0.11***</td>
<td>0.13***</td>
<td>0.15***</td>
<td>0.28***</td>
<td>0.26***</td>
<td>0.18***</td>
</tr>
<tr>
<td>Germany</td>
<td>0.06***</td>
<td>0.06***</td>
<td>0.10***</td>
<td>0.23***</td>
<td>0.15***</td>
<td>0.12***</td>
</tr>
<tr>
<td>Greece</td>
<td>0.13***</td>
<td>0.13***</td>
<td>0.14***</td>
<td>0.24***</td>
<td>0.21***</td>
<td>0.21***</td>
</tr>
<tr>
<td>Hungary</td>
<td>0.17***</td>
<td>0.16***</td>
<td>0.17***</td>
<td>0.26***</td>
<td>0.21***</td>
<td>0.20***</td>
</tr>
<tr>
<td>Iceland</td>
<td>0.27***</td>
<td>0.23***</td>
<td>0.27***</td>
<td>0.31***</td>
<td>0.33***</td>
<td>0.28***</td>
</tr>
<tr>
<td>Indonesia</td>
<td>-0.02</td>
<td>-0.02</td>
<td>0.01</td>
<td>0.35***</td>
<td>0.21***</td>
<td>0.16***</td>
</tr>
<tr>
<td>Ireland</td>
<td>0.17***</td>
<td>0.14***</td>
<td>0.16***</td>
<td>0.24***</td>
<td>0.21***</td>
<td>0.21***</td>
</tr>
<tr>
<td>Israel</td>
<td>-0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Italy</td>
<td>0.05***</td>
<td>0.07***</td>
<td>0.09***</td>
<td>0.31***</td>
<td>--</td>
<td>0.20***</td>
</tr>
<tr>
<td>Japan</td>
<td>0.08***</td>
<td>0.06***</td>
<td>0.04**</td>
<td>0.27***</td>
<td>0.18***</td>
<td>0.16***</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>-0.01***</td>
<td>-0.07***</td>
<td>-0.08***</td>
<td>0.37***</td>
<td>0.32***</td>
<td>0.29***</td>
</tr>
<tr>
<td>Korea</td>
<td>0.15***</td>
<td>0.15***</td>
<td>0.13***</td>
<td>0.36***</td>
<td>0.26***</td>
<td>0.26***</td>
</tr>
<tr>
<td>Latvia</td>
<td>0.13***</td>
<td>0.10***</td>
<td>0.08***</td>
<td>0.24***</td>
<td>0.20***</td>
<td>0.18***</td>
</tr>
<tr>
<td>Lithuania</td>
<td>0.15***</td>
<td>0.13***</td>
<td>0.15***</td>
<td>0.33***</td>
<td>0.26***</td>
<td>0.23***</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>0.07***</td>
<td>0.09***</td>
<td>0.10***</td>
<td>0.31***</td>
<td>0.22***</td>
<td>0.19***</td>
</tr>
<tr>
<td>Malaysia</td>
<td>0.19***</td>
<td>0.24***</td>
<td>0.28***</td>
<td>0.31***</td>
<td>0.31***</td>
<td>0.23***</td>
</tr>
<tr>
<td>Malta</td>
<td>0.19***</td>
<td>0.13***</td>
<td>0.17***</td>
<td>0.30***</td>
<td>0.23***</td>
<td>0.21***</td>
</tr>
<tr>
<td>Mexico</td>
<td>0.05***</td>
<td>0.03**</td>
<td>0.06***</td>
<td>0.36***</td>
<td>0.26***</td>
<td>0.24***</td>
</tr>
<tr>
<td>Moldova</td>
<td>0.13***</td>
<td>0.12***</td>
<td>0.17***</td>
<td>0.36***</td>
<td>0.25***</td>
<td>0.27***</td>
</tr>
<tr>
<td>Morocco</td>
<td>0.01</td>
<td>0.04*</td>
<td>0.03</td>
<td>0.38***</td>
<td>--</td>
<td>0.19***</td>
</tr>
<tr>
<td>Netherlands</td>
<td>-0.04**</td>
<td>-0.05**</td>
<td>-0.04*</td>
<td>0.27***</td>
<td>0.18***</td>
<td>0.17***</td>
</tr>
<tr>
<td>New Zealand</td>
<td>0.16***</td>
<td>0.14***</td>
<td>0.17***</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Norway</td>
<td>0.29***</td>
<td>0.27***</td>
<td>0.34***</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Panama</td>
<td>-0.02</td>
<td>-0.05**</td>
<td>-0.01</td>
<td>0.36***</td>
<td>0.22***</td>
<td>0.23***</td>
</tr>
<tr>
<td>Peru</td>
<td>0.04**</td>
<td>0.02</td>
<td>0.04*</td>
<td>0.37***</td>
<td>0.25***</td>
