

Students' Perceptions of Rewards for Academic Performance by Parents and Teachers: Relations With Achievement and Motivation in College

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ABSTRACT. In the present study, the authors examined college students' ($N = 136$) perceptions of the provision of extrinsic rewards given by parents and teachers for academic performance from elementary school through high school. They also examined the relations between reward history and present student motivational orientation. External rewards for students' grades were common at all levels of schooling. Reward history related significantly to students' motivational orientation and performance in college, and these relations were generally stronger for boys than for girls. The authors discuss implications of these findings.

Key words: achievement, gender, motivation, rewards

EDUCATORS AND PSYCHOLOGISTS HAVE DEBATED about ways to promote academic intrinsic motivation in children and adolescents, that is, to create lifelong learners who want to learn for the sake of learning and mastering new skills (Cameron & Pierce, 1994; Deci, Koestner, & Ryan, 1999; Fabes, Eisenberg, Fultz, & Miller, 1988). This goal seems to be good because intrinsic motivation is known to be associated with a wide variety of positive motivational and educational outcomes (Gottfried, 1985; Pintrich & De Groot, 1990).

At the center of the debate has been the question of whether the provision of external rewards (e.g., stickers, grades, praise) for children's school performance undermines student intrinsic motivation or promotes extrinsic motivational orientations (i.e., motivation to perform for external factors rather than genuine interest in the material) among students (Cameron & Pierce; Deci et al.; Kohn, 1993).

Questions remain, however, about the frequency of rewards received in natural settings, their relation to student motivation, and the ways such relations might be moderated by student gender. Furthermore, few researchers have assessed students' perceptions of receiving rewards for school performance (see for example, Kennelly & Mount, 1985). Although a number of factors (e.g., contingency, saliency, type of reward) are likely to play some role in determining the effects of rewards on intrinsic motivation (e.g., Deci et al., 1999; Tang & Hall, 1995). The key factor likely linking all of these factors together and being the most important determinant is individual perception of the reward and how it relates to personal goals (Deci & Ryan, 1985). As such, in the present study, we had two main goals: (a) to examine reports from college students regarding the frequency that they received various types of rewards from parents and teachers for earlier and present academic performance and (b) to explore relations between childhood reward history with academic achievement and motivation in college. We also explored gender differences in those relations.

Method

Participants

The sample included 136 undergraduate students (76 women, 60 men) attending a large public university in the mid-Atlantic region. The students were predominantly from European American backgrounds. The mean age of the participants was 19.9 years ($SD = 2.0$), and the majority of the participants were freshmen (55%) and declared majors in the College of Arts and Sciences (48%). The median annual family of origin income for this sample was \$61,000–\$80,000 (range: \$10,000–\$300,000+), and the average level of parental education was the completion of a bachelor's degree for both mothers and fathers.

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Procedure and Measures

We allotted the students 1 hr to complete one large survey packet that contained retrospective and present self-report measures.

*Academic reward history.*¹ We asked participants questions about how frequently they received rewards during different school periods (elementary school, middle school, high school) using a 6-point Likert-type scale from *never* (1) to *all the time (at least 1/week)* (6). Questions also required students to indicate the types of rewards they received, whether they received them from parents or teachers, and the school periods in which they received them. We computed Cronbach's alphas for the frequency of parental rewards ($\alpha = .88$) and for teacher rewards ($\alpha = .80$). We also asked participants their perceptions of receiving rewards for academic performance (i.e., whether or not they thought rewards were effective motivators for success).

Academic achievement and goal. Participants indicated their present cumulative college grade point average (GPA) on a 9-point scale (1 = < 1.0; 9 = 3.75–4.0) and their academic goal, or the highest level of education they planned to complete, on a 6-point Likert-type scale from *some college (not necessarily graduate)* (1) to *doctoral degree (PhD, EdD, MD, JD)* (6).

Motivational orientation. Students completed two 4-item subscales (intrinsic and extrinsic motivation) from the Motivated Strategies for Learning Questionnaire (Pintrich, Smith, Garcia, & McKeachie, 1993), which is a widely used self-report measure administered to college students. Sample items included the following: "I prefer class work that is challenging, so I can learn new things" (intrinsic motivation) and "I want to do well in class because it is important to show my ability to family and friends" (extrinsic motivation). Cronbach's alphas were .80 and .85, respectively. High scores represented more of that particular orientation.

