



Exploring Relations among Social-Emotional and Character Development Targets: Character Virtue, Social-Emotional Learning Skills, and Positive Purpose

Danielle R. Hatchimonji¹ ^{ab}, Esha Vaid^a, Arielle C.V. Linsky^a, Sam J. Nayman^a,

May Yuan^a, Marisa MacDonnell^a, and Maurice J. Elias^a

^aRutgers, The State University of New Jersey, USA

^bNemours Children's Health, Delaware Valley, USA

In the current study, we sought to understand relations among the key intervention targets of social-emotional and character development (SECD) interventions: character virtues, Positive Purpose, and social-emotional learning (SEL). Sixth, seventh, and eighth grade students ($n = 1011$, ages 11 to 16, $M = 12.94$, $SD = 1.00$) from five urban middle schools in the mid-Atlantic US completed self-report surveys containing measures of five supporting character virtues (diligence, gratitude, forgiveness, future-mindedness, and generosity) and Positive Purpose. Teachers rated students' social-emotional strengths. Hierarchical regressions found a constellation of five character virtues was associated with Purpose and SEL, thereby providing empirical support for the framework for SECD interventions. Exploratory analyses found higher student-reported virtues were associated with a steeper increase in teacher ratings of SEL for males and White students, compared to female students and students of color. The current study contributes to both SEL and character education research by demonstrating positive associations among SEL, character, and Positive Purpose in the context of mid-Atlantic US urban middle schools. Future directions for research include examining how these SECD intervention targets and relations among them develop over time, the ability of SECD interventions to cultivate these skills and virtues, and how differences in teacher ratings by student race/ethnicity and sex may occur.

Keywords: social-emotional learning, character education, purpose, urban education

First submission 16th December 2021; Accepted for publication 30th May 2022.

¹ Corresponding author. Email address: danielle.hatchimonji@nemours.org

<https://doi.org/10.56300/EVIP7836>

Introduction

Middle school students, or early adolescents, require environments that support their social and emotional development (Zimmer-Gembeck & Collins, 2003; Yeager, 2017), while also offering opportunities to reflect on their identity and life purpose (Erikson, 1968; Hatchimonji et al., 2017; Malin et al., 2013). Recognizing this developmental need for purpose reflection and acknowledging that students require both character and social-emotional learning (SEL) skills to be successful in school and in life (Battistich, 2008; Elias, 2009), the social-emotional and character development (SECD) approach to fostering positive development in middle school places equal weight on individual students' character virtues, SEL skills, and Positive Purpose. Despite theoretical support for this model, there is little empirical evidence supporting these relationships. In the current study, we sought to better understand relationships among the key intervention targets of SECD and exploratorily examine differences by student sex and race/ethnicity.

A Positive Purpose in life is a personally meaningful, constructive, long-term life goal that aims to contribute to the world beyond the self (Damon et al., 2003). Contemplating and identifying a life purpose is possible in early adolescence as young people develop skills to balance self-identity with empathy for others (Crone & Fuligni, 2020). Purpose is associated with benefits from adolescence through adulthood, including psychological well-being, physical health, and academic success (Bronk et al., 2009; Pizzolato et al., 2011; Ryff et al., 2004; Yeager & Bundick, 2009). The theoretical framework of SECD posits that at the individual student level, a constellation of focal virtues supports the development of Positive Purpose (Hatchimonji et al., 2017; Hatchimonji et al., 2020). This perspective is aligned with other character and moral development frameworks that emphasize a constellation of virtues, or a set of interconnected virtues that coalesce to support moral development. For example, Narvaez and Bock (2014) describe three ethics—Safety, Engagement, and Imagination—which each comprise a number of virtues. Peterson and Seligman (2004) articulated a consensus of 24 virtues identified across history and cultures falling under six domains: wisdom, courage, humanity, justice, temperance, and transcendence. From the SECD perspective, a constellation of virtues should represent multiple developmentally relevant domains.

For early adolescents, we have emphasized the following virtues to support Positive Purpose: Forgiveness, Gratitude, Diligence, Generosity, and Future-mindedness. These virtues were selected for their contextual and developmental relevance in low-resourced urban middle schools (Hatchimonji et al., 2017; Hatchimonji et al., 2020). These virtues build upon the typical developmental processes of early adolescence by balancing self- and other-oriented virtues while also covering the six virtue domains identified by Peterson and Seligman (2004): Diligence (self-oriented temperance, courage), Gratitude (other-oriented transcendence), Forgiveness (self-oriented courage, other-oriented temperance), Future-mindedness (self- and other-oriented wisdom and transcendence), and Generosity (other-oriented humanity, justice). Each of these virtues independently is thought to be insufficient to support Positive Purpose. When taken together, this constellation of virtues can support youth in their ability to balance their own needs with the needs of others, plan for the future, and connect with others to cope with challenges in pursuit of their Positive Purpose. While these virtues

are important for all young people, this specific constellation is thought to be particularly contextually relevant for early adolescents in low-resourced urban schools who are likely to face high levels of adversity and trauma (Hatchimonji et al., 2017). Highlighting this constellation of virtues supports both coping with adversity (Forgiveness) and identifying opportunities for prosocial connection with others (Generosity, Gratitude) to envision and plan for a hopeful future (Future-mindedness, Diligence).

The SECD framework also acknowledges that character virtues and social-emotional learning (SEL) skills are both necessary to support positive development. SEL refers to the process of learning and practicing essential cognitive, affective, and behavioral competencies. These competencies are needed to (1) label and regulate emotions; (2) determine and accomplish goals; (3) understand perspectives of others; (4) create and sustain positive relationships; (5) make effective decisions; and (6) communicate across a spectrum of interpersonal situations (CASEL, 2015). SEL skills are necessary to effectively act upon character virtues and pursue a Positive Purpose (Hatchimonji et al., 2020). For example, exercising diligence (character virtue) toward a Positive Purpose requires SEL skills, such as the ability to regulate emotions, focus, and delay gratification (Elias, 2014). Thus, the SECD approach emphasizes the interrelated processes connecting SEL skills for enacting character virtues toward a Positive Purpose.

