
MOTIVATION AND SOCIAL PROCESSES

Nonacademic Effects of Homework in Privileged, High-Performing High Schools

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This study used survey data to examine relations among homework, student well-being, and behavioral engagement in a sample of 4,317 students from 10 high-performing high schools in upper middle class communities. Results indicated that students in these schools average more than 3 hr of homework per night. Students who did more hours of homework experienced greater behavioral engagement in school but also more academic stress, physical health problems, and lack of balance in their lives. To better understand the role homework played as a stressor in students' lives, the authors explored students' qualitative descriptions of their experiences with homework. The discussion addresses how current homework practices in privileged, high-performing schools sustain students' advantage in competitive climates yet hinder learning, full engagement, and well-being.

Keywords *engagement, high school, homework, privilege, well-being*

THE PRACTICE OF ASSIGNING HOMEWORK is common in secondary schools. Most secondary students report doing nightly homework, and parents and teachers tend to believe that homework plays a crucial role in student learning, achievement, and skill development (Xu & Yuan, 2003). In upper middle class, advantaged communities, the practice of homework is deeply embedded, as parents who hold political clout and influence view homework as a way to sustain their child's academic edge and status in the social and economic hierarchy (Kralovec & Buell,

2000). Many students in these upper middle class schools describe schoolwork as dominating their day (Conner, Pope, & Galloway, 2009). Rather than deeply learning and engaging, these students report “doing school,” and express willingness to sacrifice their health and academic integrity in order to successfully complete their work to maintain or increase their achievement status (Pope, 2001; Taylor, Pogrebin, & Dodge, 2002). In these competitive school climates, learning has become a secondary goal. Instead, students’ hard work and the stress it creates are accepted as necessary to obtain the credentials needed to succeed in a competitive climate (Demerath, 2009).

Homework plays a key role in this credentialing system (Kralovec & Buell, 2000). For more than two decades, it “has been lauded as inherently good by educators and politicians from all points on the ideological spectrum” (Gill & Schlossman, 2001, p. 27). As Kralovec and Buell (2000) noted, homework is a powerful tradition, and many hold assumptions about its capacity to help students get ahead and ensure America’s status in a competitive global economy.

One would assume that such a highly touted and commonplace practice would be backed by research on its benefits. However, the link between homework and achievement has been inconsistent, and findings have depended, in part, upon study design and analytical techniques (Cooper, Lindsay, Nye, & Greathouse, 1998; Cooper, Robinson, & Patall, 2006; Trautwein, 2007; Trautwein & Koller, 2003; Trautwein, Schnyder, Niggli, Neumann, & Ludtke, 2009; Wagner, Schober, & Spiel, 2008). Moreover, although proponents of homework argue that it supports development of critical life skills, this claim has received scant research attention, offering little data on homework’s nonacademic effects (Kralovec & Buell, 2000; Warton, 2001).

Our study responds to the need, noted by both proponents and detractors of homework, for greater empirical evidence of these nonacademic effects of homework. As the debate over the policies and practices governing homework continues to play out in school board rooms, in the popular press, and in trade publications, the experiences of students, those most affected by homework, warrant close attention and analysis, and their perspectives deserve to be shared.

The purpose of the present study was twofold: (a) to examine the relation between homework load and student well-being and engagement in upper middle class, advantaged communities; and (b) to understand how homework can act as a stressor in students’ lives. We were particularly interested in homework’s effects within advantaged communities because, as highlighted above, the accepted value of homework appears to be entrenched in these communities (Kralovec & Buell, 2000).

Homework and Achievement

Most studies on homework have examined its relation to academic achievement. This research indicates a weak relation, if any, between homework and achievement in elementary school (Cooper, 1989a; Cooper, 2001; Cooper et al., 1998; Cooper et al., 2006; Cooper & Valentine, 2001; Kohn, 2006). At the secondary level, homework is consistently positively associated with academic achievement, particularly school performance (Cooper et al., 2006). This relation is strengthened when students find the work assigned to be meaningful or relevant to them (Cooper et al., 2006; Marzano & Pickering, 2007a; Trautwein, Ludtke, Schnyder, & Niggli, 2006). However, Cooper suggests that homework benefits plateau at about 2 hr per night for high school students. Beyond 2 hr, homework may have detrimental achievement effects, leading

Cooper to suggest somewhere between 90 min and 2.5 hr per night as optimal in high school (Cooper, 2008).

Nonacademic Effects of Homework

Some scholars have looked beyond the effects of homework on achievement to consider homework's broader benefits (or costs). These studies have examined skill development, engagement, well-being, and family and leisure time.

Homework, skill development, and engagement

A small body of literature has explored the potential benefits of homework for school habits and skills. For example, Bempechat (2004) proposed that homework plays a critical role in the development of students' achievement motivation, including the development of good study habits and the ability to cope with mistakes. Parents and teachers (and to a lesser extent students) also report that homework is designed to build a sense of personal responsibility and study skills (Xu & Yuan, 2003).

More research has examined links between homework and engagement. In general, students' (and sometimes parents') experiences with homework tend to be negative and emotionally charged (Xu, 2011; Xu & Corno, 1998; Xu & Yuan, 2003). Students often experience lower levels of engagement while doing homework than engaging in other out-of-school activities (Leone & Richards, 1989), although students can find homework engaging when it is authentic and centers on solving real-world problems (Shernoff, Csikszentmihalyi, Schneider, & Shernoff, 2003).

