



## Article

# Too Much of a Good Thing: Social Capital and Academic Stress in South Korea

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**Abstract:** In intense academic environments such as in South Korea, students experience extreme levels of academic stress. This stress peaks as students prepare for the college entrance exam in the final year of high school. Stress is associated with a host of negative outcomes, and academic stress is the leading cause of suicidal ideation among youth in South Korea. Research suggests that in high-stress contexts such as this, social capital can improve academic success and mental health, while reducing risky or deviant behaviors. However, this research has predominantly focused on Western contexts. Because of the unique intensity of educational pursuits and intense investment in education by parents, South Korea provides a compelling case for research on the effects of family and school social capital on youth academic stress. Using data from the Korea Youth Panel Survey ( $N = 2753$ ), we find that particular components of family and school social capital can both reduce and exacerbate academic stress. While measures of closeness and connection to parents reduced academic stress, school social capital had a limited impact on academic stress. Furthermore, there may be a limit to the effectiveness of social capital to help with academic stress before it becomes too much of a good thing.

**Keywords:** social capital; school relationships; education in Asia; South Korea

## 1. Introduction

South Korea's educational environment is intense, competitive, and a major source of stress for students and families. While South Koreans consistently score in the top five among high-income nations on international educational assessments (OECD 2018a), and more 25–34-year-olds in Korea have a university degree than in any other country (70 percent) (OECD 2018b), this academic competition begins early and is the dominant narrative in the lives of families with children under the age of 18 (Kim and Bang 2017; Choi et al. 2019; Seth 2002; Sorensen 1994). For parents, the burden of providing their children with an edge in the ultra-competitive educational environment is a leading cause of anxiety and financial stress (Statistics Korea 2018; Kim and Bang 2017; Seth 2002; Sorensen 1994). For South Korean children, academic stress is a regular feature of childhood and adolescence, the most common reason for life dissatisfaction, and the leading explanation for youth impulse to commit suicide (Statistics Korea 2018; Choi et al. 2019; Kwak and Ickovics 2019).

A powerful mechanism by which parents can invest in their children's success and provide advantages in competitive social contexts while reducing anti-social outcomes is through social capital (Coleman 1988; Novak et al. 2018; Dufur et al. 2015; Hoffmann and Dufur 2018; Caridade et al. 2020). Considering the positive effects that social capital has on academic outcomes and the protective effect social capital has against deviant behaviors, examining social capital's association with academic stress is of interest, especially in high-stress contexts such as in South Korea.

Research examining social capital in general, but social capital used at home and school in particular, has predominantly focused on Western contexts. However, family and school contexts in high-income, non-Western countries vary widely in both intensity and form. Therefore, observing the way family and school social capital affects children in contexts where family and school dynamics differ from the West provides the opportunity to better understand the generalizability of existing social capital research. This also allows us to observe how these mechanisms of parental investment in children, via family and school social capital, work in contexts with historically high family cohesion and more intense and competitive academic experiences.

Using data from the Korea Youth Panel Survey (KYPS), we examine the effects of family and school social capital on academic stress in South Korea, a non-Western country where academic stress and family and school dynamics vary dramatically from Western nations. We find that in South Korea, particular components of family and school social capital can both reduce and exacerbate academic stress in adolescents. This suggests that unlike in Western nations, where social capital generally provides positive support to youth, in South Korea, where there is so much pressure to succeed and so much competition between peers at school, there may be a threshold for the effectiveness of social capital in mitigating academic stress before it becomes too much of a good thing.

### 1.1. Academic Stress

Stress is associated with a host of negative outcomes. These include physical (Thoits 2010), behavioral (Hoffmann 2016; Glozah and Pevalin 2014), and psychological problems (Grant et al. 2004; McMahon et al. 2003; Ayyash-Abdo 2002; Nelson and Crawford 1990). Among adolescents, stress is often linked to schooling (Hirvonen et al. 2019). School-related stress is commonly associated with difficulty navigating social environments, as well as relationships with peers and teachers (Bowker et al. 2000; Seiffge-Krenke et al. 2009), and associated challenges with school performance (Murberg and Bru 2004; Seiffge-Krenke et al. 2012). The most common causes of stress among high school students are exams and homework (Huan et al. 2008). Cross-nationally, nearly 60% of all 15-year-old students in high-income countries worried about taking tests, while 66% worried about bad grades (OECD 2017).

Despite these insights, past research tends to focus on work-related stress or academic stress in college-aged students, rather than adolescents (Akgun and Ciarrochi 2003; Hystad et al. 2009; Ang and Goh 2006; Hjern et al. 2008). Researchers also tend to examine concepts such as academic stress in Western contexts, despite the heightened importance of academic achievement and the greater intensity of academic pursuits in many non-Western countries.

### 1.2. Education in South Korea

East-Asian countries, such as South Korea (hereafter Korea), are known for their intense educational systems (Huan et al. 2008; Choi et al. 2019). The focus on the college entrance exam as a key societal sorting mechanism in East-Asian countries has led to an “educational fever” that creates tremendous pressure for student success (Seth 2002; Kim and Bang 2017). To perform better on the college entrance exam and gain admission to Korea’s most prestigious universities, Korean students devote a significant portion of their early lives to studying. Parents in Korea invest heavily in the academic achievement of their children, spending between 15 percent to 30 percent of their family budget on private education (Lartigue 2000; Yang 2017; Hyundai Research Institute 2007). Korean students spend twice as much time studying as their American counterparts, devoting more time after school and on the weekends in private education (Huan et al. 2008; Lee and Larson 1996; Zhou and Kim 2006). Graduating from a high-ranking university is a top priority for Korean families, as it is seen as the best means for obtaining a secure job with high wages in a competitive market, improving social status, and even helping with marriage prospects (Smits and Park 2009).