The Current Study

The goal of this study was to test relations among the targets of the SECD approach to positive student development in the context of five urban middle schools in the mid-Atlantic United States. We operationalized character virtues and Positive Purpose as internal processes reported by students, and SEL skills as teacher-observed behaviors rated by teachers. We included the following character virtues, hypothesized to support the development of Positive Purpose in middle school students: Forgiveness, Gratitude, Diligence, Generosity, and Future-mindedness. We hypothesized that student-reported character virtues would be positively associated with teacher-rated SEL skills and student-rated Positive Purpose, when controlling for race/ethnicity, sex, grade level, and low socioeconomic status (SES; approximated by whether a student qualified for free or reduced lunch at school). We also expected that the combined effect of the supporting virtues would demonstrate a positive relationship with SEL skills and Positive Purpose, with each virtue explaining a unique portion of the variance. Below we present the four specific hypotheses we tested:

H1: Each independent student-reported character virtue (Forgiveness, Gratitude, Diligence, Generosity, and Future-mindedness) will be positively associated with teacher-reported SEL skills, controlling for race/ethnicity, sex, grade level, and low SES.

H2: Collectively, the five supporting student-reported character virtues will demonstrate a positive relationship with teacher-rated SEL skills, with each virtue explaining a unique portion of the variance, controlling for race/ethnicity, sex, grade level, and low SES.

H3: Each independent student-reported character virtue (Forgiveness, Gratitude, Diligence, Generosity, and Future-mindedness) will be positively associated with student-reported Positive Purpose, controlling for race/ethnicity, sex, grade level, and low SES.

H4: Collectively, five supporting student-reported character virtues will demonstrate a positive relationship with student-rated Positive Purpose, with each virtue explaining a unique portion of the variance, controlling for race/ethnicity, sex, grade level, and low SES.

Exploratory Analyses: Moderating Effects of Race/Ethnicity and Sex

While the relations among these intervention targets are likely similar across students from an array of identities and backgrounds, educator *perceptions* of students' character and SEL skills may differ. To explore the impact of including both student and teacher ratings in our analyses, we investigated whether students' student-reported character virtues demonstrated different relationships with teacher ratings of SEL skills based on student race/ethnicity or sex. Sex and racial/ethnic disparities in academic achievement and harsh and exclusionary school discipline are well-documented (Strambler et al., 2017; Skiba et al., 2011; Voyer & Voyer, 2014; White et al., 2016). Given the limited research on race/ethnicity and sex differences in teacher perceptions of SEL skills specifically, we did not make an *a priori* hypothesis about the moderating role of race/ethnicity or sex. Based on literature on race and sex differences in teacher perceptions more broadly (e.g., Starck et al., 2020), we considered one possibility: students from minoritized backgrounds who reported higher levels of virtue would be rated at similar levels of SEL skills, when compared to their White peers rating lower levels of virtue. Alternatively, we considered whether only specific groups of students (by race/ethnicity or sex) would be rated more highly by teachers with regard to SEL skills when they self-reported higher levels of virtue.

Method

Participants

Participants were sixth, seventh, and eighth grade students attending five public urban middle schools during the 2015-2016 school year (ages 11 to 16, mean age = 12.94, standard deviation = 1.00). See Table I for student sample characteristics. Due to the student-focused nature of the study and associated Institutional Review Board approval, sociodemographic variables for teachers ($N = 95$) who rated student SEL skills were not collected. While we were not permitted to collect the race/ethnicity or sex of individual teachers, we can report aggregated data from each school indicating the overall staff was comprised of 60% White, 14% Black, and 19% Latinx educators and 77% female educators. This represents a workforce that is more racially diverse than the overall teaching workforce in the United States (82% White; U.S. Department of Education, 2016) and roughly equivalent to the proportion of females in the U.S. educator workforce (76% female; Ingersoll et al., 2018). However, this educator workforce is not racially reflective of the student body, which was comprised of only 14% White students.

Procedure

Data are from the baseline assessment (Fall 2015) of a project to implement a SECD curriculum known as MOSAIC (Mastering Our Skills and Inspiring Character). MOSAIC builds social-emotional skills and character virtues designed to support students' journeys toward identifying and pursuing a Positive Purpose. Six middle schools were recruited to take part in this study. Schools were selected for their demographic diversity, representing the public schools within the larger school district. Participants were consented to study participation through a passive consent process approved by the school district and the research institution's Institutional Review Board. Students were also provided an opportunity to decline participation through a passive assent process. Sixth, seventh, and eighth grade students in participating schools were asked to complete self-report surveys through Qualtrics, an online survey platform. Return rates were low in one school, so paper and pencil surveys were provided, but this school maintained low return rates so was not included in analysis for the current study. Teachers rated student social-emotional skills using Qualtrics.

Measures

Supporting Character Virtues

Scales representing the following character virtues were adapted from existing measures of character. Unless otherwise noted, scales used a five-point Likert scale with the following anchors: "Disagree A LOT!", "Disagree a little", "Neither Agree nor Disagree", "Agree a little", "Agree A LOT!".

Gratitude. We measured gratitude with the Froh et al. (2011) youth adaptation of the *Gratitude Questionnaire-6 item* (GQ-6; McCullough et al., 2002). Froh et al. (2011) replaced "grateful" with "thankful" and retained five items with acceptable reliability ($\alpha = .76 - .85$ across age groups) and convergent validity in a large youth sample (ages 10-19). We found acceptable reliability in our sample as well ($\alpha = .70$).

Forgiveness. Mullet et al. (2003) originally developed the Forgiveness Scale for an adult population, and later adapted it into a 19-item Forgiveness Scale to measure dispositional forgiveness in adolescents (Chiaramello et al., 2008). The current study used the Lasting Resentment and Forgiveness subscales, with several items adapted to include additional explanations or definitions of key terms to improve accuracy of student ratings (9 items). The scale had acceptable reliability in the current sample ($\alpha = .82$).

Diligence. The measure of Diligence used three items from the "Perseverance of Effort" subscale of the *Short Grit Scale* (Grit-S; Duckworth & Quinn, 2009). This subscale is known to have greater coherence and utility in a Latinx population (Hatchimonji et al., under review) when compared to the full scale. Similar to the adaptation made to define words on the Forgiveness scale, teachers expressed a concern about students understanding of the word "diligence." Thus, we added a definition of "diligence" to one item. The three Grit-S items had five response options ("Not at all like me", "A little like me", "Half the time like me", "Usually like me", "Always like me"). The scale also included two items from the *Diligence Scale for Teenagers* (Lippman et al., 2014). This original seven-item self-report scale was developed by the *Flourishing Children Project* to assess Diligence in adolescents using a five-point Likert scale: "none of the time", "a little of the

time”, “half of the time”, “most of the time” and “all of the time.” In our current sample, the five-item Diligence scale had acceptable reliability ($\alpha = .78$).