Several studies use homework completion and time spent on homework as indicators of behavioral engagement (e.g., Birch & Ladd, 1997; Finn, Panno, & Voelkl, 1995; Kong, Wong & Lam, 2003; Marks, 2000), and behavioral engagement is frequently linked to academic achievement (see Committee on Increasing High School Students Engagement and Motivation to Learn, 2003; Fredricks, Blumenfeld, & Paris, 2004, for reviews). Simply put, students who complete their homework tend to earn higher grades than their peers who do not complete their assignments, in part because grades are often based on homework completion.

Whether or not the behaviorally engaged students actually learn more than their peers remains an open question. For example, in a survey of teachers in their high school, Sallee and Rigler (2008) found that teachers typically based 20–30% of students' end of the quarter grades on homework, but they assessed homework through a quick visual check of its completion, rather than an assessment of students' learning. Qualitative research suggests that some behaviorally engaged, high-achieving students may simply go through the motions, completing their schoolwork and homework and doing what they need to do to earn high grades, without truly learning the material (Pope, 2001). More research is needed to examine the mechanics of the relation between homework and behavioral engagement.

Homework and well-being

Homework and schoolwork have been described by students as a primary source of stress and anxiety (Bauwens & Hourcade, 1992; Conner et al., 2009; Hardy, 2003; Kouzma & Kennedy, 2002, 2004; West & Wood, 1970; Ystgaard, 1997). Yet, Cheung and Leung-Ngai (1992) indicated

that “the stressful effects of homework have been grossly neglected in research on children and adolescents” (p. 146), and only a handful of studies have emerged since.

Studies that have explored the relation between homework and well-being indicate that number of hours of homework is negatively associated with psychological well-being, physical health symptoms, and sleep. Cheung and Leung-NGai (1992) found that hours of homework, coupled with homework difficulty and social pressures for doing homework, were associated with increased somatic symptoms (e.g., headaches, faintness), depressive symptoms, and anxiety. Further, the experience of exhaustion after homework was the best predictor of these somatic symptoms. In a study of 1,457 students in Grades 5–12, Yang, Kim, Patel, and Lee (2005) found that academic demands featured prominently among the reasons students gave for their sleep-deprivation. Kouzma and Kennedy (2002) also demonstrated a relation between hours of homework and well-being in a group of Australian high school students. Those doing more homework reported higher stress levels and more mood disturbance (including internalizing and externalizing problems and fatigue). Data from a national survey of high school students further support this link between homework and stress. This research found that 9 in 10 students (89%) report feeling stressed about doing homework, and one third of students (34%) feel frequently stressed about homework (Markow et al., 2007).

Homework, family, and leisure

Research also suggests that homework loads can reduce the time students have for family activities, social life, cultural or religious enrichment, and leisure pursuits (Cooper, 1989b; Dudley-Marling, 2003; Kralovec & Buell, 2000; Nordmo & Samara, 2009). Homework can cause tension in the home, “diminishing the quality of family interactions” (Dudley-Marling, 2003, p. 1) and “fostering conflict between school and home” (Kralovec & Buell, 2004, p. 22). Bennett and Kalish (2006, p. 55) discussed the “family fallout” as parents assume the roles of taskmaster, overseeing homework, and as their children, burdened by heavy homework loads, are excused from having to do chores or participate in other family activities. These claims are buttressed by a MetLife survey which found that secondary school students were more likely to report spending time on homework than spending time on chores or helping out at home (Markow, Kim, & Liebman, 2007).

In addition to impacting the quality and quantity of family time, homework may also encroach on students’ involvement in other developmental contexts. Bennett and Kalish (2006) argued that heavy homework loads preclude youth from having time to socialize and to read for pleasure. Other research shows that students completing more than 3.5 hr of homework each night are more likely than students completing fewer hours of homework to report having to drop activities or hobbies that they enjoy because of the amount of time they need to complete their schoolwork (Galloway & Pope, 2007).

Many students who do remain engaged in extracurricular activities struggle to balance the demands of these activities with their homework responsibilities, often staying up late into the night to complete requirements (Cooper, 1989b; Galloway, Pope, & Osberg, 2007; Vail, 2001). Sallee and Rigler (2008) reported that high school students are “more overcommitted than ever” and find themselves trying to “juggle conflicting responsibilities” (p. 48). Still, the empirical evidence for these claims is limited, and some studies make alternate claims. For example, in their study of seventh-grade parents, Kiewra and colleagues (2010) found, contrary to many

opponents of homework, that parents viewed homework positively, rather than as a detractor from their child's participation in other activities. As such, questions about the relation between homework and family and leisure time require further empirical study.

Homework in privileged communities: Advantage or cost?

Last, studies on homework often lack exploration or discussion of social class, yet Kralovec and Buell (2000) argue that homework does not affect all students equally. Rather, they state, the practice of homework "appears to further disadvantage the already disadvantaged" (Kralovec & Buell, 2000, p. 70) and acts as a sorting mechanism to magnify inherent class differences. Students in middle class and wealthy communities have adequate resources, materials and physical space, are more likely to receive outside help to complete their work (e.g., a private tutor), and are less often forced to choose between completing homework and essential family needs or responsibilities (Cooper, 2007; Kralovec & Buell, 2000). These advantaged students are, as Demerath (2009) described, developing the work habits and the kind of psychological capital to help them succeed in a credential-focused system. As Bempechat (2004) observed, parents who advocate against homework actually place their students' academic preparation in jeopardy due to the academic demands they will eventually face. Nonetheless, it is not clear to what extent homework, even in advantaged communities, supports student learning, school engagement, and well-being. The present study fills this gap.