As a result of this academic investment, Korean students are among the highest performing in the world (OECD 2016). Korea has the highest number of adults between the ages 25 and 34 with a college

degree (70%), compared to 50 percent of adults between the ages 25 and 34 with a college degree in the United States (OECD 2019). However, with intense pressure from family, community and society to perform well in school, Korean adolescents are also more likely to report stress and negative emotions regarding education when compared to their Western counterparts (Huan et al. 2008; OECD 2017). In fact, research shows that South Korean youth are particularly unhappy (Broadbent et al. 2017). Since 2007, the leading cause of death among Korean youth is suicide, with academic stress described as the most common explanation for the impulse to commit suicide (Statistics Korea 2018). In high-stress academic environments such as in Korea, what can parents do to protect their children from the deleterious effects of academic stress? Research suggests that one way parents help their children is through social capital.

## 2. Social Capital

In Coleman's (1988) seminal work, he argues that resources are created and transmitted through interaction. The benefits, resources, and individual gains that come from these social ties are known as social capital. Parents are often the primary source of social capital for an individual, as they can provide assistance with school, enforce norms for achievement, and share personal information and past experiences (Crosnoe 2008). However, such benefits are contingent on the closeness between parent and child. By investing in the development of their children, parents foster a positive environment and improve the transmission of resources, knowledge and skills, while parents with distant ties to their children impede such transmission (Crosnoe 2008). Social capital is, therefore, not merely being co-resident with or providing basic needs for children; instead, parents build stores of social capital that their children can use through purposeful investment in connections between themselves, their children, and other actors who have an interest in the child's development.

### 2.1. Family Social Capital

Family relationships and investments in children that encourage child well-being and enable socialization are referred to as family social capital (Dufur et al. 2015). This is the time and attention parents invest in their children's development. Children with two parents in a stable relationship benefit from the stability and the social connections of their parents (Parcel and Dufur 2001; Dufur et al. 2015). Having an intact family structure with two married, biological parents is associated with the type of social closure that creates close bonds with parents and creates family social capital (Coleman 1988, 1990). As a result of having access to this form of social capital, children are less likely to engage in deviant or delinquent behavior (Dufur et al. 2015).

Family relations are a primary source of social capital for students. Research on family social capital and educational achievement finds that high levels of family social capital explained student's high math achievement; home environments characterized by rich social capital increased math achievement (Parcel and Dufur 2001). Factors influencing parents' ability to build social capital in home environments, such as increased maternal working hours (Coleman 1988) and single-parent households with less access to parental social investments, were linked to lower levels of achievement (Parcel and Dufur 2001). As parents guide their children through the educational system, they reinforce norms and expectations, both important forms of social capital according to Coleman (1988), and use social connections to provide opportunities for further academic advancement and achievement for their children (Crosnoe 2008). Yet without intentional investment in their child's development or success, the likelihood of a parent's human capital (skills, knowledge) being transmitted to the child is low (Coleman 1988). The transmission of human capital from parent to child occurs through intentional investment and positive bonding interactions with the child; if built and used, family social capital can have a lasting impact on influencing the norms children internalize about education, the degree to which they share their parents' educational expectations, and even their educational achievement and attainment (Dufur et al. 2012; Coleman 1990).

## 2.2. School Social Capital

The family is not the only context where social capital can be acquired. Schools and communities also help individuals access social resources that are beneficial for educational or occupational pursuits, as well as helping to enforce both school and societal norms, beliefs, and behaviors (Coleman 1988). Some examples might include teachers emotionally investing in students, teachers creating social closure by interacting with each other, and school personnel discussing school and personal matters with each other (Dufur et al. 2015). Just as family social capital can help prevent delinquency and improve academic achievement, the interpersonal investments between students and schools also help facilitate positive outcomes (Dufur et al. 2013).

For children and adolescents, relationships with teachers and peers are especially important during their schooling (Bester 2019). School resources are embedded within school social networks (Tsang 2010). Much as parents invest social resources in their children that facilitate the transmission of information, obligations, and norms (Coleman 1988), actors within schools can also invest in or create social resources with youth that lead to the exchange of pro-education and pro-social norms, information about how to succeed in school settings, and expectations for school performance. Therefore, interactions in schools between students and teachers, and the relationships parents and children form with schoolteachers, can create school social capital (Dufur et al. 2015). Student life satisfaction, well-being and risk behavior are directly tied not only to parent-child relationships that make up family social capital, but also to peer relationships and teacher-student relationships created at school (Lau and Li 2011).

Social capital theory has been applied to a variety of adolescent outcomes. Previous research finds that both family and school social capital can help adolescents. These forms of social capital are associated with greater academic achievement (Parcel and Dufur 2001; Crosnoe 2008; Dufur et al. 2013) while reducing delinquency and behavior problems (Dufur et al. 2015; Hoffmann and Dufur 2008). However, even when looking at settings outside of the United States, these studies have largely focused on Western contexts, ignoring the importance of the cultural embeddedness of social capital and how such embeddedness may vary in non-Western contexts (Ream 2005; Han and Grogan-Kaylor 2015).

## 3. The Korean Context

Examining social capital in non-Western settings can provide unique insights into how social capital manifests under varying conditions, while also allowing us to consider the generalizability of past research that has predominantly focused on Western settings. As we consider how school and family contexts affect academic stress in Korea, it is important that we think about what is different in the family and school contexts in Korea.

Family structure in Korea is more traditional and conservative than in high-income Western contexts. While divorce rates have increased in the past two decades, Korean family structures are still more stable than in Western nations, and Korean children are much more likely to reside in a home with two married parents (Woo et al. 2020). These patterns fit the description of social closure Coleman (1988) describes as characterizing social capital. Family dynamics in Korea are also different than in Western countries. In Korea, parent-child relationships tend to be close, with a mutual reliance on or obligation to one another (Jin 2015), and like many East-Asian nations, parenting style tends to focus on forming interdependence among parents and children (Chao and Tseng 2002). While East-Asian parental parenting styles tend to be more authoritarian, strict or controlling parenting may be interpreted positively as parental concern and care in the Asian context (Ang and Goh 2006). These distinct parenting styles may indicate additional opportunities to build family social capital that are less available in Western contexts. While the Korean family context is often explained through the historical and cultural lens of Confucianism, Korea is changing rapidly and such family dynamics may be in flux.