<td>0.25***</td>
</tr>
<tr>
<td>Philippines</td>
<td>0.31***</td>
<td>0.21***</td>
<td>0.29***</td>
<td>0.40***</td>
<td>0.32***</td>
<td>0.28***</td>
</tr>
<tr>
<td>Poland</td>
<td>0.11***</td>
<td>0.13***</td>
<td>0.16***</td>
<td>0.17***</td>
<td>0.14***</td>
<td>0.13***</td>
</tr>
</tbody>
</table>
The Correlations between Fear of Failure and Different Outcome Variables in Each Country/Region

<table>
<thead>
<tr>
<th>Country/Region</th>
<th>Maths</th>
<th>Science</th>
<th>Reading</th>
<th>MiL</th>
<th>PA</th>
<th>LS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
<td>-0.13***</td>
<td>0.03***</td>
<td>-0.13***</td>
<td>0.00</td>
<td>-0.10***</td>
<td>-0.11***</td>
</tr>
<tr>
<td>Argentina</td>
<td>-0.10***</td>
<td>-0.06***</td>
<td>-0.03***</td>
<td>-0.04***</td>
<td>-0.17***</td>
<td>-0.17***</td>
</tr>
<tr>
<td>Australia</td>
<td>0.07***</td>
<td>0.08***</td>
<td>0.15***</td>
<td>-0.18***</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Austria</td>
<td>-0.03***</td>
<td>0.00</td>
<td>0.02</td>
<td>-0.15***</td>
<td>-0.20***</td>
<td>-0.27***</td>
</tr>
<tr>
<td>Belgium</td>
<td>0.02</td>
<td>0.05***</td>
<td>0.08***</td>
<td>-0.07***</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Brazil</td>
<td>0.07***</td>
<td>0.10***</td>
<td>0.13***</td>
<td>-0.13***</td>
<td>-0.16***</td>
<td>-0.20***</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>0.01</td>
<td>0.03</td>
<td>0.02</td>
<td>-0.01</td>
<td>-0.06***</td>
<td>-0.14***</td>
</tr>
<tr>
<td>Canada</td>
<td>0.03***</td>
<td>0.10***</td>
<td>0.14***</td>
<td>--</td>
<td>-0.14***</td>
<td>--</td>
</tr>
<tr>
<td>Chile</td>
<td>0.02</td>
<td>0.03*</td>
<td>0.06***</td>
<td>-0.13***</td>
<td>-0.17***</td>
<td>-0.20***</td>
</tr>
<tr>
<td>Colombia</td>
<td>-0.01</td>
<td>0</td>
<td>-0.01</td>
<td>-0.11***</td>
<td>-0.14***</td>
<td>-0.17***</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>-0.02</td>
<td>-0.01</td>
<td>-0.02</td>
<td>-0.08***</td>
<td>-0.15***</td>
<td>-0.19***</td>
</tr>
<tr>
<td>Croatia</td>
<td>0.04**</td>
<td>0.07***</td>
<td>0.12***</td>
<td>-0.21***</td>
<td>-0.20***</td>
<td>-0.25***</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>0.01</td>
<td>0.04**</td>
<td>0.10***</td>
<td>-0.15***</td>
<td>-0.19***</td>
<td>-0.24***</td>
</tr>
<tr>
<td>Denmark</td>
<td>-0.04**</td>
<td>0.05***</td>
<td>0.03</td>
<td>-0.14***</td>
<td>-0.19***</td>
<td>--</td>
</tr>
<tr>
<td>Estonia</td>
<td>0.00</td>
<td>0.04**</td>
<td>0.10***</td>
<td>-0.17***</td>
<td>-0.18***</td>
<td>-0.26***</td>
</tr>
<tr>
<td>Finland</td>
<td>0.05***</td>
<td>0.12***</td>
<td>0.17***</td>
<td>-0.23***</td>
<td>-0.23***</td>
<td>-0.35***</td>
</tr>
<tr>
<td>France</td>
<td>0.00</td>
<td>0.02</td>
<td>0.05**</td>
<td>-0.08***</td>
<td>-0.10***</td>
<td>-0.20***</td>
</tr>
<tr>
<td>Georgia</td>
<td>-0.14***</td>
<td>-0.12***</td>
<td>-0.12***</td>
<td>-0.03</td>
<td>-0.06***</td>
<td>-0.05***</td>
</tr>
<tr>
<td>Germany</td>
<td>0.03</td>
<td>0.05**</td>
<td>0.08***</td>
<td>-0.18***</td>
<td>-0.21***</td>
<td>-0.27***</td>
</tr>
<tr>
<td>Greece</td>
<td>-0.02</td>
<td>0.04***</td>
<td>0.07***</td>