Present Study and Research Questions

We examine nonacademic effects of homework and seek to understand the role that homework plays as a stressor in students' lives in advantaged communities. The following research questions guided our work: How much homework are students in a set of advantaged, high-performing high schools doing each night, and how do they view this homework load? How is homework load associated with (a) students' stress; (b) students' physical health (including symptoms like headaches, stomach problems, problems sleeping); (c) students' time for outside activities; and (d) students' behavioral engagement in school?

METHOD

Although we could have taken a number of different approaches to gathering data on homework, we decided to go straight to the source and ask the students themselves. In general, student voice has been lacking from the conversations about educational issues that deeply affect them, yet recent scholarship has called for attending to students' perspectives and involving students in opportunities to effect change (see Cook-Sather, 2006; Thiessen & Cook-Sather, 2007). We support the premise put forth by Schultz and Cook-Sather (2001):

It is crucial to listen to what students have to say because until we truly understand what students are experiencing—what and how education means, looks, and feels to them—our efforts at school reform will not go very far." (p. 2)

Our methods were designed to gather student voice.

We invited students to respond to both Likert-type and open-ended questions on a survey. Students' responses to the Likert-type items allowed us to examine the relation between homework and both well-being and engagement. The open-ended items provided us with richer student voice, and enabled us to explore how students view their homework, and if, when, and how homework impacts their daily lives.

Study Context

This research was part of a larger university-based intervention and research project designed to understand how to create school and home contexts that support adolescent academic integrity, engagement, and mental and physical health in communities where achievement pressure is particularly high (communities self-identify and volunteer to participate). Schools that participate in the intervention are invited to take part in a survey to gather baseline data on students' perceptions of their home and school contexts, as well as student self-reports on their achievement goals, academic integrity, engagement, and health. We draw here from a subset of the data in the survey, focused on the present study's research questions.

Participants

A sample of 4,317 high school students from 10 high-performing high schools (four public and six private) participated in this study. The mean age of participants was 15.7 ($SD = 1.20$), with 1,211 ninth-grade students (28.1% of the sample), 983 tenth-grade students (22.8% of the sample), 1018 eleventh-grade students (23.6% of the sample), and 836 twelfth-grade students (19.4% of the sample); 269 students (6.2%) did not report their grade level. Of the sample, 54% was female. Students self-reported their ethnicity: 48% European American; 31% Asian or Asian American; 4% Hispanic; 2% African American; and 0.5% Native American. A small but notable percentage (10.5%) checked multiple categories or "other" for their race and/or ethnicity, and 4% elected not to respond.

All of the schools in our study were college preparatory schools in advantaged, upper middle class communities and had elected to participate in the study as part of the larger research and intervention project. Median household income in these communities exceeds \$90,000.00 per year. The schools themselves were some of the most high-performing schools in the area. The four public schools consistently demonstrated outstanding performance on standardized tests, with Academic Performance Index scores above 800, in a 200 to 1000 range, and rankings in the 9th or 10th decile in comparison to similar schools (the 10th decile is the highest ranking) (Bay Area News Group, 2011). All schools had high graduation rates, with the majority of the students attending 4-year colleges and universities, and more than 93% attending a 2- or 4-year institution (the overall rate in the region is 50%, with 29% representing community college goers; California Postsecondary Education Commission, 2012).

Procedure

Students with parent consent completed a 40-min survey during the school day. We asked schools to pay particular attention to schedules, to be sure not to administer the survey near final examinations, or advanced placement testing, which are particularly stressful times of year for

students. Nine of the participating schools elected to conduct the survey in the spring term, between late January and April (one school implemented the survey in early December). These varying dates were a necessary accommodation to make to our school partners, who best understand the limitations and affordances their particular schedules allowed. Four of the participating schools elected to have students complete a paper version of the survey, while the remaining schools administered an online version. Questions asked on the paper and online surveys were identical.

Measures

The student survey included Likert-type and open-ended questions. Likert-type questions analyzed for the present study assessed students' self-reported homework load and perceptions of homework load, well-being (measured here through questions on stress over schoolwork, performance anxiety, physical health, sleep behavior, and time for outside activities), behavioral engagement, and enjoyment of schoolwork. These items included a mix of scales drawn from previously validated work and individual items relevant to our research questions. The open-ended items invited students to write about experiences with stress in their lives more generally and at school specifically. Although the open-ended items were not designed around the topic of homework, we draw upon them here to understand students' experiences with homework, and specifically how it can act as a stressor in their lives.

The open-ended questions were posed in the middle of the survey, after students had responded to items about their school context, personal goals, academic integrity, time for activities, performance anxiety, and behavioral engagement. Questions related to homework load, usefulness of homework, and health (among others not included in this study) followed the open-ended questions.

Homework load

Homework load was assessed by asking students to report how many hours of homework they do on a typical week day. Students were asked to exclude time when they were taking breaks, instant messaging, or using the computer for recreational use.

Homework usefulness

Homework usefulness was assessed by two items: "In general, how useful is your homework for helping you learn the material?" and "In general, how well does your homework prepare you for tests, papers, or projects?" Students rated these items from 1 (*not at all useful/well*) to 5 (*very useful/well*). These items were used to create a homework usefulness construct, $\alpha = .82$.