Future-Mindedness. Students’ Future-Mindedness was measured using a scale of self-expectations ($\alpha = .79$). The six-item scale was adapted from a Social-Normative Expectations scale (Bell et al., 2019) and modeled after Ou and Reynolds’ (2008) method of evaluating student aspirations. Two sample items were: “In the future, I will graduate from high school” and “In the future, I will have a happy family life.”

Generosity. We used four items from the altruism scale and one item from the Generosity Scale from *The Flourishing Children Project* (Lippman et al., 2014). Items were rated using a five-point Likert scale (“not at all like me”, “a little like me”, “half the time like me”, “usually like me”, and “always like me”). This five-item scale had acceptable reliability in our sample ($\alpha = .72$)

Positive Purpose

Purpose was measured by a five-item self-report scale used in previous research (Hatchimonji et al., 2021; Nayman et al., 2019). The scale was adapted from the Lippman et al. (2014) *Purpose Scale* (two items) and the *Revised Youth Purpose Survey* (Bundick et al., 2008). Higher scores indicated higher levels of student-reported Purpose. The scale had acceptable reliability in this study ($\alpha = .82$).

SEL Skills

We used the *Devereux Student Strengths Assessment-mini* (DESSA-mini; LeBuffe et al., 2009) to measure SEL Skills. The DESSA-mini is an 8-item teacher-report measure that assesses social-emotional strengths and resilience (i.e., positive behaviors). Teachers rated the frequency with which they observed the student carry out specific positive behaviors on a five-point scale (0 = Never, 1=Rarely, 2=Occasionally, 3=Frequently, and 4 = Very Frequently). The DESSA-mini had excellent reliability in our sample ($\alpha = .98$). The DESSA-mini scores can be compared to a normative sample. Raw scores at or below 14 are considered in the “Need” range, raw scores ranging from 15-26 are considered “Typical,” and raw scores at or above 27 are considered in the “Strength” range.

Student Demographics

Student sex, race/ethnicity, age, grade level, and free/reduced lunch status (measurement of low SES) were collected from the district. Sex was reported by the district as male or female. Race/ethnicity was reported in the school records as: American Indian/Native American, Asian/Asian American, Black/African American, Hispanic/Latinx, Multiracial, Pacific Islander, or White. We grouped students who qualified for either free or reduced lunch together as an indicator of lower socioeconomic status than students who did not qualify for free or reduced lunch.

Results

Preliminary Analyses

Sample characteristics are provided in Table I. Descriptive statistics of study variables and their intercorrelations can be found in Table II. Student-reported character virtues (Diligence, Gratitude, Generosity, Forgiveness, and Future-Mindedness) as well as Positive Purpose were positively correlated with each other. As expected, r values between virtues were not high enough to show collinearity, thus showing each construct accounted for meaningful unique variance. Forgiveness had the lowest correlations with other variables. Virtues were also positively correlated with teacher-rated SEL skills.

Table I. Student Sample Characteristics

School Number	1	2	3	4	5	Total
Grade Level						
6 th	140	54	35	68	34	331
7 th	151	77	55	62	27	372
8 th	126	51	50	53	28	308
Socioeconomic Status (SES)						
Low SES	263	147	92	128	77	707
Higher SES	154	35	48	55	12	304
Race/Ethnicity						
Black	106	44	56	20	46	272
Latinx	143	79	36	111	26	395
Asian/Asian American	121	20	16	33	10	200
White	47	39	32	19	7	144
Sex						
Male	179	90	75	95	52	491
Female	238	92	65	88	37	520
Total	417	182	140	183	89	1011

Table II. Correlations and Descriptive Statistics of Study Variables

	<i>M(SD)</i>	1	2	3	4	5	6	7
1. Diligence	3.99 (0.71)	-	.36**	.14**	.45**	.48**	.51**	.20**
2. Gratitude	4.24 (0.67)		-	.25**	.29**	.36**	.44**	.15**
3. Forgiveness	2.91 (0.86)			-	.28**	.12**	.14**	.11**
4. Generosity	3.43 (0.82)				-	.27**	.30**	.18**
5. Future-Mindedness	4.64 (0.50)					-	.55**	.20**
6. Positive Purpose	4.22 (0.75)						-	.07*
7. SEL Skills	23.54 (7.10)							-

Note. Five supporting character virtues and Positive Purpose are provided as mean scores for the entire scale to allow for comparison across the scales; * $p < .05$, ** $p < .01$, *** $p < .001$

We explored the relationship of race/ethnicity, sex, low SES, and grade level with the dependent variables of interest: teacher-rated SEL skills and student-reported Positive Purpose. Independent samples t-tests revealed that females were rated significantly higher on SEL skills compared to males, $t(971.77) = 7.17$, $p < .001$. Furthermore, students with low SES were rated as significantly lower in SEL skills than their peers with higher SES, $t(646.81) = -2.97$, $p = .003$. A one-way ANOVA also revealed significant differences in teacher-rated SEL skills by racial group, $F(4, 1014) = 13.49$, $p < .001$. *Post hoc* tests (Tukey's HSD) found that Asian/Asian American students were rated as significantly higher in SEL skills than all other racial/ethnic groups. No other racial/ethnic group differences in teacher ratings were found. Students differed in their teacher-rated SEL skills by grade level, with eighth graders being rated higher than both sixth and seventh graders, $F(2, 1016) = 19.67$, $p < .001$. Students did not differ significantly in their student-reported sense of Positive Purpose by sex, low SES, or race/ethnicity. One-way ANOVA with *post hoc* analysis (Tukey's HSD) revealed sixth graders rated their Positive Purpose as significantly higher than seventh and eighth grade students, $F(2, 1008) = 15.62$, $p < .001$.

Association of Student-Reported Character Virtues with Teacher-Reported SEL Skills

A series of hierarchical linear regressions tested the hypothesis that student-reported character virtues would be associated with teacher-reported SEL skills, controlling for demographics. Independent variables were mean-centred to reduce multi-collinearity. Race/ethnicity was dummy coded with White as the reference group. Grade level was dummy coded with sixth graders as the reference group.