<td>-0.15***</td>
<td>-0.17***</td>
<td>-0.21***</td>
</tr>
<tr>
<td>Hungary</td>
<td>-0.02</td>
<td>0.00</td>
<td>0.04**</td>
<td>-0.14***</td>
<td>-0.20***</td>
<td>-0.26***</td>
</tr>
</tbody>
</table>

Note: p < .05; ***p < .01; ****p < .001. MG = Mastery goals; FoF = Fear of failure; MiL = Meaning in life; PA = Positive affect; LS = Life satisfaction.
<table>
<thead>
<tr>
<th>Country</th>
<th>MG</th>
<th>FoF</th>
<th>MiL</th>
<th>PA</th>
<th>MG</th>
<th>FoF</th>
<th>MiL</th>
<th>PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iceland</td>
<td>0.07**</td>
<td>0.07**</td>
<td>0.12***</td>
<td>-0.25***</td>
<td>-0.25***</td>
<td>-0.33***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indonesia</td>
<td>0.10***</td>
<td>0.10***</td>
<td>0.10***</td>
<td>-0.06***</td>
<td>-0.09***</td>
<td>-0.10***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>0.02</td>
<td>0.05***</td>
<td>0.11***</td>
<td>-0.19***</td>
<td>-0.20***</td>
<td>-0.31***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Israel</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Italy</td>
<td>-0.03**</td>
<td>0.02*</td>
<td>0.06***</td>
<td>-0.13***</td>
<td>--</td>
<td>-0.27***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td>0.08***</td>
<td>0.11***</td>
<td>0.12***</td>
<td>-0.08***</td>
<td>-0.06***</td>
<td>-0.17***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>0.03***</td>
<td>0.05***</td>
<td>0.06***</td>
<td>-0.08***</td>
<td>-0.13***</td>
<td>-0.17***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Korea</td>
<td>0.00</td>
<td>0.03*</td>
<td>0.06***</td>
<td>-0.26***</td>
<td>-0.25***</td>
<td>-0.34***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latvia</td>
<td>0.02</td>
<td>0.06***</td>
<td>0.10***</td>
<td>-0.14***</td>
<td>-0.18***</td>
<td>-0.23***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithuania</td>
<td>0.00</td>
<td>-0.01</td>
<td>0.06***</td>
<td>-0.13***</td>
<td>-0.16***</td>
<td>-0.22***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Luxembourg</td>
<td>0.03*</td>
<td>0.05***</td>
<td>0.09***</td>
<td>-0.12***</td>
<td>-0.16***</td>
<td>-0.23***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malaysia</td>
<td>0.06***</td>
<td>0.11***</td>
<td>0.14***</td>
<td>-0.05***</td>
<td>0.03</td>
<td>-0.10***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malta</td>
<td>0.07***</td>
<td>0.08***</td>
<td>0.15***</td>
<td>-0.18***</td>
<td>-0.15***</td>
<td>-0.26***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>-0.05***</td>
<td>-0.02</td>
<td>-0.02</td>
<td>-0.04***</td>
<td>-0.14***</td>
<td>-0.16***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moldova</td>
<td>-0.10***</td>
<td>-0.13***</td>
<td>-0.09***</td>
<td>-0.02</td>
<td>-0.10***</td>
<td>-0.09***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morocco</td>
<td>-0.06***</td>
<td>-0.02</td>
<td>-0.03</td>
<td>-0.02</td>
<td>--</td>
<td>-0.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td>0.08***</td>
<td>0.12***</td>
<td>0.14***</td>
<td>-0.17***</td>
<td>-0.19***</td>
<td>-0.33***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Zealand</td>