Finally, the Korean school context also differs from schooling in Western nations. Korean education is also influenced by Confucianism, which is reflected in the more hierarchical educational environment

(Shin and Koh 2007). Teacher and student relationships are less egalitarian and teacher authority is less challenged than in the West (Shin and Koh 2007). This may indicate fewer opportunities for students to build social capital at school than for students in Western contexts. As mentioned previously, academic achievement in Korea is uniquely intense, and a source of stress and hardship for students and parents alike. While academic concerns are experienced across high-income nations, Korean students study more, their parents invest more in their education, and the educational expectations are especially high. Korean students spend more time on academic pursuits, which may decrease the time that they have available to build social capital with families and peers. Further, unlike academic stress experienced in Western countries, such as the United States, academic stress in Korea is more pervasive and intense. If social capital from either family or school helps to ameliorate academic stress, this mechanism may be present even more strongly in the high-stress Korean context.

Therefore, when examining social capital and academic stress in Korea, we must consider that the bonds, responsibilities, and investments between parents and children appear especially intense, perhaps indicating additional social capital in the Korean context that could be used to facilitate a number of positive outcomes. However, at the same time, investment in children is inextricably intertwined with educational success, and the presence of high-stakes schooling may mean that additional social capital is used to transmit high-pressure norms and expectations across social ties and networks that cause damaging stress to Korean students. These differences may affect the way that social capital is formed within the Korean family or the way or extent to which social capital influences adolescent outcomes, such as academic stress.

### *This Study*

By examining how family and school social capital are associated with academic stress in South Korea, we contribute to research on social capital in the following ways: (1) we expand the scope of analysis to a non-Western context, where family structure, family dynamics, and cohesion differ, and academic pursuits are much more intense and competitive, and examine whether family and social capital work in a similar manner as in Western contexts. (2) We consider how *family* social capital affects academic stress in the competitive academic Korean context, where the family has historically been more conservative, stable, and parent–child relationships more interdependent and close-knit. (3) We examine how *school* social capital affects academic stress in Korea’s more intense educational context, where parental investment in academic achievement is much higher and student relationships with teachers are more hierarchical and less egalitarian. We expect that the comparatively close-knit family structures in Korean society may lead to greater expected investments in others and, therefore, create an abundance of social capital for adolescents, reducing academic stress. We also expect that connections and relationships with peers and teachers will be generally beneficial for students and reduce academic stress. However, due to the high-stakes Korean educational environment, student relationships with parents, teachers, or peers that would generally be expected to create beneficial social capital, may instead lead to greater pressure to live up to high expectations instead of reducing academic stress.

## **4. Materials and Methods**

### *4.1. Sample*

To examine the effects of family and school social capital on academic stress among Korean youth, we use data from the Korean Youth Panel Survey (KYPS). The KYPS is a nationally representative, longitudinal cohort study that uses a three-stage stratified sampling strategy, sampling from school districts, schools, and classrooms. We account for this design by using the cross-sectional sampling weights provided with the survey data. Survey responses were self-reported by the child and their parent with the help of an interviewer (National Youth Policy Institute 2012). Given our focus on adolescents and academic stress, we use data from the latter cohort that follows youth from eighth



grade to one year after high school graduation. It is important to note that Korean youth work from elementary school through 12th grade in preparation for the college entrance exam (CSAT). We use data from the fifth wave of data collection (representing youth in their final year of high school), as this is the year students take the college entrance exam and is therefore the most stressful year for students.

Our analytic sample originally included all cases for which both the youth and parent questionnaires had been completed during the fifth wave of data collection ( $N = 2881$ ). We then examined the data for systematic patterns of missing data and concluded that, while missing data were present on a number of variables, no systemic biases were present. Further, Little's test for covariate dependent missingness revealed that our data can be assumed to be Missing Completely At Random. Given this evidence, variables which were missing on fewer than three percent of cases were treated with listwise deletion; variables which were missing between three percent and fifty percent were then treated with multiple imputation via chained equations in Stata16. We imputed 20 complete datasets with a burn-in period of 500 iterations between imputations. After restricting our sample to individuals with valid sampling weights and addressing missing data, our analytic sample consists of 2753 adolescents.

## 4.2. Measures

### 4.2.1. Dependent Variable

We measure academic stress on a scale from 0 to 4 composed of five separate measures indicating child stress related to schooling ( $\alpha = 0.85$ ). These include child responses on the following statements: (1) I get stressed by my parents' concern about my school grades, (2) I get stressed by poor school grades, (3) I get stressed by home assignments or examinations, (4) I get stressed by college preparation or job prospects, and (5) I get stressed because it is boring to study.

### 4.2.2. Independent Variables

Our measures of social capital are based on a robust body of literature encompassing a variety of indicators of adolescent social capital (Dufur et al. 2013, 2015). The KYPS includes information about social capital indicators that can broadly be conceptualized into two types of social capital: family social capital and school social capital. The measure of family social capital is composed of six indicators consisting of the child-reported responses to statements such as "my parents always treat me with love and affection," and "my parents and I understand each other well". School social capital is measured with five indicators. Indicators of school social capital include youth responses to statements such as "I can talk about all of my troubles and worries with my teacher". Responses to these statements ranged from 0 (very untrue) to 4 (very true). Higher values on all types of social capital represent greater social capital. Rather than create scales for family and school social capital, we chose instead to look at social capital as separate variables with the goal of providing specific actions to suggest to build social capital and protect students from academic stress.