Stress

We gauged student academic-related stress using a four-item measure of performance anxiety, which included questions such as "How often do you worry about taking tests?" and "How often do you worry about school assignments?" rated on a 5-point scale ranging from 1 (*never*) to 5 (*always*). This scale was drawn from Pintrich, Smith, Garcia, and McKeachie (1991). Reliability for this measure was $\alpha = .79$. We later asked students to identify what in their lives right

now causes them the most stress and why (an open-ended question). After asking this question, we measured stress over schoolwork: “How often do you feel stressed by your schoolwork or academic experience?” rated on a 5-point scale ranging from 1 (*never*) to 5 (*always*). We then asked students to respond to an open-ended question: “If you have felt stressed, what is the most stressful part of your schoolwork or academic experience?”

To analyze the open-ended data, we reviewed student responses for common themes across the schools (first looking for what students indicated caused stress and then examining themes for cases where homework was indicated as a primary stressor). We did not begin the process with predetermined categories; rather we allowed categories to emerge following the process for open coding. From here, we moved to axial coding to make connections among our categories (Strauss & Corbin, 1998). Clear themes began to emerge after examining responses from our first two schools. We used these themes as a guide for coding the rest of the open-ended responses, allowing for the addition of new themes along the way. We then formed propositions regarding the data and earmarked representative responses, as well as any negative cases, to use to report our findings in this paper (Taylor & Bogdan, 1998).

Physical health

We assessed physical health by whether students reported experiencing any of seven stress-related physical symptoms in the month before taking the survey (sweating, headache, exhaustion, weight loss, weight gain, stomach problems, and/or sleeping difficulties). Each was a dichotomous variable where students answered that they either had or had not experienced the reaction because of stress. We also asked students to report how many hours they slept on school nights.

Time for other activities/endeavors

We were interested in how homework was associated with students’ perceptions of their ability to have time for sleep, relationships, and activities. Three questions addressed perceptions of time: “How often does the amount of schoolwork you have keep you from getting enough sleep?” rated on a 5-point scale ranging from 1 (*never*) to 5 (*always*); “How often does schoolwork or studying keep you from having time for your family, friends, or other activities?” also rated on a 5-point scale ranging from 1 (*never*) to 5 (*always*); and “Have you ever been forced to drop an activity or hobby which you enjoyed because schoolwork took too much of your time?” rated on a yes/no scale. This final question is from West and Wood’s (1970) Academic Pressure Scale.

Behavioral engagement

To assess students’ behavioral engagement, we used a previously established measure (Marks, 2000), which consisted of three items:

1. How often do you try as hard as you can in school?
2. How often do you pay attention in your classes?
3. How often do you complete your school assignments?

Each of these items was rated from 1 (*never*) to 5 (*always*). Reliability (α) for this measure was .68. As done in the study by Marks (2000), we also asked students how often they enjoyed their schoolwork, from 1 (*never*) to 5 (*always*).

Demographic and achievement information

The end of the survey asked students to provide demographic information and self-reported grade point average. For demographics, students reported on gender, race and/or ethnicity, grade in school, and age.

RESULTS

Hours of Homework, Stress, and Physical Health

On average, students reported spending 3.11 hr ($SD = 1.46$) per night on homework. In general, they found their homework as “somewhat useful” in helping them to learn the material ($M = 3.08$, $SD = 0.98$) and “somewhat useful” in helping them to prepare for tests, papers, or projects ($M = 3.13$, $SD = 0.98$). Frequencies indicated that only 6% of students found their homework “very useful” for either learning or preparation.

Although our sample averaged more than 3 hr of homework per night, homework hours differed by grade, $F(3, 3912) = 20.10$, $p < .001$, $\eta_p^2 = .02$, and gender, $F(1, 3912) = 166.0$, $p < .001$, $\eta_p^2 = .04$. In addition, 9th- and 12th-grade students reported the fewest hours per night, less than did the 10th-grade students at $p < .05$, whereas 11th-grade students reported significantly more than did any other grade. Female students indicated doing more hours per night than did male students. This finding was also statistically significant (see Table 1 for means and standard deviations). A one-way analysis of variance indicated that the schools in our sample also differed in average amount of homework, $F(9, 4151) = 17.90$, $\eta_p^2 = .04$. Four (one private, three public) schools had means below 3.00 hr per night, with the lowest school mean at 2.38 ($SD = 1.07$). The remaining schools (five private schools and one public school) had means above 3.00, with highest mean at 3.59 ($SD = 1.25$).

As expected, many students in our study reported experiencing stress, compromised health, or lack of balance. Most experienced distress and/or lacked time to engage in important life tasks outside of school. The majority (72%) reported being often or always stressed over schoolwork ($M = 3.92$, $SD = 0.90$), and many reported that they experienced physical symptoms due to

TABLE 1
Nightly Homework Hours, by Grade and Gender

Grade	Boys		Girls	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
9th	2.75	1.26	3.11	1.25
10th	2.91	1.42	3.43	1.37
11th	3.03	1.48	3.66	1.44
12th	2.49	1.47	3.35	1.67

stress (82% reported experiencing at least one physical symptom in the past month, with 44% of the sample experiencing three or more symptoms). Overall, students reported getting less sleep than the National Sleep Foundation's (2000) recommended 8.5 to 9.25 hr per night for healthy adolescent development. On average, students in our sample reported 6.80 hr of sleep on school nights ($SD = 1.24$), and 68% stated that schoolwork often or always kept them from getting enough sleep each night. Many (63%) reported that the amount of work they received often or always made it challenging to spend time with family and friends, and a similar percent (61%) indicated that they had been forced to drop an activity they enjoyed because of their school workload.