Table III. Hierarchical Linear Regression of Student-Reported Diligence Association with Teacher-Reported SEL Skills

Independent Variables	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Low SES	-0.59	0.47	-0.04	-0.50	0.46	-0.03
Sex	3.18	0.42	0.22***	2.93	0.41	0.21***
Grade 7	-1.05	0.53	-0.07*	-0.85	0.50	-0.06
Grade 8s	2.19	0.53	0.14***	2.46	0.52	0.16***
Asian/Asian American	2.36	0.73	0.13**	2.36	0.72	0.13**
Black	-2.10	0.69	-0.13**	-1.98	0.68	-0.12**
Latinx	-1.03	0.65	-0.07	-0.76	0.64	-0.05
Diligence				0.35	0.06	0.17***
R^2		.14			.17	

Note. Low SES coded as qualified for free/reduced lunch = 1, did not qualify for free/reduced lunch = 0; Sex coded as female = 1, male = 0; Grade level dummy coded with 6th grade as reference group; Race dummy coded with White as reference group; * $p < .05$, ** $p < .01$, *** $p < .001$

We tested our first hypothesis by running five separate models for the supporting character virtues (Diligence, Gratitude, Generosity, Forgiveness, and Future-Mindedness). As an example, the model for Diligence is displayed in Table III. Demographic covariates (Step One) accounted for 14% of the variance in teacher-reported SEL skills. Controlling for these demographic covariates (sex, race/ethnicity, grade level, and low SES), all five student-reported virtues (Step Two) were positively associated with teacher-reported SEL skills. In all models, student-reported character virtue accounted for a small, but significant, portion of the variance in SEL skills (1% to 3%) above and beyond the effect of demographic covariates (Table IV). To test our second hypothesis, we ran a model with all five character virtues added in Step Two and found that the combined effect of the five supporting character virtues accounted for an additional 5% of variance in teacher-rated SEL skills above and beyond the impact of demographics ($\Delta R^2 = .05, p < .001$). Three of the virtues offered unique explanatory power to the positive prediction of SEL skills in the full model: Diligence ($\beta = .08, p = .03$), Forgiveness ($\beta = .07, p = .02$), and Future-Mindedness ($\beta = .10, p = .002$). The variance and change in variance explained in these models is summarised in Table IV.

Table IV. Summary of Variance Explained by Character Virtues in Hierarchical Linear Regression Models

Dependent Variable	Step One	Step Two	
	Demographics	Student-Reported Character Virtue	
	R ²	Virtue	ΔR ²
Teacher-Rated SEL Skills	.14***	Diligence***	.03***
	.14***	Gratitude***	.02***
	.14***	Forgiveness***	.02***
	.14***	Generosity***	.01***
	.14***	Future-Mindedness***	.03***
	.14***	All Five Virtues***	.05***
Student-Rated Purpose	.04***	Diligence***	.24***
	.04***	Gratitude***	.18***
	.04***	Forgiveness***	.02***
	.04***	Generosity***	.10***
	.04***	Future-Mindedness***	.33***
	.04***	All Five Virtues***	.41***

Note. Demographics in Step One were: Low SES, sex, grade level, and race/ethnicity. In Step Two, each virtue was tested in a separate model. When all five virtues were included in one model, only generosity and gratitude lost significance when predicting SEL skills and only forgiveness lost significance when predicting Positive Purpose; *** $p < .001$

Association of Student-Reported Character Virtues with Student-Reported Positive Purpose

Next, we tested the hypothesized relationships between the student-reported character virtues and Positive Purpose. To test hypothesis three, we ran five separate regression equations with each of the student-reported virtues as Step Two and demographics as Step One. Results indicated that all five virtues (Diligence, Gratitude, Forgiveness, Generosity, and Future-Mindedness) were independently associated with Positive Purpose above and beyond demographics (ΔR^2 range: 2% to 33%). We also tested hypothesis four, that the combined effect of student-reported character virtues would be associated with student-reported Positive Purpose. We found that the combined effect of the five supporting virtues accounted for 41% of the variance in Positive Purpose, controlling for demographics ($\Delta R^2 = .41, p < .001$), with all virtues except for Forgiveness offering unique explanatory power to the model (Diligence: $\beta = .24, p < .001$, Gratitude: $\beta = .21, p < .001$, Generosity: $\beta = .06, p = .03$, Future-Mindedness: $\beta = .34, p < .001$). See Table IV for a summary of ΔR^2 for all regression models.

Exploratory Analysis of Virtue and SEL Skills: Moderating Effect of Race and Sex

Preliminary analyses found that teacher ratings of SEL skills differed by race/ethnicity and sex. We then explored whether race/ethnicity and sex moderated the association between student-reported virtues and teacher-rated SEL skills using the PROCESS macro for SPSS (Hayes, 2019). We ran models for each of the five supporting virtues (Diligence, Gratitude, Forgiveness, Generosity, and Future-Mindedness) separately as independent variables. The interaction terms were significant for sex and Diligence ($\Delta R^2 = .005, F(3,999) = 5.46, p = .020$), Gratitude ($\Delta R^2 = .01, F(3,999) = 7.33, p = .007$), Generosity ($\Delta R^2 = .003, F(3,1001) = 4.09, p = .043$), and Future-mindedness ($\Delta R^2 = .004, F(3,1001) = 4.50, p = .034$), indicating that the strength of the relationship between character virtue and teacher-rated SEL skills differed by student sex. In each of these models, although females had higher levels of teacher-rated SEL skills overall, an incremental increase in character virtue was associated with a steeper increase in teacher-rated SEL skills for males, compared to females (Figure 1). Males and females were both perceived by teachers as demonstrating higher SEL at higher levels of virtue, and there was less of a discrepancy between male and females at higher levels than there was at lower levels of the virtue. No moderating effect of sex on the relationship between Forgiveness and SEL skills was observed.