### 4.2.3. Controls

We include a number of individual and family characteristics in our models that have associations with social capital and youth outcomes. These include respondent gender (Rosenfield and Mouzon 2013), age (Ferraro and Wilkinson 2013), household income and parental education (Lorant et al. 2003), family structure (Umberson et al. 2013), mother's employment, and whether the child smokes and drinks (Park 2008). For measures of youth gender, we use a binary measure of gender where 1 = female and 0 = male. Respondent age is measured in years and is created from the reported birth month and year. Household income was reported by the interviewed parent in the fifth wave, converted from Korean Won to US dollars, and indicates the average monthly household income. Reported household income followed a slightly skewed distribution, so we used a logarithmic transformation. Parental education is measured by three categories that reflect the highest

level of education completed by either parent in two-parent homes, or the highest completed education of the resident parent in single-parent homes. The educational categories include less than high school (reference), high school degree, and bachelor's degree or higher. Family structure is measured as a series of dichotomous measures indicating the relationship of resident parents to the respondent. Categories include both married biological parents, a single biological parent, and reconstituted family (stepfamily). Mother's employment includes full-time employment (reference), part-time employment, or unemployed status. Both smoking and drinking are self-reported by the adolescent respondent and are measured dichotomously, where an affirmative response indicates that the adolescent has used these substances within the past 12 months.

## 5. Results

Descriptive statistics can be found in Table 1. Beginning with our dependent variable (academic stress), we see that Korean youth report an average academic stress score of 14.75. Among our measures capturing family social capital, the average scores ranged from a low of 3.38 (My parents and I candidly talk about everything) to a high of 3.82 (My parents always treat me with love and affection). Among our measures capturing school social capital, the average scores ranged from a low of 2.55 (I can talk about all my troubles and worries to my teachers without reservation) to a high of 3.88 (I get along well with friends at school). Nearly half of the sample is female (47 percent), and the average respondent age is nearly 18 years old (17.78). Approximately 89 percent of our sample lived with two-biological married parents, 6 percent with single parents, and the remaining 5 percent lived in stepparent homes. When looking at parent's highest education, 37 percent had a college degree or higher, 55 percent had graduated from high school and only 9 percent had not completed high school. Only 53 percent of mothers worked fulltime. Thirty-five percent of respondents in our sample had participated some form of shadow education (both math and English), 14 percent had smoked in the past year, and 53 percent had consumed alcohol in the past year.

**Table 1.** Summary Statistics for Variables Included in Regression Models: KYPS, Wave 5, 2008 (N = 2753).

Variables.	Mean/Prop.	SD	Range
<b>Dependent Variable</b>			
Academic Stress Scale	14.75	4.27	5–25
<b>Key Independent Variables</b>			
<i>Family Social Capital</i>			
My parents and I have frequent conversations	3.55	0.93	1–5
My parents always treat me with love and affection	3.82	0.84	1–5
I often talk about my career plan with my parents	3.50	0.82	1–5
My parents and I understand each other well	3.50	0.90	1–5
My parents and I candidly talk about everything	3.38	1.01	1–5
I frequently talk about my thoughts and what I experience away from home with my parents	3.43	1.05	1–5
<i>School Social Capital</i>			
I can talk about all my troubles and worries to my teachers without reservation	2.55	1.07	1–5
Teachers treat me with love and affection	2.88	1.03	1–5
I hope to become a person like my teacher	2.38	1.08	1–5
I rarely feel lonely at school when other students are around	3.61	1.04	1–5
I get along well with friends at school	3.88	0.82	1–5

Table 1. Cont.

Variables.	Mean/Prop.	SD	Range
<b>Controls</b>			
Gender (female)	0.47		
Age	17.78	0.42	17–19
<i>Household Characteristics</i>			
Household Income (logged)	7.83	0.60	0–9.44
Family Structure			0–1
Married, Biological, Two Parent	0.89		
Single Parent	0.60		
Reconstituted (Stepparent)	0.50		
Parental Education			1–3
Less than High School	0.09		
High School	0.55		
College or Higher	0.37		
Mother's Employment			1–3
Full Time	0.53		
Part Time	0.01		
Unemployed/Housewife	0.47		
Shadow Education			0–1
Math (yes)	0.35		
English (yes)	0.35		
Risky Behavior			0–1
Smoking in the past Year	0.14		
Drinking Alcohol in the past Year	0.53		

Data: Korean Youth Panel Survey (KYPS), Cohort 1.

Table 2 presents the results from the OLS regression models predicting respondent's school stress. In Model 1, we examine the effects of family social capital on academic stress. In the bivariate analysis, we see that the more respondents feel that they and their parents understand each other, the less academic stress they feel (−0.9 unit decrease  $p < 0.001$ ). Talking with parents candidly about everything is also associated with a significant decrease in academic stress (−0.595 unit decrease  $p < 0.001$ ). Finally, and surprisingly, the more respondents agree that they frequently talk to their parents about their thoughts and experiences, the more academic stress they experience (0.273 unit increase  $p < 0.05$ ). In Model 2, we examine the effects of school social capital on academic stress. Most of the measures capturing school social capital are not significantly associated with respondent academic stress. In this bivariate analysis, the measures that are significantly associated with respondent academic stress include rarely feeling lonely at school, and getting along well with friends at school. The more respondents agree that they rarely feel lonely at school, the less academic stress they experience (−1.111 unit decrease  $p < 0.001$ ). Surprisingly, the more strongly students feel that they get along with friends at school, the more academic stress they experience (0.319 unit increase  $p < 0.01$ ). These findings suggest that at the bivariate level, there are measures of family and school social capital that are associated with both decreases and increases in respondent academic stress.