Relation Between Hours of Homework and Student Well-being and Engagement

Bivariate correlations indicated that more hours of homework was associated with increased school stress and physical distress, and decreased ability to cultivate skills outside of school (see Table 2 for correlations among all variables). Students who spent more hours on homework tended to be more behaviorally engaged in school, but were simultaneously more stressed about their school work and tended to report more physical symptoms due to stress, fewer hours of sleep on school nights, less ability to get enough sleep, and less ability to make time for friends and family. These correlations also indicated that homework hours had a stronger linear relation to student well-being variables (with r s between $|.22|$ and $|.41|$) than to student grade point average ($r = .14$).

To look more closely at the relation between homework load and student outcome variables, we conducted a series of hierarchical linear regressions, controlling for demographic variables and school effects to understand how much variance homework predicted in our outcome variables. Though effects were small, time spent on homework had the single biggest effect for our stress and time variables (see Table 3): for performance anxiety, homework accounted for 11% of the variance; for stress over schoolwork, 12%; for time spent with family and friends, 14%; and for time spent sleeping, 13%. We also found positive significant effects for homework load on hours of sleep and physical symptoms due to stress, though effect sizes were less than .10.

TABLE 2
Bivariate Correlations Between Hours of Homework, Well-Being, and Engagement

	1	2	3	4	5	6	7	8	9	10	11
1. Homework hours	—	0.36**	.34**	0.22**	-0.31**	0.41**	0.39**	.27**	.05**	.01	.14**
2. Stress over schoolwork		—	.63**	0.41**	-0.27**	0.51**	0.48**	.12**	-.16**	.01	-.05*
3. Performance anxiety			—	.39**	-.23**	.48**	.44**	.19**	-.10**	-.02	-.11**
4. Physical problems				—	-0.31**	0.34**	0.25**	-.05**	-.12**	.08**	-.13**
5. Hours of sleep					—	-.044**	-0.21**	.14**	.13**	-.19**	.04*
6. Lack of time for sleep						—	0.56***	.09**	-.09**	.05**	.04*
7. Lack of friend/family time							—	.18**	-.08**	-.04*	.09**
8. Behavioral engagement								—	.38**	-.17**	.36**
9. Enjoyment									—	-.01	.22*
10. Age										—	-.02
11. Grade point average											—

* $p < .05$. ** $p < .01$. *** $p < .001$.

TABLE 3
 Hierarchical Multiple Regression Analyses Examining Relationship Between Homework Load and Well-Being

	<i>Performance anxiety</i>	<i>School stress</i>	<i>Physical symptoms</i>	<i>Time from family and friends</i>	<i>Time from sleep</i>	<i>Sleep</i>
Predictor	β	β	β	β	β	β
Step 1: Demographic variables						
Age	-.04*	.01	.08***	-.05**	.05**	-.24***
White students	-.04	.05	.06***	.06**	-.04	.13***
Non-Asian students of color	-.04	.02	.07**	.04**	-.02	.04
Gender	.16***	.12***	.25***	.02	.08***	-.10***
Grade point average	-.17***	-.11***	-.16***	.03	-.02	.09***
ΔR^2	.06	.04	.10	.02	.03	.10
Step 2: Schools						
Public school 1	-.07***	-.06**	-.08***	-.02	-.07	.01
Public school 2	-.01	-.02	.00	.00	.00	.03
Public school 3	-.01	-.01	-.06**	.00	.01	-.06**
Private school 1	.02	-.02	.00	.04*	.03	-.08***
Private school 2	.02	-.04	.00	.01	.00	-.02
Private school 3	.02	-.06**	-.05*	.02	.07***	-.05*
Private school 4	-.05**	-.03	.00	-.01	-.03	.03
Private school 5	-.01	.01	-.03	.08**	.09***	.01
Private school 6	.00	-.01	-.03	.02	.05*	-.07***
ΔR^2	.01	.01	.01	.02	.03	.02
Step 3: Homework hours						
Homework load		.362	.21***	.40***	.37***	-.25
ΔR^2	.11	.12	.04	.14	.13	.06
Total R^2	.18	.17	.15	.18	.19	.18

Note. The Asian sample and the largest school (a public school) were the comparison groups for race and school, respectively, in all regressions.

$\hat{p} < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

For engagement, we found a somewhat different pattern (see Table 4). The demographic variables (particularly grade point average) explained more variance in the behavioral engagement model than any other variable, though again, homework hours also showed a small positive relation. These results suggest (in concert with the literature) that those with higher grade point averages also tend to be more likely to try hard, complete their work on time, and pay attention in class. Similarly, those with higher grade point averages also tended to report greater enjoyment of school. Not surprising, although disheartening, was that homework hours predicted none of the variance in enjoyment; in other words, those who did more hours of homework did not enjoy their work any more than those who did less.

We also examined students' likelihood of dropping out of an activity due to homework load. Using a point-biserial correlation, we found those doing more homework per night tended to be more likely to drop out of activities due to workload ($r = .25$, $p < .001$). Nonetheless, we did not find a statistically significant relation between the amount of hours students reported spending on extracurricular activities and the hours they spent on homework ($r = .02$).