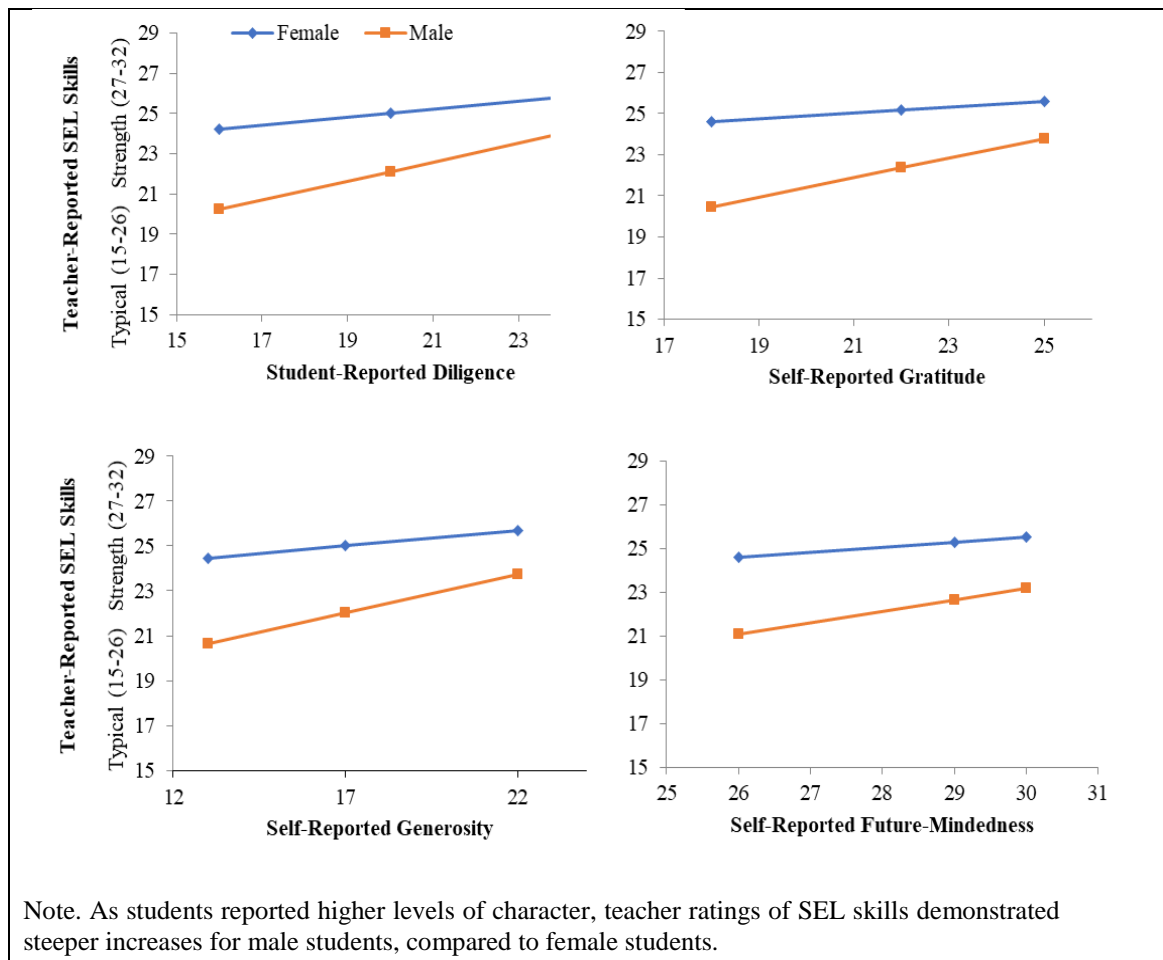


Figure 1. Moderating Role of Sex in Association of Student-Reported Character with Teacher-Reported SEL Skills

Additionally, the interaction term was a significant predictor of SEL skills for race/ethnicity and Diligence ($\Delta R^2 = .01$, $F(3,999) = 3.14$, $p = .025$), Gratitude ($\Delta R^2 = .01$, $F(3,999) = 2.77$, $p = .040$), Generosity ($\Delta R^2 = .01$, $F(3,999) = 3.23$, $p = .022$), and Future-Mindedness ($\Delta R^2 = .01$, $F(3,999) = 3.59$, $p = .01$). There was no significant interaction effect for race/ethnicity and Forgiveness. In this case, an incremental increase in the four character virtues was associated with a steeper increase in teacher-rated SEL skills for White students. At lower levels of virtue, White, Latinx, and Black students' SEL skills were rated similarly by teachers and were rated lower than Asian/Asian American students. With each incremental increase in student-reported virtue, teachers rated Asian/Asian American, Black, and Latinx students with the parallel increases in SEL skills so that Black and Latinx students were rated at lower levels of SEL skills compared to Asian/Asian American students across all levels of the four virtues. However, whereas White students at low levels of virtue were rated similarly to Black and Latinx students, White students with high levels of student-reported virtue were rated by their teachers with SEL skills closer to the ratings of Asian/Asian American students than Black or Latinx students (Figure 2). Conditional effects analysis using PROCESS found that for Asian/Asian American students there was no relationship between Generosity, Gratitude, and Future-

Mindedness and SEL skills. All other racial/ethnic groups were rated with higher SEL skills at higher levels of self-reported virtue. The effect was larger for White students, which is clear in the interaction graphs in Figure 2. The Diligence model showed a slightly different pattern. In this model, higher levels of self-reported Diligence were associated with higher levels of teacher-rated SEL skills for all racial groups except for Black students. Across all four virtue models, the slope for White students was steeper. In other words, at higher levels of self-reported character, White students were disproportionately rated as demonstrating higher levels of SEL skills (Figure 2).