**Table 2.** OLS Regression Predicting Academic Stress by Family and School Social Capital, Individual and Household Characteristics: KYPS, Wave 5, 2008 (N = 2753).

	Model 1	Model 2	Model 3 (Full)
<b>Family Social Capital</b>			
My parents and I have frequent conversations	0.161 (0.160)		0.067 (0.149)
My parents always treat me with love and affection	0.21 (0.144)		0.164 (0.137)
How often do you talk about your career plans with parents?	0.242 (0.137)		0.092 (0.127)
My parents and I understand each other well	−0.9 *** (0.165)		−0.754 *** (0.151)
My parents and I candidly talk about everything	−0.595 *** (0.135)		−0.554 *** (0.126)
I frequently talk to parents about my thoughts and experiences	0.273 * (0.135)		0.254 * (0.126)
<b>School Social Capital</b>			
I can talk about my troubles and worries with my teachers		−0.095 (0.100)	−0.031 (0.096)
Teachers treat me with love and affection		−0.102 (0.121)	−0.117 (0.117)
I hope to become a person like my teacher		−0.100 (0.104)	−0.063 (0.098)
I rarely feel lonely at school when other students are around		−1.111 *** (0.089)	−1.01 *** (0.085)
I get along well with friends at school		0.319 ** (0.121)	0.389 ** (0.120)
<b>Family Structure</b>			
Single Parent			−0.305 (0.362)
Stepparent			0.309 (0.341)
<b>Household Income (log)</b>			
			0.171 (0.139)
<b>Mother's Employment</b>			
Part Time			−1.880 (1.110)
Unemployed/Housewife			−1.720 (0.160)
<b>Parental Education</b>			
High School			0.700 * (0.290)
College or Higher			1.111 *** (0.312)
<b>Female</b>			
			0.275 (0.168)
<b>Age</b>			
			0.208 (0.184)
<b>Shadow Education</b>			
Math (yes)			1.199 *** (0.190)
English (yes)			0.831 *** (0.194)
<b>Smoking in the past Year (Yes)</b>			
			−0.653 * (0.252)
<b>Drinking Alcohol in the past Year (Yes)</b>			
			0.194 (0.162)

Note: \*  $p < 0.05$ , \*\*  $p < 0.01$ , and \*\*\*  $p < 0.001$ . Reference: unemployed, less than high school; data: the Korean Youth Panel Survey (KYPS), Cohort 1. Note: standard errors in parentheses.

We include a host of relevant control variables along with family and school social capital in Model 3. Results from the full model largely support the conclusions from the bivariate models: respondent family social capital is associated with *both* increased and decreased academic stress. In Model 3, we again see that the more respondents feel that they and their parents understand each

other, the less academic stress they experience ( $-0.754$  unit decrease  $p < 0.001$ ). Talking with parents candidly about everything is also associated with a significant decrease in academic stress ( $-0.554$  unit decrease  $p < 0.001$ ). Our surprise finding from the bivariate analysis, that the more respondents agreed that they frequently talk to their parents about their thoughts and experiences, the more academic stress they experienced, remained significant in the full model ( $0.254$  unit increase  $p < 0.05$ ). As in the bivariate model, most of the measures capturing school social capital are not significantly associated with respondent academic stress. The two measures that remain significantly associated with respondent school stress are rarely feeling lonely at school and getting along well with friends at school. Again, the more respondents agree that they rarely feel lonely at school, the less academic stress they experience ( $-1.01$  unit decrease  $p < 0.001$ ). Further, our finding that the more strongly students feel that they get along with friends at school, the more academic stress they experience, remains significant in the full model ( $0.389$  unit increase  $p < 0.01$ ). Interestingly, among the control variables, measures related to academic achievement are statistically associated with youth academic stress. Greater parental educational attainment is associated with more youth academic stress, and when respondents participate in either math or English shadow education, they also experience more academic stress ( $1.199$  unit increase  $p < 0.001$ , and  $0.831$  unit increase  $p < 0.001$  respectively).

## 6. Discussion

Our study adds to a growing body of research on social capital by examining the effects of particular aspects of family and school social capital on academic stress in South Korea, a non-Western context. Because of the unique intensity of educational pursuits and the overall high investment in children by parents, Korea provides a compelling comparative case for research on social capital. Based on past research in Western contexts, we expected to find that family and school social capital would help youth deal with academic stress. We found that in some regards, the effect of social capital does not appear to be context specific. In other words, despite Korea's different family dynamics, and despite academic stress being so much more intense in Korea, family social capital worked in a similar fashion to what we see in Western contexts (Dufur et al. 2013). Parental investment in youth helps promote healthy youth development in a similar manner regardless of the intensity of educational context. In particular, closeness and connection with parents helped Korean youth deal with the most intense and damaging source of stress in their lives. However, unlike what past research has found in Western contexts (Dufur et al. 2015), school social capital generally did not reduce school stress in Korean youth. While school social capital tends to have weaker effects on youth outcomes than family social capital in Western contexts, it does generally exert desirable and statistically significant effects (Dufur et al. 2013, 2015). It is possible that the hierarchical nature of Korean educational settings might provide obstacles to the creation of social capital between Korean students and adult school personnel. As research using the KYPS has suggested, social capital can be useful in preventing adolescent mental health problems beyond academic stress. Schools and teachers in Korea could focus more on increasing the ability of Korean students to build social capital at school as an important tool in helping students manage the dangerous levels of stress introduced in this setting. In the Korean academic context, where so much of the teacher's focus is on college entrance exam performance, increasing school social capital by building teacher–student relationships and trust might not only lead to less academic stress, but also improved exam scores.