Results

Prevalence and Type of Rewards Received During Childhood

Our first research goal concerned students' recollections of the extent to which rewarding for school performance occurred at school and at home. Table 1 shows that receiving tangible external contingencies for children's school performance was common. Overall, the participants in our sample reported receiving rewards of some type from their parents for academic achievements during elementary school (73%), middle school (72%), and high school (74%). Parents also distributed gifts, stickers, and extra privileges (e.g., playtime, television time, dessert) for children's school grades, especially in the earlier years. Slightly more

than half (51%) of students received money for good grades in high school. Most students reported receiving myriad external rewards—such as candy, certificates, stickers, and prizes—for school performance from their teachers, especially during elementary school and middle school. Overall, the participants reported receiving rewards of some type for grades from their teachers during elementary school (90%), middle school (81%), and high school (75%).

Frequency of Rewards Received During Childhood

Table 2 shows the frequency with which students reported receiving tangible rewards for academic performance from both parents and teachers in elementary school, middle school, and high school, overall and by gender. To examine contextual differences in the frequency of rewards given, we conducted a $2 \times 2 \times 3$ mixed, factorial analysis of variance (ANOVA) with gender as the between-subjects variable and setting (home [parents], school [teachers]) and school period (elementary, middle, high) as within-subjects factors. The interaction between setting, age period, and gender was significant, $F(2, 132) = 4.09, p < .05$, which indicated that for boys, rewards for school performance from both parents and teachers reduced sharply in frequency as they aged. For girls, however, only teacher rewards reduced in frequency over time, with rewards from parents remaining stable

TABLE 1. Percentage of Participants ($N = 136$) Who Reported Receiving Different Types of Rewards for Academic Performance From Parents and Teachers, by School Period

Type of reward	Elementary school	Middle school	High school
<i>Parent</i>			
Money	24	46	51
Gifts	32	30	34
Stickers	16	1	0
Extra items	40	18	13
Other	4	4	5
<i>Teacher</i>			
Stickers	64	30	18
Certificates	43	37	33
Candy	70	43	30
Prizes	49	27	11
Extra recess or free time	49	10	2
Class parties	49	44	30
Money	2	2	2
Other	3	2	7

TABLE 2. Frequency of Receiving Rewards for Academic Performance From Parents and Teachers in Elementary School, Middle School, and High School, Overall and by Gender

School	Boys (n = 60)		Girls (n = 76)		Overall (n = 136)	
	M	SD	M	SD	M	SD
<i>From parents</i>						
Elementary	2.47	1.28	3.05	1.62	2.78	1.49
Middle school	2.28	1.12	2.71	1.35	2.49	1.25
High school	2.13	0.98	2.62	1.34	2.39	1.20
All	2.29	0.99	2.79	1.30	2.56	1.19
<i>From teachers</i>						
Elementary	3.32	1.63	4.48	1.40	3.95	1.61
Middle school	2.27	1.23	3.01	1.21	2.67	1.26
High school	1.93	1.00	2.41	1.13	2.17	1.07
All	2.51	1.01	3.30	1.14	2.93	1.12

Note. Scale: 1 = never, 2 = rarely (1-2 per year), 3 = occasionally (3-6 per year), 4 = often (1 per month), 5 = frequently (2-3 per month), and 6 = all the time (at least 1 per week).

throughout elementary school, middle school, and high school. A significant gender effect, $F(1, 132) = 22.93, p < .001$, revealed that girls reported receiving considerably more rewards overall (from both parents and teachers) than did boys. The significant setting effect, $F(2, 132) = 6.51, p < .05$, showed that, overall, teachers gave more rewards for academic performance than did parents.

Outcome Measures: Descriptive Statistics and Relations with Educational Goal and GPA

The participants in our sample overall (a) were generally motivated more extrinsically than intrinsically in orientation, paired $t(135) = -6.33, p < .05$; (b) had average academic performance (GPA slightly < 3.0); and (c) had reasonably high educational aspirations ($M = 3.38, 3 = \text{some graduate study}$). Academic performance in college (GPA) was associated positively with students' academic goals and intrinsic motivation, $r_s = .18$ and $.21$, respectively, $p < .05$. Students' educational goals were associated positively with intrinsic motivation and extrinsic motivation, $r_s = .22$ and $.19$, respectively, $p < .05$.