TABLE 4
Hierarchical Multiple Regression Analyses Examining Relation Between
Homework Load and Engagement

	<i>Behavioral engagement</i>	<i>Enjoyment</i>
Predictor	β	β
Step 1: Demographic variables		
Age	-.19***	-.04*
White students	.02	.01
Non-Asian students of color	.00	.03
Gender	.14***	.10***
Grade point average	.31***	.21***
ΔR^2	.20	.07
Step 2: Schools		
Public school 1	.09***	.07**
Public school 2	.02	-.01
Public school 3	-.03	.00
Private school 1	-.03	.01
Private school 2	.06***	.00
Private school 3	.07***	.09***
Private school 4	.04*	.08***
Private school 5	.08***	.08***
Private school 6	-.13	-.01
ΔR^2	.01	.04
Step 3: Homework hours		
Homework load	.22***	-.02
ΔR^2	.05	.00
Total R^2	.26	.11

Note. The Asian sample and the largest school (a public school) were the comparison groups for race and school, respectively in all regressions.

$\hat{p} < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Student Views of Homework as a Stressor

The aforementioned quantitative results presented indicate that a significant number of high school students in our sample are doing several hours of homework per night, and the more homework students report doing, the more they report school stress, physical distress (including lack of sleep), inability to find time for friends and family, and likelihood of dropping one or more activities because of workload. When we explored students' responses to the two open-ended questions—"Right now in your life, what would you say causes you the most stress and why?" and "If you have felt stressed by your schoolwork, what is the most stressful part of your schoolwork or academic experience?"—we wondered how they would talk about homework as a stressor. The majority (56%) of students indicated homework as a primary stressor. Homework was listed most often as a primary stressor, although 43% of students listed tests as a primary stressor, and 33% listed grades and/or getting good grades as a primary stressor. Parent expectations and the college process were also reported by more than 15% of the sample. A small percentage of students (1%, a total of 59 students) indicated that they were not stressed, either in general and/or

by their schoolwork. Similarly, a small number (<1%) explicitly stated that homework was not a stressor, but identified other academic, social, personal, or family stressors.

That students described homework as a primary stressor was not particularly surprising, both because homework has acted as a perennial source of stress for students (Bauwens & Hourcade, 1992; Conner, Pope, & Galloway, 2009; Hardy, 2003; Kouzma & Kennedy, 2002, 2004; West & Wood, 1970, Ystgaard, 1997) and because our survey focused so squarely on academic-related themes. Rather, what was surprising was how students described their experiences with homework and the potential perils of too much homework. We subsequently include representative student quotations to support and extend findings from the quantitative sections of the survey, which attest to the costs of too much homework. In particular, we focus on three thematic categories that emerged in our coding of data from students who viewed homework as a stressor: homework overload and its impact on health, the lack of time for anything but schoolwork, and the prevalence of busywork. We end with data showing why so many of the students continue to complete more than 3 hr of homework per night.

Homework overload and health

Homework overload was one of the primary themes that emerged from students' descriptions of homework. Some of the students described the amount of homework each night as "overwhelming," "unmanageable," or "more than [they] could handle," with one describing the load as "an endless barrage of work."

Many complained that the workload led to sleep deprivation and other health problems. Students described homework as the "main reason" preventing them from getting the recommended 9.25 hr of sleep each night: "I'm up until usually 1:30 am working [on homework] and I get very little sleep." Another, after stating "homework load" as his primary stressor responded as follows: "I rarely make it to bed before midnight and wake up early to finish it." Many students recognized the importance of rest and rejuvenation but found it nearly impossible to achieve these goals with such heavy workloads. As one student wrote:

There's never a time to rest. There's always something more you should be doing. If I go to bed before 1:30 I feel like I'm slacking off, or just screwing myself over for an even later night later in the week . . . There's never a break. Never.

Another similarly expressed:

I go to school for 10 hours, from 7:30 to 5:30 . . . After a 10 hour day, when I get home, I want to chill and relax and actually eat a good meal and get a good night's rest. That way I can go to school the next day, ready to learn and to be attentive and participate in class.

This student's comment also suggests that homework overload, coupled with lack of sleep, can limit capacity to learn.

Students further described how homework took its toll. Because of the overload and exhaustion they expressed: "I don't feel healthy;" "[I] generally feel lousy;" "It can feel like you are drowning;" and "My body crashes when I've done maybe half of my homework." One went further asking: "Ever wondered why students at [this school] drink and there's a suicide rate? It's because of the workload." These students expressed the view that the amount of homework they were expected to complete adversely affected their wellbeing.

No time for anything but school

The voices of these students reflect a primary challenge faced by many in our study: if students have several hours of homework per night, how can they find time for other endeavors in their lives (including extracurricular activities, leisure, and social time)? Some expressed that they “never seem to have enough time.” One adolescent stated:

Now I understand the expression “not enough hours in a day.” In a day, I want to be able to do homework/study, have time with friends and family, and do activities that are important to me. I don’t always feel I have enough time for this, and I feel pressured.

Because of homework load, tests, and quizzes, students reported, for example:

- I have no life other than school; that is my life.
- Homework . . . is all I have time for; there’s never a time where you’re not thinking about [it].
- There is hardly any time for me to enjoy being a kid when I have to go to school all day and then go home and do homework all night.

Students recognized that spending so much time on homework meant that they were not meeting their developmental needs or cultivating other critical life skills. One questioned, “Most people have no social life because of all the homework they do; how is that helping them in the real world?” Another explained, “I’m struggling between trying to maintain [my grades, but] more to maintain my identity, soul, and sanity! Teachers don’t seem to teach students that there’s more to life than . . . hours of homework a night.”