What was most interesting in our examination of how these two forms of social capital affect academic stress is that there are components of both family and school social capital that actually increased academic stress. What this suggests is that when Korean students have more of these elements of social capital, it appears to make academic stress worse and not better. This is in sharp contrast to the associations for social capital in Western contexts, which find almost exclusively helpful relationships encouraging prosocial outcomes and discouraging antisocial ones. In particular, with regards to Korean family social capital, frequently talking about thoughts and experiences was associated with more academic stress. With school social capital, Korean youth had lower levels of stress when they created

social connections with their friends at school, but students who got along with their friends at school experienced more school stress. This suggests that the high-stakes educational norms that students pass across their social capital networks may be damaging rather than helpful. Because having social ties appears to be beneficial, it might be useful to provide students with other activities and interests over which they can bond, promoting supportive social capital and limiting the social capital that transmits high-stress norms from student to student.

These findings have important implications. First, these patterns suggest that social capital is not uniformly helpful across all contexts or all outcomes. Examining outcomes where social ties transmit high-stakes expectations may reveal arenas in which the social capital that transmits those norms can be harmful. Typical efforts to build social capital may, in such circumstances, reduce the effectiveness of the social capital. Perhaps in high-stress contexts such as in Korea, support and investment may be perceived as pressure, especially when connected to already high-stakes situations. Second, the nature of the parent-child relationship in Korea is one where parents are highly engaged in the academic pursuits of their children, especially mothers. As families invest huge resources in their children's academic achievement (Lartigue 2000; Yang 2017; Hyundai Research Institute 2007), mothers have an incentive to monitor this investment, often adopting the role of educational overseer, organizing educational schedules, choosing private tutors and after-school studies, and assessing child performance. In Korea, their own success as mothers is largely a product of their child's academic success. In this context, where family norms include less independence for youth, and instead the expectations of an interdependent, close, cohesive family unit that is mobilizing behind a student's academic efforts, perhaps any conversation with parents becomes a reminder of the stresses in youth's lives or the high stakes of their studies. While this form of engagement builds strong ties, and therefore social capital, such capital may be more useful in promoting academic achievement but lack the ability to protect youth from academic stress. Another way to think about this is that Korean youth have a great deal of family social capital, and these strong ties and family social capital operate exactly as we might expect in transmitting norms and expectations across social ties. However, this effective social capital may be less desirable when the norms and expectations being transmitted to Korean youth raise academic stress to unhealthy levels. Third, in intensely competitive environments, social capital generated among friends may be tainted by competition. Engagement with friends may be a reminder of who students are competing with and against, rather than a helpful or supportive resource for dealing with difficult school circumstances. Engaging with friends may also be a welcomed distraction from the intensive educational environment Korean youth experience, but if this engagement comes at the expense of studying and school performance, it may in turn lead to further academic stress. By looking at multiple measures of school social capital, we see that the relationship with peers is a complicated balance of support and stress. Again, these insights might be described as looking at both the quality and quantity of social capital available to youth. While we tend to conceptualize social capital as positive, perhaps there can be too much social capital.

Future research on social capital in non-Western contexts should attempt to separate which parent is constructing social capital, as this may alter the effectiveness of that capital. In Korea, where mothers play a central role in their children's educational pursuit, they may be more sensitive to children's worries or more demanding. As Korean fathers expand their involvement in their children's lives, they may be a helpful resource for providing social capital in a manner that mitigates rather than exacerbates academic stress. Finally, future research should compare academic stress and these forms of social capital to similar contexts, such as China or Taiwan, to determine whether this is an East-Asian trend based on the highly competitive educational environments and deeply involved parental engagement. Perhaps in other high-stress educational contexts, there may also be a threshold for the effectiveness of social capital in mitigating school stress before it becomes too much of a good thing.

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## References

- Akgun, Serap, and Joseph Ciarrochi. 2003. Learned Resourcefulness Moderates the Relationship between Academic Stress and Academic Performance. *Educational Psychology* 23: 287–94. [CrossRef]
- Ang, Rebecca P., and Dion H Goh. 2006. Authoritarian Parenting Style in Asian Societies: A Cluster- Analytic Investigation\*. *Contemporary Family Therapy* 28: 131–51. [CrossRef]
- Ayyash-Abdo, Huda. 2002. Adolescent suicide: An ecological approach. *Psychology in the Schools* 39: 459–75. [CrossRef]
- Bester, Garfield. 2019. Stress experienced by adolescents in school: The importance of personality and interpersonal relationships. *Journal of Child & Adolescent Mental Health* 31: 25–37. [CrossRef]
- Bowker, Anne, William M. Bukowski, Shelley Hymel, and Lorrie K. Sippola. 2000. Coping with Daily Hassles in the Peer Group during Early Adolescence: Variations as a Function of Peer Experience. *Journal of Research on Adolescence* 10: 211–43. [CrossRef]
- Broadbent, Emma, John Gougoulis, Nicole Lui, Vikas Pota, and Jonathan Simons. 2017. What the World’s Young People Think and Feel. Generation Z: General Citizenship Survey. Varkey Foundation. Available online: <https://www.varkeyfoundation.org/media/4487/global-young-people-report-single-pages-new.pdf> (accessed on 1 August 2020).
- Caridade, Sónia Maria Martins, Hélder Fernando Pedrosa e Sousa, and Maria Alzira Pimenta Dinis. 2020. The Mediating Effect of Parental Involvement on School Climate and Behavior Problems: School Personnel Perceptions. *Behavioral Sciences* 10: 129. [CrossRef] [PubMed]
- Chao, Ruth, and Vivian Tseng. 2002. Parenting of Asians. In *Handbook of Parenting. Vol. 4, Social Conditions and Applied Parenting*, 2nd ed. Edited by Marc H. Bornstein. Mahwah: Lawrence Erlbaum, pp. 59–93.
- Choi, Changyong, Juyeon Lee, Min Sang Yoo, and Eunhye Ko. 2019. South Korean children’s academic achievement and subjective well-being: The mediation of academic stress and the moderation of perceived fairness of parents and teachers. *Children and Youth Services Review* 100: 22–30. [CrossRef]
- Coleman, James S. 1988. Social Capital in the Creation of Human Capital. *American Journal of Sociology* 94: S94–120. [CrossRef]
- Coleman, James S. 1990. *Foundations of Social Theory*. Cambridge: Harvard University Press.
- Crosnoe, Robert. 2008. Social Capital and the Interplay of Families and Schools. *Journal of Marriage and Family* 66: 267–80. [CrossRef]
- Dufur, Mikaela J., Toby L. Parcel, and Benjamin A. McKune. 2012. Does Capital at Home Matter More than Capital at School? The Case of Adolescent Alcohol and Marijuana Use. *Journal of Drug Issues* 43: 85–102. [CrossRef]
- Dufur, Mikaela J., Toby L. Parcel, and Kelly P. Troutman. 2013. Does capital at home matter more than capital at school? Social capital effects on academic achievement. *Research in Social Stratification and Mobility* 31: 1–21. [CrossRef]
- Dufur, Mikaela J., John P. Hoffmann, David B. Braudt, Toby L. Parcel, and Karen R. Spence. 2015. Examining the Effects of Family and School Social Capital on Delinquent Behavior. *Deviant Behavior* 36: 511–26. [CrossRef]
- Ferraro, Kenneth F., and Lindsay R. Wilkinson. 2013. Age, Aging, and Mental Health. In *Handbook of the Sociology of Mental Health*. Edited by Carol S. Aneshensel, Jo C. Phelan and Alex Bierman. Dordrecht: Springer, pp. 183–203.
- Glozah, Franklin N., and David J. Pevalin. 2014. Social support, stress, health, and academic success in Ghanaian adolescents: A path analysis. *Journal of Adolescence* 37: 451–60. [CrossRef] [PubMed]
- Grant, Kathryn E., Bruce E. Compas, Audrey E. Thurm, Susan D. McMahon, and Polly Y. Gipson. 2004. Stressors and Child and Adolescent Psychopathology: Measurement Issues and Prospective Effects. *Journal of Clinical Child & Adolescent Psychology* 33: 412–25. [CrossRef]