Because both main effects and interactions in the earlier analyses involving reward history implicated gender, we also explored gender differences

among the outcome variables. A multivariate analysis of variance with gender as the between-subjects variable and GPA and motivation as dependent variables yielded a significant multivariate effect for gender, Pillai's $F(9, 122) = 2.31, p < .05$. Follow-up univariate ANOVAs revealed that women ($M = 5.96, SD = 1.68$) were significantly outperforming men ($M = 5.38, SD = 1.65$) in college (GPA), $F(1, 130) = 3.95, p < .05$, and extrinsic motivation was greater for female college students ($M = 5.60, SD = .99$) as a group than for male students ($M = 5.19, SD = 1.23$), $F(1, 130) = 4.40, p < .05$.

Relations Between Rewards and College Motivation

Our second research goal pertained to relations between reward history and present college student motivational orientation and performance. For this, we first calculated Pearson product-moment correlations between the frequency of receiving external rewards during youth and the outcome measures. Because we also observed gender differences both in frequency of receiving external contingencies for school performance and in some of the outcome measures, we calculated these correlations separately for boys and girls. Table 3 shows that college students' present motivation related to the history of receiving tangible

TABLE 3. Correlations Between Motivational Orientation and Reward History

Gender	Grade point average	Academic goal	Intrinsic motivation	Extrinsic motivation
<i>Parent reward</i>				
Boy	-.05	-.06*	.18	.21
Girl	-.10	.09	-.21*	-.21
<i>Teacher reward</i>				
Boy	-.19	.34*	.29*	.46*
Girl	.02	.14	.00	-.04*
<i>Overall</i>				
Boy	-.15	.22	.32*	.48*
Girl	-.09	.16	-.08	-.24*

Note. College grade point average was measured using a 9-point Likert-type scale, on which 6 = 3.0–3.25 GPA. Academic goal was measured using a 6-point Likert-type scale, on which 3 = some graduate study.

* $p < .05$.

rewards for academic performance, but it is of interest that gender differences emerged—the relation between previous rewards and present motivation was stronger for boys than girls.

For boys, we associated receiving greater amounts of external rewards for school performance in early schooling overall (parents and teachers combined) with greater extrinsic motivation, but this motivation also was associated positively with intrinsic motivation. For girls, overall reward history was related negatively with extrinsic motivation. The more girls reported receiving external rewards during their childhood, the less extrinsically motivated they were—a finding significantly different from the significant positive association found for boys. Teacher rewards were associated more with male achievement motivation than were parent rewards. In addition, frequency of teacher rewards (but not parent rewards) was associated positively with boys' academic goals. In other words, boys who reported receiving many rewards from teachers also reported higher academic goals for themselves compared with boys who reported receiving fewer teacher rewards.

Overall Student Impression of Rewards

When we asked, "Do you think rewards were a good way to motivate you to learn or do well in school?" 77% of the participants responded that rewards were effective academic motivators. An interesting finding emerged, however, when we calculated students' responses to this overall attitude about rewards with extrinsic motivation. A significant negative association emerged, $r = -.24, p < .05$, which indicated that students who thought rewards were good were those who were less extrinsically motivated in college, and those who thought rewards were bad were the ones more extrinsically motivated in college.

Discussion

Our first goal of this study was to paint an overall picture of the extent to which parents and teachers dispensed rewards for students' grades from elementary school through high school, based on students' recollections. The provision of external rewards for children's school performance was common, according to students. Almost 75% of the college students in our sample reported receiving rewards from their parents for grades during elementary school, middle school, and high school. Although the frequency with which students received rewards from teachers for their grades seemed to decrease somewhat as children got older, rewards for grades in the home seemed to decrease with age at a slower rate. Teacher rewards were even more common than were parent rewards. In addition, 90% of students reported receiving rewards from teachers in elementary school, a figure that reduced only to 75% by high school. Furthermore, girls reported getting more rewards for academic performance than did boys.

Second, we asked the extent to which students' perceptions of their reward histories were related to their present motivational orientations. College students' present motivation related to reward history but in more and in different ways for men than for women. Greater extrinsic motivation associated with greater frequency of rewards received from parents and teachers for grades in youth, but for men only. We also found other motivational correlates of reward history for men, however, which included greater intrinsic motivation and higher academic goals. Thus, it seems that rewards are particularly salient and relevant in potentially positive (i.e., greater intrinsic motivation and academic goals) and negative ways (i.e., greater extrinsic motivation) to the achievement motivation of male college students. Instructors should realize that male students might respond to reinforcements more strongly than female students might. One possibility is that boys perceive academic rewards as informational, and thus male students internalize the rewards as an indication of their abilities, which creates confidence and healthier patterns of motivation (Deci & Ryan, 1985).