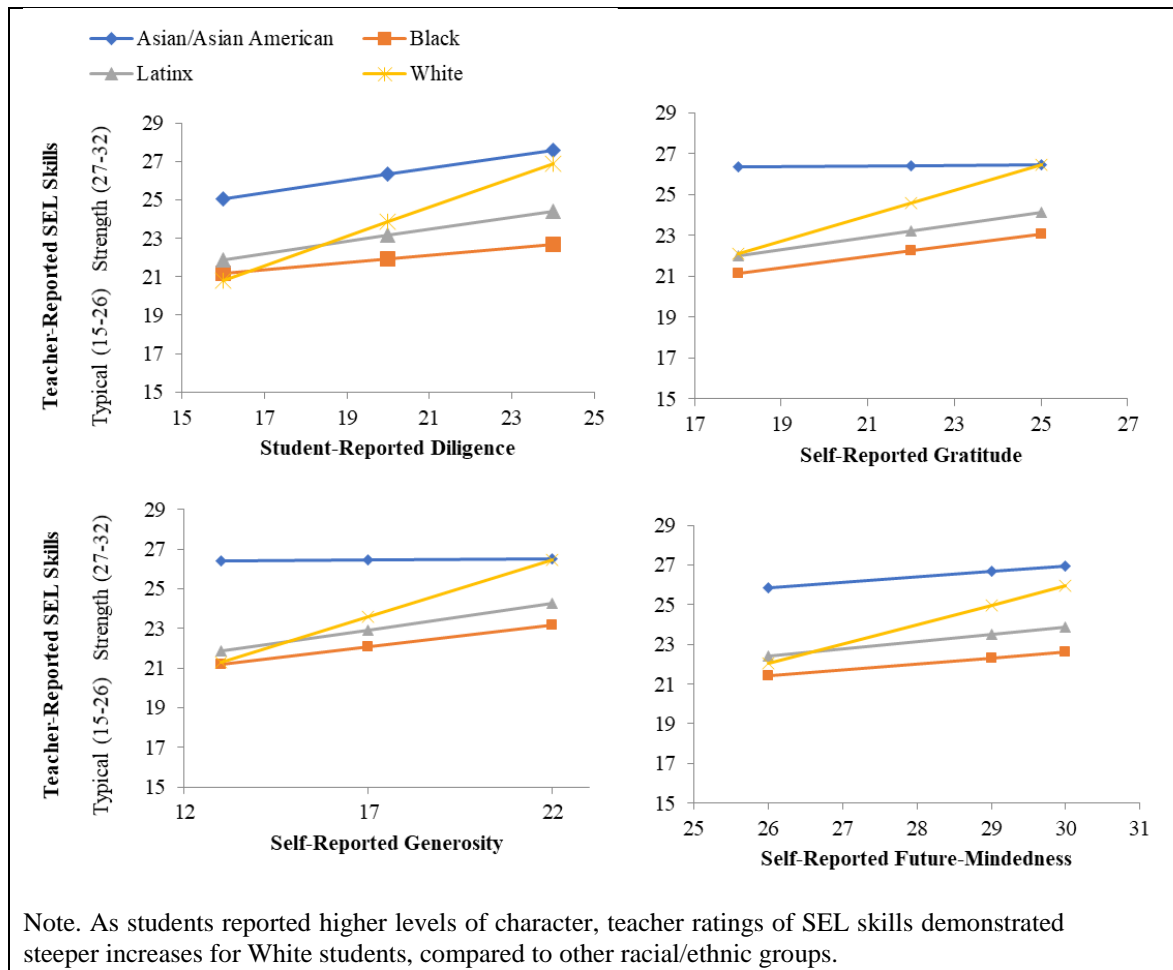


Figure 2. Moderating Role of Race/Ethnicity in Association of Student-Reported Character with Teacher-Reported SEL Skills

Discussion

In the current study, we sought to better understand relations among the key intervention targets of SECD interventions. Results supported the positive role played by the constellation of five character virtues (Diligence, Gratitude, Forgiveness, Generosity, and Future-mindedness) in supporting Positive Purpose and SEL skills. Investigation of the moderating roles of race and sex found that higher student-reported virtues

were associated with a steeper increase in teacher ratings of SEL skills for males and White students, compared to female students and students of color.

The current study contributes to both the SEL and character education fields by providing empirical support for the positive association of character virtues with Positive Purpose and SEL skills in the context of low-resourced urban middle schools. Despite consistent calls for the fields of SEL and character education to join forces (e.g., Elias, 2009; Elias, 2014; Hatchimonji et al., 2017), these two fields have only recently begun to come together in practice. As such, much of the extant research on SEL skills focuses on programme outcomes, such as the association of student SEL competencies with academic (grades and test scores), behavior (discipline referrals), and emotional (emotional distress) outcomes (e.g., Durlak et al., 2011; Taylor et al., 2017). Less attention has been paid to the relationships among the inputs of SEL and character programmes. Thus, this study provides much needed empirical support for the positive association between character virtues and SEL skills. As theorized in the SECD framework, these findings suggest that interventions that cultivate both character virtues and social-emotional skills have the potential to contribute to positive youth development more effectively than either approach independently.

A second unique aspect of the current study is the examination of the theory that a constellation of character virtues supports Positive Purpose development. The theory of SECD conceptualizes Positive Purpose as an overarching meta-virtue supported by a group of focal virtues (Han, 2015; Hatchimonji et al., 2017). Previous research has connected purpose to hope (Bronk, et al., 2009; Burrow et al., 2010) and gratitude (Bronk et al., 2019); however, the constellation of five virtues to support Positive Purpose has not been tested. The finding that the five supporting virtues had a significant combined effect on Positive Purpose while also maintaining unique contributions (with the exception of Forgiveness) represents the first empirical support for a constellation of virtues supporting Positive Purpose. These results support the need for SECD interventions to highlight several complementary character virtues, rather than promote a single virtue.

Our finding that the association of student-reported character with teacher ratings of SEL skills was moderated by race/ethnicity and sex requires more attention in future studies. Higher levels of student-reported virtues were associated with steeper increases in teacher-reported SEL skills for male students as compared to female students. Similarly, higher levels of student-reported virtues were associated with a steeper increases in teacher-rated SEL skills for White students as compared to all other racial groups. These exploratory findings are in line with one previous study that found teacher perceptions of student effort depended on student race (Kozlowski, 2015). Our results also corroborate literature on race and sex disparities in behavior, academic achievement, and discipline (Skiba et al., 2011; Strambler et al., 2017; Voyer & Voyer, 2014) and the less positive impact of SEL skills on academic grades for Black and Indigenous students, compared to White students (Jones et al., 2020). Unfortunately, we are not able to specifically draw conclusions about the role of bias or discrimination in our study because we did not measure student or teacher bias or perceptions of discrimination, nor did we have data available on teacher sociodemographics or cultural competence. However, as previous research has found evidence for educator implicit bias against female, Black, and Latinx

students (Copur-Gencturk et al., 2020) and associations between educator implicit bias and disparities in achievement and discipline (Chin et al., 2020), more research on the process of classroom-based bias and discrimination, particularly in the context of social-emotional and character development, is needed. While the racial/ethnic and sex of educators may play a role in their tendency toward bias, all educators are susceptible to pro-White bias, as teachers from non-White backgrounds have demonstrated bias against Black and Latinx students' mathematical abilities (Copur-Gencturk et al., 2020). Moving forward, research on racial and sex disparities must move away from subgroup comparisons toward measurement of the complex processes that can explain how and why disparities occur.