- Han, Yoonsun, and Andrew Grogan-Kaylor. 2015. Social Capital and the Onset of Health-Risk Behaviors among Korean Youths. *Social Work Research* 39: 199–211. [CrossRef]
- Hirvonen, Riikka, Laura Yli-Kivistö, Dave Putwain, Timo Ahonen, and Noona Kiuru. 2019. School-related stress among sixth-grade students—Associations with academic buoyancy and temperament. *Learning and Individual Differences* 70: 100–8. [CrossRef]
- Hjern, Anders, Gösta Alfvén, and Viveca Ostberg. 2008. School stressors, psychological complaints and psychosomatic pain. *Acta Paediatrica* 97: 112–17. [CrossRef] [PubMed]
- Hoffmann, John P. 2016. Cumulative Stress and Substance Use From Early Adolescence to Emerging Adulthood. *Journal of Drug Issues* 46: 267–88. [CrossRef]
- Hoffmann, John P., and M.J. Dufur. 2008. Family and School Capital Effects on Delinquency: Substitutes or Complements? *Sociological Perspectives* 51: 29–62. [CrossRef]
- Hoffmann, J. P., and M. J. Dufur. 2018. Family social capital, family bonds, and juvenile delinquency. *American Behavioral Scientist* 62: 1525–44. [CrossRef]
- Huan, Vivien S., Yeo Lay See, Rebecca P. Ang, and Chong Wan Har. 2008. The impact of adolescent concerns on their academic stress. *Educational Review* 60: 169–78. [CrossRef]
- Hystad, Sigurd W., Jarle Eid, Jon C. Laberg, Bjørn H. Johnsen, and Paul T. Bartone. 2009. Academic Stress and Health: Exploring the Moderating Role of Personality Hardiness. *Scandinavian Journal of Educational Research* 53: 421–29. [CrossRef]
- Hyundai Research Institute. 2007. Private Education, the Major Cause of Anxious Old Age. *Weekly Economic Review* 246: 1–16.
- Jin, Bora. 2015. Family Cohesion and Child Functioning among South Korean Immigrants in the US: The Mediating Role of Korean Parent-Child Closeness and the Moderating Role of Acculturation. Ph.D. dissertation, Department of Child and Family Studies, Syracuse University, Syracuse, NY, USA.
- Kim, Jin-Sook, and Hyeyoung Bang. 2017. Education fever: Korean parents' aspirations for their children's schooling and future career. *Pedagogy, Culture & Society* 25: 207–24. [CrossRef]
- Kwak, Chae Woon, and Jeannette R. Ickovics. 2019. Adolescent suicide in South Korea: Risk factors and proposed multi-dimensional solution. *Asian Journal of Psychiatry* 43: 150–53. [CrossRef] [PubMed]
- Lartigue, Casey J., Jr. 2000. You'll never guess what South Korea frowns upon. *Washington Post*, May 28.
- Lau, Maggie, and Wanxin Li. 2011. The extent of family and school social capital promoting positive subjective well-being among primary school children in Shenzhen, China. *Children and Youth Services Review* 33: 1573–82. [CrossRef]
- Lee, Meery, and Reed Larson. 1996. The Effectiveness of Coping in Adolescence: The Case of Korean Examination Stress. *International Journal of Behavioral Development* 19: 851–69. [CrossRef]
- Lorant, Vincent, Denise Deliege, William Eaton, Annie Robert, Pierre Philippot, and Marc Ansseau. 2003. Socioeconomic Inequalities in Depression: A Meta-Analysis. *American Journal of Epidemiology* 157: 98–112. [CrossRef]
- McMahon, Susan D., Kathryn E. Grant, Bruce E. Compas, Audrey E. Thurm, and Sydney Ey. 2003. Stress and Psychopathology in Children and Adolescents: Is There Evidence of Specificity? *Journal of Child Psychology and Psychiatry, and Allied Disciplines* 44: 107–33. [CrossRef]
- Murberg, Terje A., and Edvin Bru. 2004. School-Related Stress and Psychosomatic Symptoms among Norwegian Adolescents. *School Psychology International* 25: 317–32. [CrossRef]
- National Youth Policy Institute. 2012. *Korea Youth Panel Survey—Elementary 4th Grade User's Guide*. Seoul: National Youth Policy Institute.
- Nelson, Richard E., and Beth Crawford. 1990. Suicide among elementary school-aged children. *Elementary School Guidance & Counseling* 25: 123–28.
- Novak, Dario, Arunas Emeljanovas, Brigita Mieziene, Branislav Antala, Lovro Štefan, and Ichiro Kawachi. 2018. Is Social Capital Associated with Academic Achievement in Lithuanian High-school Students? A Population-based Study. *Montenegrin Journal of Sports Science & Medicine* 7: 1–7. [CrossRef]
- OECD. 2016. *PISA 2015 Results (Volume I): Excellence and Equity in Education*. Paris: OECD Publishing. [CrossRef]
- OECD. 2017. *PISA 2015 Results (Volume III): Students' Well-Being*. Paris: OECD Publishing. [CrossRef]
- OECD. 2018a. Program for International Student Assessment (PISA). 2018 Reading, Mathematics and Science Assessment. Available online: <https://pisadataexplorer.oecd.org/ide/idepisa/report.aspx> (accessed on 1 October 2020).