The inability to balance or juggle the overload of homework, along with the number of other out-of-school activities or interests was the single most-often provided response by students when describing homework as a stressor (30% mentioned this lack of balance due to homework). One student described her homework load as “plenty manageable . . . If I never try to do anything else!” Several highlighted the challenge of finding the right balance between schoolwork, extracurricular activities, leisure, and social time. Their quotes reflect an inability to address this challenge:

- “[I have] way too much homework! I cannot focus on sports and family if I have 4 hours of homework like I normally do.”
- “All of the homework and studying that I have each and every night take away from everything I used to do and the activities that I like to do and that keep me healthy.”
- “I don’t have time to be with my friends and family. Also, I don’t have time to get enough exercise and build my other talents.”
- “I do not feel like I have enough time to do all of my school work, homework, sports, training etc., to do all of these things well. I feel like in order to have energy to do homework at night, I have to run on 50% energy during the day. I normally run on 50% energy at [sports] practice and then only have 20% to squeak out my homework, when I should really use at least 80% on all of these things. And still, even doing this, I am too tired to spend time with my friends or family or have fun.”

- “Balancing all of my extracurricular interests and activities while maintaining my level of academic performance is the most stressful part of my life. When I get home at 9:00 after practice and a community service meeting, I feel stressed and tired and worried that I will not be able to finish (or even have the energy to start) assignments.”
- “[I have an] overload of activities in a day. School till 3, football till 6:30, Advanced Jazz Band till 8:30, Homework till 12 (or later) then all over again. It is hard to imagine that such intensive schedules could be sustainable for very long.”

Weekends or breaks could serve as a much-needed respite, but many students described how homework consumed these times as well: “On the weekends—my only time to de-stress, have fun, [or] be with friends and family—I have so much more work and I devote at least a whole day or two on work”; “I feel as though I am constantly doing homework . . . Even on the weekend I spend at least 9 hours doing homework!”; and “I don’t normally get the time to relax or have fun until the weekend; where I receive even more homework than I do on weekdays.” One student specifically wondered why the term *break* was used if teachers planned to assign homework during this time:

It seems like I do get a good amount of assigned work and because of that I am stressing over getting it done because I might be going on a trip or something like that which requires me to be with my family or doing other things on my break. The keyword in winter break is break. It’s not much of a break when I get a lot of homework.

These students’ perceptions suggest the need for more manageable homework loads to provide more time for students to engage in other activities, pursuits, and pastimes.

Busy work

In addition to the quantity of homework they had to complete, students remarked on the quality of the homework they were assigned. Their frustrations over homework were exacerbated when they found the work “boring,” “uninteresting,” or “futile,” another theme that emerged in students’ descriptions of the stress of homework. Student descriptions of homework included “waste of time,” “often trivial-seeming,” “repetitive,” “redundant,” “tedious,” “mindless,” and “nonsense.” One student lamented, “Sometimes I get assignments that just take up a lot of time and are hardly useful. These prevent me from getting as much sleep as I’d like, and I don’t even learn from them.” Another student who described her homework as “extremely time consuming” remarked, “Some work that we are given doesn’t help us in life and I start to wonder why we even are doing it.” Another explained: “I’m stressed because I have so many pointless, mundane assignments that take up large amounts of time without actually learning anything in class. I don’t mind working if I’m actually learning something.”

Why Do Homework?

If, for many students, homework acts as such a source of stress, leads to lack of balance, and is often seen as a “waste of time,” we must ask, why do these students continue to do it? The open-ended responses provide some answers. In particular, many students focused on the need to get good grades, and because homework is viewed by students (and parents) as a primary

indicator of students' school performance ("grades hinge on homework"), most students view homework completion as a necessity (see also Xu & Corno, 1998). While some students indicated the pressure to maintain high achievement was self-imposed, most described parents and college admission as the primary sources of this pressure. They expressed pressure to "make parents happy about grades," and "live up to parents' standards" or expectations. They were anxious about fierce competition to get into top-tier colleges, and they recognized the importance of grades in the admissions process. As one student put it, "College admissions expect students do so much, when in reality, the only way to truly be that outstanding is to not sleep and kill yourself with work." Further, many worried about disappointing parents, or worse, being "punished," "threatened," or ignored if they did not get good grades, with "good grades" often defined by the students as "all A's." For example, some indicated that parents "only expect perfect[ion]." "Anything but the highest grade is a failure" and "The only acceptable grade is an 'A.'" Given that students often do homework in order to please parents (Xu & Corno, 1998), expectations to be "perfect," coupled with the worry over college admissions, seem to increase these students' stress and time spent on homework.

DISCUSSION

The results of this study corroborate what Cooper and colleagues (2006) cautioned—that "too much homework may diminish its effectiveness, or even become counterproductive" (p. 53). We find that more time spent on homework is associated with greater stress; more compromised health; and less time for family, friends, and other extracurricular pursuits. Although effect sizes from the quantitative data were small, students who completed more hours of homework per night were at greater risk for these negative outcomes; they were also more likely to drop activities or hobbies they enjoyed in order to focus on their academic work. The students' comments in the open-ended section of our survey corroborate and extend the quantitative findings, revealing that students recognize the adverse consequences of high-quantity, yet seemingly low-quality, homework.