<td>0.04***</td>
<td>0.09***</td>
<td>0.15***</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Norway</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panama</td>
<td>-0.08***</td>
<td>-0.06***</td>
<td>-0.07***</td>
<td>0.00</td>
<td>-0.10***</td>
<td>-0.09***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peru</td>
<td>-0.06***</td>
<td>-0.06***</td>
<td>-0.05***</td>
<td>-0.11***</td>
<td>-0.16***</td>
<td>-0.17***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philippines</td>
<td>0.15***</td>
<td>0.14***</td>
<td>0.15***</td>
<td>0.16***</td>
<td>-0.02</td>
<td>-0.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td>0.07***</td>
<td>0.08***</td>
<td>0.13***</td>
<td>-0.21***</td>
<td>-0.21***</td>
<td>-0.26***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portugal</td>
<td>0.02</td>
<td>0.00</td>
<td>0.06***</td>
<td>-0.16***</td>
<td>-0.17***</td>
<td>-0.23***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Romania</td>
<td>0.01</td>
<td>0.00</td>
<td>0.01</td>
<td>-0.11***</td>
<td>-0.16***</td>
<td>-0.17***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Russian Federation</td>
<td>0.01</td>
<td>0.00</td>
<td>0.02</td>
<td>-0.09***</td>
<td>-0.14***</td>
<td>-0.17***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>-0.04**</td>
<td>-0.03*</td>
<td>-0.05***</td>
<td>0.01</td>
<td>-0.08***</td>
<td>-0.10***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serbia</td>
<td>0.00</td>
<td>0.02</td>
<td>0.05**</td>
<td>-0.11***</td>
<td>-0.12***</td>
<td>-0.19***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Singapore</td>
<td>-0.01</td>
<td>0.03**</td>
<td>0.07***</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>0.08***</td>
<td>0.10***</td>
<td>0.14***</td>
<td>-0.10***</td>
<td>-0.11***</td>
<td>-0.20***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vietnam</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>-0.09</td>
<td>--</td>
<td>-0.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slovenia</td>
<td>0.02</td>
<td>0.06***</td>
<td>0.11***</td>
<td>-0.24***</td>
<td>-0.21***</td>
<td>-0.29***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>0.00</td>
<td>0.01*</td>
<td>0.05***</td>
<td>-0.11***</td>
<td>-0.18***</td>
<td>-0.22***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td>0.05**</td>
<td>0.06***</td>
<td>0.09***</td>
<td>-0.20***</td>
<td>-0.22***</td>
<td>-0.30***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Switzerland</td>
<td>0.02</td>
<td>0.05**</td>
<td>0.08***</td>
<td>-0.13***</td>
<td>-0.17***</td>
<td>-0.25***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
<td>0.11***</td>
<td>0.10***</td>
<td>0.15***</td>
<td>-0.07***</td>
<td>-0.08***</td>
<td>-0.16***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>0.02</td>
<td>0.03*</td>
<td>0.05***</td>
<td>0.03*</td>
<td>-0.03**</td>
<td>-0.09***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ukraine</td>
<td>-0.02</td>
<td>0.00</td>
<td>0.04**</td>
<td>-0.08***</td>
<td>-0.09***</td>
<td>-0.15***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>0.03***</td>
<td>0.08***</td>