- OECD. 2018b. *Education at a Glance 2018: OECD Indicators*. Paris: OECD Publishing. [CrossRef]
- OECD. 2019. *Education at a Glance 2019: OECD Indicators*. Paris: OECD Publishing. [CrossRef]
- Parcel, Toby L., and Mikaela J. Dufur. 2001. Capital at Home and at School: Effects on Child Social Adjustment. *Journal of Marriage and Family* 63: 32–47. [CrossRef]
- Park, Eunok. 2008. The Influencing Factors on Suicide Attempt among Adolescents in South Korea. *Journal of Korean Academy of Nursing* 38: 465–73. [CrossRef]
- Ream, Robert K. 2005. Toward Understanding How Social Capital Mediates the Impact of Mobility on Mexican American Achievement. *Social Forces* 84: 201–24. [CrossRef]
- Rosenfield, Sarah, and Dawne Mouzon. 2013. Gender and Mental Health. In *Handbook of the Sociology of Mental Health*. Edited by Carol S. Aneshensel, Jo C. Phelan and Alex Bierman. Dordrecht: Springer, pp. 277–96.
- Seiffge-Krenke, Inge, Kaisa Aunola, and Jari-Erik Nurmi. 2009. Changes in stress perception and coping during adolescence: The role of situational and personal factors. *Child Development* 80: 259–79. [CrossRef]
- Seiffge-Krenke, Inge, Malte Persike, Cecilia Chau, Leo B. Hendry, Marion Kloepp, Michelle Terzini-Hollar, Vicky Tam, Carmen Rodriguez Naranjo, Dora Herrera, Palma Menna, and et al. 2012. Differences in agency? How adolescents from 18 countries perceive and cope with their futures. *International Journal of Behavioral Development* 36: 258–70. [CrossRef]
- Seth, Michael J. 2002. *Education Fever: Society, Politics and the Pursuit of Schooling in South Korea*. Honolulu: University of Hawai'i Press.
- Shin, Sunwoo, and Myung-Sook Koh. 2007. A Cross-Cultural Study of Teachers' Beliefs and Strategies on Classroom Behavior Management in Urban American and Korean School Systems. *Education and Urban Society* 39: 286–309. [CrossRef]
- Smits, J., and Hyunjoon Park. 2009. Five Decades of Educational Assortative Mating in 10 East Asian Societies. *Social Forces* 88: 227–55. [CrossRef]
- Sorensen, Clark W. 1994. Success and Education in South Korea. *Comparative Education Review* 38: 10–35. [CrossRef]
- Statistics Korea. 2018. Private Education Expenditures Survey of Elementary, Middle and High School Students in 2018. Available online: <http://kostat.go.kr/portal/eng/pressReleases/1/index.board?bmode=read&aSeq=374184> (accessed on 1 November 2019).
- Thoits, Peggy A. 2010. Stress and health: Major findings and policy implications. *Journal of Health and Social Behavior* 51: S41–53. [CrossRef] [PubMed]
- Tsang, Kwok-Kuan. 2010. School social capital and school effectiveness. *Education Journal* 37: 119–36.
- Umberson, Debra, Mieke Beth Thomeer, and Kristi Williams. 2013. Family Status and Mental Health: Recent Advances and Future Directions. In *Handbook of the Sociology of Mental Health*. Edited by Carol S. Aneshensel, Jo C. Phelan and Alex Bierman. Dordrecht: Springer, pp. 405–31.
- Woo, Hyeyoung, Sojung Lim, sun Young Jeon, and Wonjeong Jeong. 2020. Does Marriage Matter for Children? Parental Marital Status and Children's Health in South Korea. In *Korean Families Yesterday and Today*. Edited by Hyunjoon Park and Hyeyoung Woo. Ann Arbor: University of Michigan Press, pp. 119–43.
- Yang, Hyunwoo. 2017. The Role of Social Capital at Home and in School in Academic Achievement: The Case of South Korea. *Asia Pacific Education Review* 18: 373–84. [CrossRef]
- Zhou, Min, and Susan Kim. 2006. Community Forces, Social Capital, and Educational Achievement: The Case of Supplementary Education in the Chinese and Korean Immigrant Communities. *Harvard Educational Review* 76: 1–29. [CrossRef]

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