Although we found that students completing more hours of homework also tended to report greater behavioral engagement in their schoolwork and classes (as measured by students reporting they often or always try hard, pay attention, and complete assignments), this connection does not mean these students were deeply learning the material, enjoying the work or finding it meaningful or helpful. There was no relation between homework hours and students' enjoyment of schoolwork, and open-ended responses revealed students will often do work they see as "pointless," "useless," and "mindless" because their grades will be affected if they do not. This kind of busy work, by its very nature, discourages learning and instead promotes doing homework simply to get points (see also Demerath, 2009). Given the negative outcomes we find associated with more time spent on homework, our study calls into question the desirability of such diligence and the utility of assigning large quantities of homework in high-performing schools. We concur with the notion that homework should not be assigned simply as a rule, a routine, or because we assume it is good practice (Sallee & Rigler, 2008). Rather, any homework assigned should have a purpose and benefit, and it should be designed to cultivate learning and development (see Kohn, 2006).

Contrary to this notion of cultivating development, a sizeable percentage of students in our study described excessive homework loads as preventing them from getting enough sleep (they

averaged fewer than 7 hr per night) or engaging in nonacademic and out-of-school activities that could support their overall well-being. Although not all of the students in the study reported homework as a stressor, these results provide empirical evidence that many students struggle to find balance between homework and their extracurricular activities, social time, family time, or leisure. Given the pressure students in such advantaged, high-achieving communities feel to achieve academically, the open-ended data suggest that many students feel forced or obligated to choose homework over developing other talents or skills.

In some ways, homework practices in these schools present a paradox. The students in our study were from advantaged communities. The schools these students attended, and the majority of the students themselves, are considered to be successful by current measures of achievement, and most will benefit from their school contexts (including the achievement pressure and the hours of homework) by garnering acceptance to college. During their secondary school years, students develop many of the skills required to advance in a competitive, achievement-focused society. Demerath (2009) described that students in such communities have developed a strong work ethic and an “attachment to personal success” (p. 177) that will serve them well in maintaining their status as part of an elite middle class. In this way, current homework practices may act to further the class divide in our educational system.

However, our study indicates that the benefits of homework to these advantaged students can be coupled with significant costs, and our current homework practices seem to be serving few students well. If homework is intended to facilitate student learning, improve study habits, and foster skills such as personal responsibility, (see Bempechat, 2004; Marzano & Pickering, 2007b; Xu & Yuan, 2003), students in our study suggest we are off track. Young people are spending more time alone, which means less time for family and fewer opportunities to engage in their community. Moreover, the focus on grades over learning and the underlying pressure for students to compete for and maintain their status “may result in an attitude that ignores community interests and places a priority on personal concerns. As adolescents seek success, they may become alienated from the organization, society, and self” (Calabrese & Cochran, 1990, p. 70). The young person in our study who described losing his identity and his soul because of the overemphasis on homework captures this notion.

Our findings on the effects of homework challenge the traditional assumption that homework is “inherently good” (Gill & Schlossman, 2001, p. 27), and instead suggest that researchers, practitioners, students, and parents unpack why the default practice of assigning heavy homework loads exists, in the face of evidence of its negative effects. These kinds of discussions would be far from new. Debates about the practice of homework go back to the early 1900s, with cycles of recommendation for either abolition or reform (see Gill & Schlossman, 2001). It is time to return to some of the fundamental questions reformers asked on the purposes of homework and education more broadly.

Limitations

There are limitations of note in the present study. Our study did not examine stress and homework load across a broad range of schools. Our findings are thus limited to a specific sample of students from privileged, high-performing schools. Although we cannot make broad generalizations about students’ experiences with homework based on this study, we think it is important to draw attention to the experiences, health, and engagement of students in these schools, as it raises

important considerations for homework policies and practices and the social context in which these are developed and implemented.

Although we asked students to identify stressors in their lives and at school, the survey's focus on academic-related experiences, and questions about worries related to school, likely shaped what students identified as stressful. At the same time, our focus in the open-ended data was not simply to show that many students identified homework as a stressor, but rather to understand how homework can act as a stressor in advantaged communities.

Last, our findings are limited by our reliance on student self-report. Data on homework hours could be bolstered by, for example, asking students to maintain a homework journal in addition to self-reporting their hours on the survey. In addition, we did not gather voices or perspectives of teachers, school leaders, or parents, and such studies may reveal different patterns (e.g., Kiewra et al., 2010). Given this focus on adolescent voice, some readers may trivialize the students' comments and regard them as typical adolescent complaining. Although this argument may have some truth (and few adolescents would paint their homework experience as rosy), the student perspective cannot be taken lightly; their perspective influences how they do their homework and, consequently, how homework affects them. Thus, we argue student self-reports have a value that outweighs their limitations. Attending to these perspectives is critical if we hope to understand, learn from, and improve students' academic experiences.

Future Research

This study also raises questions for future exploration. First, the study questions whether students are really learning from their homework. New research could explore this relation between time spent on homework and student learning, along with the factors that might mediate or moderate this relation.

The students' voices also corroborate how entrenched the practice of homework is in advantaged school communities. Future research might examine how a reduction in homework load in advantaged schools (and/or an increase in student perception of homework usefulness) impacts student and school achievement. In addition, studies might explore students', teachers', parents', and administrators' views on homework and its purposes in a diversity of school communities. Such research could offer deeper understanding of how class and social context play a role in homework practices and policies and could further examine whether students and parents in these advantaged communities would be willing to significantly change, reduce, or give up homework (which they may view as sustaining their privilege), in order to alleviate the costs of homework overload. More discussion and empirical data are needed before we can end the homework debates. More important, such dialogue and research will help schools create homework that supports students and—ideally, that students support.

AUTHOR NOTES

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