<td>0.12***</td>
<td>-0.21***</td>
<td>-0.19***</td>
<td>-0.29***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>0.17***</td>
<td>0.17***</td>
<td>0.19***</td>
<td>-0.20***</td>
<td>-0.18***</td>
<td>-0.25***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uruguay</td>
<td>-0.03</td>
<td>-0.02</td>
<td>-0.01</td>
<td>0.00</td>
<td>-0.13***</td>
<td>-0.15***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B-S-J-Z (China)</td>
<td>-0.01</td>
<td>-0.03**</td>
<td>0.02*</td>
<td>-0.24***</td>
<td>-0.15***</td>
<td>-0.25***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moscow Region (RUS)</td>
<td>-0.01</td>
<td>0.00</td>
<td>0.04</td>
<td>-0.12***</td>
<td>-0.16***</td>
<td>-0.19***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tatarstan (RUS)</td>
<td>-0.01</td>
<td>-0.02</td>
<td>0.02</td>
<td>-0.10***</td>
<td>-0.17***</td>
<td>-0.19***</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: *p < .05; **p < .01; ***p < .001. MG = Mastery goals; FoF = Fear of failure; MiL = Meaning in life; PA = Positive affect; LS = Life satisfaction.
Table S4

Summary of the Two-level Multilevel Analysis with Mastery Goals and Fear of Failure as the Predictors in One Model

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Outcome variables</th>
<th>Math</th>
<th>Science</th>
<th>Reading</th>
<th>Meaning in life</th>
<th>Positive affect</th>
<th>Life satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Coefficient</td>
<td>Coefficient</td>
<td>Coefficient</td>
<td>Coefficient</td>
<td>Coefficient</td>
<td>Coefficient</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[95% CI]</td>
<td>[95% CI]</td>
<td>[95% CI]</td>
<td>[95% CI]</td>
<td>[95% CI]</td>
<td>[95% CI]</td>
</tr>
<tr>
<td>Societal level†</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP</td>
<td></td>
<td>-.34</td>
<td>-.23</td>
<td>-.06</td>
<td>.001</td>
<td>.001</td>
<td>-.01</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[-.89, .20]</td>
<td>[-.79, .33]</td>
<td>[-.60, .48]</td>
<td>[-.001, .004]</td>
<td>[-.003, .004]</td>
<td>[-.01, .004]</td>
</tr>
<tr>
<td>Social Mobility</td>
<td></td>
<td>4.53***</td>
<td>3.84***</td>
<td>3.51***</td>
<td>-.01*</td>
<td>-.01*</td>
<td>.0001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[3.31, 5.76]</td>
<td>[2.58, 5.09]</td>
<td>[2.29, 4.73]</td>
<td>[-.02, -.01]</td>
<td>[-.02, -.002]</td>
<td>[-.02, .02]</td>
</tr>
<tr>
<td>Individual level†</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family wealth</td>
<td></td>
<td>16.24***</td>
<td>13.91***</td>
<td>13.91***</td>
<td>.03***</td>
<td>.07***</td>
<td>.18***</td>
</tr>
<tr>
<td>Gender (male = 0; female = 1)</td>
<td></td>
<td>-8.54***</td>
<td>-1.58</td>
<td>23.78***</td>
<td>-.10***</td>
<td>.01</td>
<td>-.38***</td>
</tr>
<tr>
<td>Matery goals</td>
<td></td>
<td>7.47***</td>
<td>6.57***</td>
<td>7.00***</td>
<td>.30***</td>
<td>.24***</td>
<td>.55***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[5.93, 9.01]</td>
<td>[4.95, 8.19]</td>
<td>[5.25, 8.76]</td>
<td>[.28, .32]</td>
<td>[.23, .25]</td>
<td>[.50, .59]</td>
</tr>
<tr>
<td>Fear of Failure</td>