This study must be interpreted in light of several limitations. For one, data were collected in the 2015-2016 school year, long before the COVID-19 pandemic affected many aspects of school life and social-emotional development. Further, the reliance on a single informant for each measure complicates the interpretation of student-reported measures of character and teacher-reported measures of SEL skills. In addition to a single informant bias, the student-reported data was likely associated with a social desirability bias (Crowne & Marlowe, 1960). Indeed, the variables reported by students in this study demonstrated negative skew, indicating that students rated themselves highly on these variables. To address these issues, future research should combine multiple informants for each of the key variables. Of course, it is possible that students might feel they possess these virtues, and that multiple informants provide different perspectives, rather than a "validity check." In addition, because our sample of schools was small (five schools), we were not able to use multi-level modeling to account for nesting and school-level effects. This research should be conducted in a larger sample of schools to be able to account for school-level effects. An additional limitation of this study was that it was cross-sectional, so we were not able to test whether changes in character virtue were associated with changes in the outcomes of Positive Purpose and SEL skills. Finally, a key limitation to interpreting the exploratory race/ethnicity and sex interaction moderation is the lack of data on teacher sociodemographics and other attributes. Future research should address these limitations by collecting longitudinal, multi-informant quantitative and qualitative data to allow for more nuanced analysis of the development of character virtues and social-emotional skills over time.

The current study lends support to the social-emotional and character development (SECD) framework to promoting Positive Purpose. These results represent the first step in providing empirical support for a model that has previously been supported primarily by theory. More research is needed to examine how character virtues, social-emotional skills, and Positive Purpose develop over time and how the relations of these intervention targets may change over time. As this research continues, it will be important to continue to assess how these relations may differ by race/ethnicity, sex, and other identity factors, with particular attention to how and why these differences may occur. Further, it will be important to test the effectiveness of SECD interventions in cultivating character virtues and social-emotional skills in support of Positive Purpose.

Acknowledgements

This work was supported by grant #56203 from the John Templeton Foundation.

References

- Battistich, V. A. (2008). Voices: A practitioner's perspective: Character education, prevention, and positive youth development. *Journal of Research in Character Education*, 6(2), 81-90.
- Bell, P. J., White, G. W., Hatchimonji, D. R., Stepney, C. T., Linsky, A. V., Vaid, E., & Elias, M. J. (2019). Social-Normative Expectations mediates school climate's association with academic achievement in latino middle school students. *Education and Urban Society*, 51(3), 374-394.
- Bronk, K. C., Hill, P. L., Lapsley, D. K., Talib, T. L., & Finch, H. (2009). Purpose, hope, and life satisfaction in three age groups. *Journal of Positive Psychology*, 4(6), 500-510.
<https://doi.org/10.1080/17439760903271439>
- Bronk, K. C., Baumsteiger, R., Mangan, S. A., Riches, B. R., Dubon, V., Benavides, C., & Bono, G. (2019). Fostering purpose among young adults: Effective online interventions. *Journal of Character Education*, 15(2), 21-38.
- Bundick, M. J., Andrews, M. C., Jones, A., Moran, S., Mariano, J. M., Bronk, K. C., & Damon, W. (2008). *Youth Purpose Survey Version 2008*. Unpublished instrument, Stanford University Center on Adolescence.
- Burrow, A. L., O'Dell, A. C., & Hill, P. L. (2010). Profiles of a developmental asset: Youth purpose as a context for hope and well-being. *Journal of Youth & Adolescence*, 39(11), 1265-1273.
<https://doi.org/10.1007/s10964-009-9481-1>
- Chiaromello, S., Mesnil, M., Muñoz Sastre, M.T., & Mullet, E. (2008). Dispositional forgiveness among adolescents. *European Journal of Developmental Psychology*, 5, 326–337.
- Chin, M. J., Quinn, D. M., Dhaliwal, T. K., & Lovison, V. S. (2020). Bias in the Air: A Nationwide Exploration of Teachers' Implicit Racial Attitudes, Aggregate Bias, and Student Outcomes. *Educational Researcher*, 49(8), 566-578. <https://doi.org/10.3102/0013189X20937240>
- Collaborative for Academic, Social, and Emotional Learning. (2015). *2015 CASEL Guide: Effective Social and Emotional Learning Programs—Middle and High School Edition*. Retrieved from <http://www.casel.org/middle-and-high-school-edition-casel-guide/>.
- Copur-Gencturk, Y., Cimpian, J. R., Lubienski, S. T., & Thacker, I. (2020). Teachers' bias against the mathematical ability of female, Black, and Hispanic Students. *Educational Researcher*, 49(1), 30-43.
<https://doi.org/10.3102/0013189x19890577>
- Crone, E. A., & Fuligni, A. J. (2020). Self and others in adolescence. *Annual Review of Psychology*, 71, 447–469. <https://doi.org/10.1146/annurev-psych-010419-050937>
- Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology*, 24(4), 349

- Damon, W., Menon, J., & Bronk, K. C. (2003). The development of purpose during adolescence. *Applied Developmental Science, 7*(3), 119–128.
- Duckworth, A. L., & Quinn, P. D. (2009). Development and validation of the Short Grit Scale (Grit-S). *Journal of Personality Assessment, 91*(2), 166–74.
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development, 82*, 405–432.
- Elias, M. J. (2009). Social-emotional and character development and academics as a dual focus of educational policy. *Educational Policy, 23*, 831-846.
- Elias, M. J. (2014). The future of character education and social-emotional learning: The need for whole school and community-linked approaches. *Journal of Research in Character Education, 10*(1), 37-42.
- Erikson, E. H. (1968). *Identity: Youth and crisis*. Norton.
- Froh, J. J., Fan, J., Emmons, R. A., Bono, G., Huebner, E. S., & Watkins, P. (2011). Measuring gratitude in youth: Assessing the psychometric properties of adult gratitude scales in children and adolescents. *Psychological Assessment, 23*(2), 311.
- Han, H. (2015). Purpose as a moral virtue for flourishing. *Journal of Moral Education, 44*(3), 291-309.
- Hatchimonji, D. R., Linsky, A. V., & Elias, M. J. (2017). Cultivating Noble Purpose in urban middle schools: A missing piece in school transformation. *Education, 138* (2) 162-178.
- Hatchimonji, D. R., Linsky, A. C. V., Nayman, S. J., & Elias, M. J. (2020). Spiral Model of Phronesis Development: Social-emotional and character development in low-resourced urban schools. *Journal of Moral Education, 49*(1). <https://doi.org/10.1080/03057240.2019.1626703>
- Hatchimonji, D. R., Gregory, A., Osher, D., Selby, E. A., & Elias, M. J. (2021). Student Self-Reported Positive Purpose Over Two Years in Urban Middle Schools. *Journal of Research on Adolescence: The official journal of the Society for Research on Adolescence, 31*(1), 101–119. <https://doi.org/10.1111/jora.12585>
- Hatchimonji, D.R., Selby, E.A., & Elias, M.J. (In preparation). *The Short Grit Scale in Latino Middle School Students*.
- Hayes, A. (2019). The PROCESS macro for SPSS, SAS, and R. Retrieved from <http://processmacro.org/index.html>
- Ingersoll, R. M.; Merrill, E.; Stuckey, D.; and Collins, G. (2018). *Seven Trends: The Transformation of the Teaching Force – Updated October 2018*. CPRE Research Reports. Retrieved from https://repository.upenn.edu/cpre_researchreports/108
- Jones, T. M., Fleming, C., Williford, A., Research and Evaluation Team of Seattle Public Schools. (2020). Racial equity in academic success: the role of school climate and social emotional learning. *Child Youth Services Review, 119*(2020), 105623. 10. 1016/j. childyouth. 2020. 105623