For female college students, who were more extrinsic in their academic motivation and reported receiving more rewards overall than were their male classmates, extrinsic motivation associated negatively with reward history—the more female students reported receiving tangible rewards, the less extrinsically motivated they were. Furthermore, for female college students, reward history was not associated with any other motivation or performance variables (including intrinsic motivation), which suggested that there are multiple pathways to receiving high academic extrinsic motivation. Receiving a lot of external rewards for grades in the past may not be one of them. The finding that female college students are more extrinsically motivated than are their male counterparts, however, is of some importance and interest to teachers and other practitioners within higher education who are interested in understanding and optimizing the motivational health of their students. These findings should be explored further to understand the processes that may explain these gender differences.

For the participants in this study, teacher rewards were generally associated with more of the various indexes of student achievement motivation than were parent rewards, especially for boys. This pattern suggests that the person administering the reward and the context in which the reward is received seem to be important for students' motivation. Rewards given for children's school performance seem to be particularly salient in the classroom context, especially for boys. A plausible explanation for the greater associations between teacher rewards and the outcomes is that teachers spend more time during the day with children providing academic lessons. Although parents may teach academic lessons at home and assist with homework, teachers still spend substantially more time with the children in a learning context. In addition, teachers determine students' grades; therefore, any rewards dispensed by the teacher may be more influential than those given by parents.

Although 77% of the participants in our sample believed that rewards were good ways to motivate children and adolescents to do their schoolwork, this belief

related to students' own extrinsic motivation in a counterintuitive way. One might have expected that extrinsically motivated students would be the ones who believed that rewards were good ways to motivate children academically. The opposite finding emerged—those who had received much extrinsic motivation tended to be the ones who thought the use of rewards was actually a bad way to motivate children. One possibility is that students who received much extrinsic motivation may have realized their own dependency on extrinsic rewards, came to dislike it, and concluded that they are that way because of their own reward history. Findings like these, together with the acknowledgment that the students' perceptions of rewards is likely to be the key to predicting the reward's effect on motivation (Deci & Ryan, 1985), clearly suggest that we need to investigate more about students' own interpretations and beliefs about rewards and their own motivational orientations.

Our present study has several strengths, as well as limitations, that should be noted. First, the focus of the present study was how receiving rewards over time may have implications for future academic performance and motivation, because most of the previous researchers have examined effects of rewards on motivation in less than 1 week. Of course, we only used retrospective measures in the present cross-sectional study. Nevertheless, that college students' perception of reward history, at least among men, was associated with present goals and intrinsic and extrinsic motivation suggests that such links are worthy topics of future research. Prospective longitudinal studies would allow researchers to investigate whether more academic rewards received early on actually cause boys to develop such robust motivational profiles or whether college students with particular motivational orientations are either more likely to actually receive rewards or are simply more likely to reconstruct memories of receiving such rewards.

A second strength was the emphasis on obtaining students' own perceptions of these experiences. Although some rewards may be associated with higher grades in school, what does the provision of rewards mean for students' interest and involvement in school? Do students come to resent being given rewards to do well in school? More studies assessing students' perceptions and ideas about these experiences are needed. A limitation of this study, however, was the sole reliance on a self-report questionnaire. Although our emphasis in this study was on obtaining the students' own perceptions of these phenomena, future investigations may benefit from including parental and teacher report measures or naturalistic observational measures of external contingency provision.

Last, for the most part, we can generalize these findings to the larger population of college students. The participants characterized a wide range of academic performance levels and college majors. Another limitation is the restricted sample in some areas. The participants were mostly Caucasian young adults already attending college. The extent to which these findings generalize to (a) students who do not attend college and (b) college students of different ethnicities is, of course, unclear and should be investigated in future research.

In summary, it seems from the present study that individual factors, such as gender, need to be examined as moderators to understand relations between rewards and student achievement motivation. In addition, these factors need to be explored in a systematic way to avoid additional contradictory findings reported in this area of investigation (Cameron & Pierce, 1994; Deci et al., 1999). Furthermore, if teachers and parents are to be guided by research findings in terms of evaluating and refining the motivational strategies that they use with their students at home and in the classroom, research in this area will have to be conducted in natural settings. Similar to the present study, more attention needs to be given to the individual's own perceptions and interpretations of rewards. How students' perceive the reward likely determines how effective a motivator it is in the present and over time.

NOTE

1. The questionnaire is available from the first author.

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