<td></td>
<td>1.14*</td>
<td>2.52***</td>
<td>3.55***</td>
<td>-.13***</td>
<td>-.17***</td>
<td>-.53***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[.05, 2.23]</td>
<td>[1.33, 3.70]</td>
<td>[2.29, 4.82]</td>
<td>[-.14, -.12]</td>
<td>[-.18, -.16]</td>
<td>[-.57, -.50]</td>
</tr>
<tr>
<td>Cross-level interaction†</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social mobility × Mastery Goals</td>
<td></td>
<td>.20**</td>
<td>.19*</td>
<td>.21*</td>
<td>.001</td>
<td>.00004</td>
<td>.002</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[.05, .35]</td>
<td>[.04, .35]</td>
<td>[.04, .38]</td>
<td>[.001, .003]</td>
<td>[.001, .001]</td>
<td>[.002, .01]</td>
</tr>
<tr>
<td>Social mobility × Fear of Failure</td>
<td></td>
<td>.16**</td>
<td>.20***</td>
<td>.26***</td>
<td>-.05***</td>
<td>-.03***</td>
<td>-.01***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[.05, .26]</td>
<td>[.09, .32]</td>
<td>[.14, .38]</td>
<td>[.004, .004]</td>
<td>[.004, .002]</td>
<td>[-.01, -.01]</td>
</tr>
</tbody>
</table>

Note. *p < .05; **p < .01; ***p < .001. † The degree of freedom for both societal- and individual-level predictors as well as the interaction was estimated based on the number of level-2 units (i.e., the number of societies; n ~ 65 societies) instead of the number of level-1 units (i.e., the number of all participants), as the intercepts and the effect of individual-level predictors were specified to be random. Unstandardized coefficients are reported.
## Table S5
Summary of the Two-level Multilevel Analysis with Mastery Goals and Fear of Failure as the Predictors and Social Mobility as the Moderator with Controlling for GDP and Societal Individualism in One Model

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Math Coefficient</th>
<th>Math 95% CI</th>
<th>Science Coefficient</th>
<th>Science 95% CI</th>
<th>Reading Coefficient</th>
<th>Reading 95% CI</th>
<th>Meaning in life Coefficient</th>
<th>Meaning in life 95% CI</th>
<th>Positive affect Coefficient</th>
<th>Positive affect 95% CI</th>
<th>Life satisfaction Coefficient</th>
<th>Life satisfaction 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Societal level†</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP</td>
<td>-.32</td>
<td>[-.88, .24]</td>
<td>-.24</td>
<td>[-.82, .34]</td>
<td>-.08</td>
<td>[-.64, .48]</td>
<td>.003†</td>
<td>[.001, .01]</td>
<td>-.002</td>
<td>[-.002, .01]</td>
<td>-.01</td>
<td></td>
</tr>
<tr>
<td>Societal Individualism</td>
<td>-.08</td>
<td>[-.56, .40]</td>
<td>.04</td>
<td>[-.46, .53]</td>
<td>.10</td>
<td>[-.38, .58]</td>
<td>-.01***</td>
<td>[-.01, -.003]</td>
<td>-.004*</td>
<td>[-.01, .00]</td>
<td>-.002*</td>
<td></td>
</tr>
<tr>
<td>Social Mobility</td>
<td>4.61***</td>
<td>[3.29, 5.93]</td>
<td>3.80***</td>
<td>[2.45, 5.16]</td>
<td>3.41***</td>
<td>[2.10, 4.72]</td>
<td>-.01</td>
<td>[-.02, -.004]</td>
<td>.01</td>
<td>[.002, .03]</td>
<td>-.02</td>
<td></td>
</tr>
<tr>
<td><strong>Individual level†</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender (male = 0; female = 1)</td>
<td>-8.54***</td>
<td>[-10.38, -6.70]</td>