- Kozlowski, K. P. (2015). Culture or teacher bias? Racial and ethnic variation in student–teacher effort assessment match/mismatch. *Race and Social Problems*, 7(1), 43-59.
<https://doi.org/10.1007/s12552-014-9138-x>
- LeBuffe, P. A., Shapiro, V., & Naglieri, J. A. (2009). *Devereux Student Strengths Assessment*. Kaplan Press.
- Lippman, L.H., Moore, K.A., Guzman, L., Ryberg, R., McIntosh, H., Ramos, M.F., ...Kuhfeld, M. (2014) Pilot study and psychometric analyses. In *Flourishing Children: Defining and Testing Indicators of Positive Development*. (pp. 45-105). Springer.
- Malin, H., Reilly, T. S., Quinn, B., & Moran, S. (2013). Adolescent purpose development: Exploring empathy, discovering roles, shifting priorities, and creating pathways. *Journal of Research on Adolescence*, 24(1), 186-199.
- McCullough, M. E., Emmons, R. A., & Tsang, J.-A. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology*, 82, 112–127.
<http://dx.doi.org/10.1037/0022-3514.82.1.112>
- Mullet, E., Barros, J., Frongia, L., Usai, V., Neto, F., & Shafiqhi, S. (2003). Religious involvement and the forgiving personality. *Journal of Personality*, 71(1), 1-19
- Narvaez, D., & Bock, T. (2014). Developing ethical expertise and moral personalities. In L. Nucci, D. Narvaez, & T. Krettenauer (Eds.), *Handbook of moral and character education* (2nd Ed) (pp.140-158). Taylor and Francis.
- Nayman, S. J., Elias, M. J., Selby, E. A., Fishman, D. B., Linsky, A. C. V., & Hatchimonji, D. R. (2019). The relationship among purpose classification, purpose engagement, and purpose commitment in low socioeconomic status and ethnically diverse adolescents. *Journal of Character Education*, 15, 53-70. <https://www.infoagepub.com/jrce-issue.html?i=p5d9e77c976890>
- Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A handbook and classification*. Oxford University Press and American Psychological Association.
- Pizzolato, J. E., Brown, E. L., & Kanny, M. A. (2011). Purpose plus: Supporting youth purpose, control, and academic achievement. *New Directions for Youth Development*, <https://doi.org/10.1002/yd.429>
- Ryff, C. D., Singer, B., & Love, G. D. (2004). Positive health: Connecting well-being with biology. *Philosophical Transactions: Biological Sciences*, 359, 1383–1394. 10.1098/rstb.2004.1521
- Skiba, R. J., Horner, R. H., Chung, C. G., Rausch, M. K., May, S. L., & Tobin, T. (2011). Race is not neutral: A national investigation of African American and Latino disproportionality in school discipline. *School Psychology Review*, 40(1), 85.
- Starck, J. G., Riddle, T., Sinclair, S., & Warikoo, N. (2020). Teachers Are People Too: Examining the Racial Bias of Teachers Compared to Other American Adults. *Educational Researcher*, 49(4), 273 - 284.
<https://doi.org/10.3102/0013189X20912758>
- Strambler, M. J., Linke, L. H., & Ward, N. L. (2017). Community psychology and educational disparities: The role of social settings and status. In *APA handbook of community psychology: Methods for*

community research and action for diverse groups and issues. (pp. 409–423). American Psychological Association.

Taylor, R. D., Oberle, E., Durlak, J.A., Weissberg, R.P. (2017). Promoting positive youth development through school-based social and emotional learning interventions: A meta-analysis of follow-up effects. *Child Development*, 88(4), 1156-1171.

U.S. Department of Education. (2016). *The State of Racial Diversity in the Educator Workforce*. Office of Planning, Evaluation and Policy Development, Policy and Program Studies Service.
<http://www2.ed.gov/rschstat/eval/highered/racial-diversity/state-racial-diversity-workforce.pdf>.

Voyer, D., & Voyer, S. D. (2014). Sex differences in scholastic achievement: A meta-analysis. *Psychological bulletin*, 140(4), 1174.

White, G. W., Stepney, C. T., Hatchimonji, D. R., Linsky, A. V., & Elias, M. J. (2016). The increasing impact of socioeconomic and race on standardized academic test scores across elementary, middle and high school. *American Journal of Orthopsychiatry*, 86(1), 10-23.

Yeager, D. S. (2017). Social and emotional learning programs for adolescents. *The Future of Children*, 27(1), 73–94. <https://doi.org/10.1353/foc.2017.0004>

Yeager, D. S., & Bundick, M. J. (2009). The role of purposeful work goals in promoting meaning in life and in schoolwork during adolescence. *Journal of Adolescent Research*, 24, 423–452.
<https://doi.org/10.1177/0743558409336749>

Zimmer-Gembeck, M. J., & Collins, W. A. (2003). Autonomy development during adolescence. In G. R. Adams & M. D. Berzonsky (Eds.), *Blackwell Handbook of Adolescence* (pp. 175–204). Blackwell.