<td>-1.58</td>
<td>[-3.54, .37]</td>
<td>23.78***</td>
<td>[21.85, 25.71]</td>
<td>-.10***</td>
<td>[-.12, -.08]</td>
<td>.01</td>
<td>[.02, .04]</td>
<td>[.44, -.32]</td>
<td></td>
</tr>
<tr>
<td>Fear of Failure</td>
<td>1.14*</td>
<td>[.05, .23]</td>
<td>2.52***</td>
<td>[1.33, 3.71]</td>
<td>3.55***</td>
<td>[2.29, 4.82]</td>
<td>-.13***</td>
<td>[-.14, -.12]</td>
<td>-.17***</td>
<td>[-.18, -.16]</td>
<td>-.54***</td>
<td></td>
</tr>
<tr>
<td><strong>Cross-level interaction†</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social mobility × Mastery Goals</td>
<td>.20*</td>
<td>[.05, .35]</td>
<td>.20*</td>
<td>[.04, .35]</td>
<td>.21*</td>
<td>[.04, .38]</td>
<td>.001</td>
<td>[-.001, .003]</td>
<td>.00004</td>
<td>[.001, .001]</td>
<td>.002</td>
<td></td>
</tr>
<tr>
<td>Social mobility × Fear of Failure</td>
<td>.16***</td>
<td>[.05, .26]</td>
<td>.20***</td>
<td>[.09, .32]</td>
<td>.26***</td>
<td>[1.14, .38]</td>
<td>-.01***</td>
<td>[-.01, -.004]</td>
<td>-.03***</td>
<td>[-.004, -.002]</td>
<td>-.02</td>
<td></td>
</tr>
</tbody>
</table>

Note. * p < .05; ** p < .01; *** p < .001. † The degree of freedom for both societal- and individual-level predictors as well as the interaction was estimated based on the number of level-2 units (i.e., the number of societies; n ~ 65 societies) instead of the number of level-1 units (i.e., the number of all participants), as the intercepts and the effect of individual-level predictors were specified to be random. Unstandardized coefficients are reported.
Table S6
Summary of the Two-level Multilevel Analysis with Mastery Goals and Fear of Failure as the Predictors and Social Mobility as the Moderator with Controlling for GDP, Societal Individualism, and the Interaction with Societal Individualism in One Model

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Math</th>
<th>Science</th>
<th>Reading</th>
<th>Meaning in life</th>
<th>Positive affect</th>
<th>Life satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient [95% CI]</td>
<td>Coefficient [95% CI]</td>
<td>Coefficient [95% CI]</td>
<td>Coefficient [95% CI]</td>
<td>Coefficient [95% CI]</td>
<td>Coefficient [95% CI]</td>
</tr>
<tr>
<td><strong>Societal level</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP</td>
<td>-0.32</td>
<td>-0.24</td>
<td>-0.08</td>
<td>0.003*</td>
<td>0.002</td>
<td>-0.002</td>
</tr>
<tr>
<td></td>
<td>[-0.88, 0.24]</td>
<td>[-0.82, 0.34]</td>
<td>[-0.64, -0.48]</td>
<td>[0.001, 0.01]</td>
<td>[-0.002, 0.01]</td>
<td>[-0.01, 0.01]</td>
</tr>
<tr>
<td>Societal Individualism</td>
<td>-0.08</td>
<td>0.04</td>
<td>0.10</td>
<td>-0.01***</td>
<td>-0.004*</td>
<td>-0.01</td>
</tr>
<tr>
<td></td>
<td>[-0.56, 0.40]</td>
<td>[-0.46, 0.53]</td>
<td>[-0.38, -0.58]</td>
<td>[-0.01, -0.003]</td>
<td>[-0.01, 0.00]</td>
<td>[-0.02, 0.000]</td>
</tr>
<tr>
<td>Social Mobility</td>
<td>4.61***</td>
<td>3.80***</td>
<td>3.41***</td>
<td>-0.01*</td>
<td>-0.01</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>[3.29, 5.93]</td>
<td>[2.45, 5.16]</td>
<td>[2.10, 4.72]</td>
<td>[-0.02, -0.004]</td>
<td>[-0.02, 0.003]</td>
<td>[-0.02, 0.03]</td>
</tr>
<tr>
<td><strong>Individual level</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family wealth</td>
<td>16.24***</td>
<td>13.91***</td>
<td>13.91***</td>
<td>0.03***</td>
<td>0.07***</td>
<td>0.18***</td>
</tr>
<tr>
<td></td>
<td>[14.23, 18.25]</td>
<td>[11.90, 15.92]</td>
<td>[11.60, 16.22]</td>
<td>[0.03, 0.04]</td>
<td>[0.06, 0.08]</td>
<td>[0.15, 0.21]</td>
</tr>
<tr>
<td>Gender (male = 0; female = 1)</td>
<td>-8.54***</td>
<td>-1.58</td>
<td>23.78***</td>
<td>-0.10***</td>
<td>0.01</td>
<td>-0.38***</td>
</tr>
<tr>
<td></td>
<td>[-10.38, -6.70]</td>
<td>[-3.54, 3.70]</td>
<td>[21.85, 25.71]</td>
<td>[-1.12, -0.08]</td>
<td>[-0.02, 0.04]</td>
<td>[-0.44, -0.32]</td>
</tr>
<tr>
<td>Matery goals</td>
<td>7.47***</td>
<td>6.57***</td>
<td>7.00***</td>
<td>0.03***</td>
<td>0.24***</td>
<td>0.55***</td>
</tr>
<tr>
<td></td>
<td>[5.92, 9.02]</td>
<td>[4.94, 8.20]</td>
<td>[5.23, 8.77]</td>
<td>[2.28, 3.32]</td>
<td>[2.23, 2.62]</td>
<td>[2.50, 0.59]</td>
</tr>
<tr>
<td>Fear of Failure</td>
<td>1.13*</td>
<td>2.51***</td>
<td>3.54***</td>
<td>-0.13***</td>
<td>-0.17***</td>
<td>-0.54***</td>
</tr>
<tr>
<td></td>
<td>[0.05, 2.22]</td>
<td>[1.35, 3.67]</td>
<td>[2.31, 4.78]</td>
<td>[-1.14, -1.12]</td>
<td>[-1.18, -1.16]</td>
<td>[-1.57, -0.50]</td>
</tr>
<tr>
<td><strong>Cross-level interaction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individualism × Mastery Goals</td>
<td>0.03</td>
<td>0.02</td>
<td>0.03</td>
<td>0.00</td>
<td>0.00</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>[-0.06, 0.12]</td>
<td>[-0.08, 0.11]</td>
<td>[-0.07, -0.14]</td>
<td>[-0.001, -0.002]</td>
<td>[-0.001, 0.001]</td>
<td>[-0.002, 0.003]</td>
</tr>
<tr>
<td>Individualism × Fear of Failure</td>
<td>0.04</td>
<td>0.06</td>
<td>0.06</td>
<td>0.0001</td>
<td>0.00</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>[-0.03, 0.10]</td>
<td>[-0.01, 0.13]</td>
<td>[-0.01, -0.13]</td>
<td>[-0.001, -0.001]</td>
<td>[-0.001, 0.001]</td>
<td>[-0.002, 0.003]</td>
</tr>
<tr>
<td>Social mobility × Mastery Goals</td>
<td>0.16</td>
<td>0.17</td>
<td>0.16</td>
<td>0.0001</td>
<td>0.00</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>[-0.04, 0.36]</td>
<td>[-0.04, 0.38]</td>
<td>[-0.06, -0.39]</td>
<td>[-0.003, -0.003]</td>
<td>[-0.002, 0.001]</td>
<td>[-0.01, -0.01]</td>
</tr>
<tr>
<td>Social mobility × Fear of Failure</td>
<td>0.10</td>
<td>0.11</td>
<td>0.17</td>
<td>-0.01***</td>
<td>-0.003***</td>
<td>-0.01***</td>
</tr>
<tr>
<td></td>
<td>[-0.04, 0.24]</td>
<td>[-0.04, 0.26]</td>
<td>[0.01, 0.33]</td>
<td>[-0.01, -0.003]</td>
<td>[-0.01, -0.002]</td>
<td>[-0.02, -0.01]</td>
</tr>
</tbody>
</table>

Note. * p < .05; ** p < .01; *** p < .001. † The degree of freedom for both societal- and individual-level predictors as well as the interaction was estimated based on the number of level-2 units (i.e., the number of societies; n ~ 65 societies) instead of the number of level-1 units (i.e., the number of all participants), as the intercepts and the effect of individual-level predictors were specified to be random. Unstandardized coefficients are reported.