

# Happiness and Academic Achievement: Evidence for Reciprocal Causality

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## **Abstract**

Several cross-sectional studies have demonstrated an association between subjective well-being and school success (Gilman & Huebner, 2003; Verkuyten & Thijs, 2002). In a prospective, longitudinal study, we explored the direction of causality in this relationship. At the beginning of the school year, fifth grade students completed measures of well-being and an intelligence test. In the spring, we collected report card grades from school records. One year later, we repeated the same procedure but did not re-administer the intelligence test. Participants reporting higher well-being were more likely to earn higher final grades, even when controlling for IQ, age, and the previous year's GPA. Furthermore, students earning higher grades tended to go on to experience higher well-being, controlling for IQ, age, and previous well-being. The findings suggest the relationship between well-being and academic performance may be reciprocally causal.

## **Introduction**

The relationship between well-being and academic performance is not yet well-understood. Does school achievement come at the expense of happiness? Or, conversely, are better-performing students happier? And if so, can we assign causal weight to the relationship?

Earlier research (e.g., Huebner, 1991a, Huebner & Alderman, 1993) failed to find a significant association between well-being and academic performance in cross-sectional studies, but recent findings have consistently linked academic achievement with well-being.

In a 2006 cross-sectional study, Gilman and Huebner found that students of mean age 14.45 who reported high life satisfaction were more likely to report higher grade point averages (GPAs) than students with lower life satisfaction. Moreover, those students with high life satisfaction reported better attitudes towards school and towards teachers. Similarly, Verkuyten and Thijs (2002) found, in a sample of students aged 10 – 12, that life satisfaction correlated significantly ( $r = .12$ ) with self-reported GPA. Indeed, in

Huebner's and Alderman's (1993) study mentioned above, which failed to find a significant difference between groups of low-performing and normally-performing elementary students on life satisfaction at a two-tailed alpha level of .01, the difference between groups was medium-sized ( $d = .59$ ).

The question of causality remains unanswered. Might well-being be a result of high performance in school? While much research treats well-being as an outcome, there has been, to our knowledge, no longitudinal study testing whether earning good grades improves well-being. Well-being might also boost academic performance, though little is known of the academic benefits of high well-being (Gilman & Huebner, 2006). Additionally, it could be that a third variable, such as intelligence or a demographic variable, drives both academic performance and well-being.

The current research was inspired by calls for longitudinal research on happiness from Diener and Seligman (2002) and Gilman and Huebner (2006). We tested two non-mutually exclusive hypotheses: Does subjective well-being predict academic performance? Does earning good grades predict well-being?

## **Method**

### *Participants.*

Seventy-eight percent of students ( $N = 257$ ) from two consecutive fifth grade classes at a public magnet school in a Northeastern city were combined into one sample for our analyses. Children in the two classes did not differ in terms of gender ( $\chi^2(1) = 0.47, p = .49$ ), race ( $\chi^2(4) = 7.42, p = .12$ ), age at assessment ( $t(310) = .93, p = .36, d = .10$ ), or subjective well-being ( $t(311) = 1.51, p = .13, d = .17$ ). The sample (mean age = 10.5 years,  $SD = 0.35$ ) was 50% female, 56% White, and 18% low-income.

### *Procedure.*

In the fall, participants completed measures of cognitive and affective happiness and an IQ test. In the spring, we collected report card grades from school records. One year later, we repeated the same procedure but did not re-administer the IQ test.

### *Measures.*

*Subjective well-being.* Participants completed the following measures of well-being:

- Student's Life Satisfaction Scale (LSS: Huebner, 1991b)

- The Positive and Negative Affect Schedule for children (PANAS-C: Laurent et al., 1999)

Subjective well-being scores were calculated as the mean of standardized scores of the Life Satisfaction Scale and the difference between the positive and negative affect scores of the Positive and Negative Affect Schedule.

*IQ.* Participants completed the Otis-Lennon School Ability Test Seventh Edition (OLSAT7) Level G, a group-administered, multiple-choice test of intelligence (Otis & Lennon, 1997). OLSAT7 scores were converted to normal curve equivalent scores for all analyses.

*Academic performance.* We collected year-end report card grades from school records. GPA was calculated as the mean of academic subject grades.

*Parents' Income.* We estimated socioeconomic status with the U.S. census' median income by zip code.

## Results

The subjective well-being measures all exhibited good internal consistency. The observed internal reliability of life satisfaction in fifth grade was  $\alpha = .83$ , and internal reliabilities of positive and negative affect in fifth grade were both  $\alpha = .88$ .

Subjective well-being was not related to gender ( $t(311) = 0.78, p = .44, d = .09$ ), IQ ( $r = .09, p = .14$ ), or parents' income ( $r = -.04, p = .44$ ). Because there was a trend for older children to have higher subjective well-being ( $r = .10, p = .08$ ), we controlled for age in subsequent analyses.

Well-being predicted academic performance. Children higher in subjective well-being at the beginning of the sixth grade year went on to earn significantly higher final grades when controlling for IQ, partial  $r = .24, p < .001$ . Moreover, participants with higher subjective well-being were more likely to improve their grades. When controlling for IQ and the previous year's GPA, well-being again predicted grades, partial  $r = .14, p = .04$ .

Earning better grades also predicted subjective well-being. Fifth grade GPA predicted sixth grade well-being when controlling for IQ, partial  $r = .21, p < .001$ . The correlation remained significant (partial  $r = .14, p = .04$ ) when controlling for subjective well-being

at fifth grade as well, indicating that children who earned better grades were more likely to experience improved well-being.

Figure 1. Final sixth grade GPA as a function of happiness, controlling for age and IQ

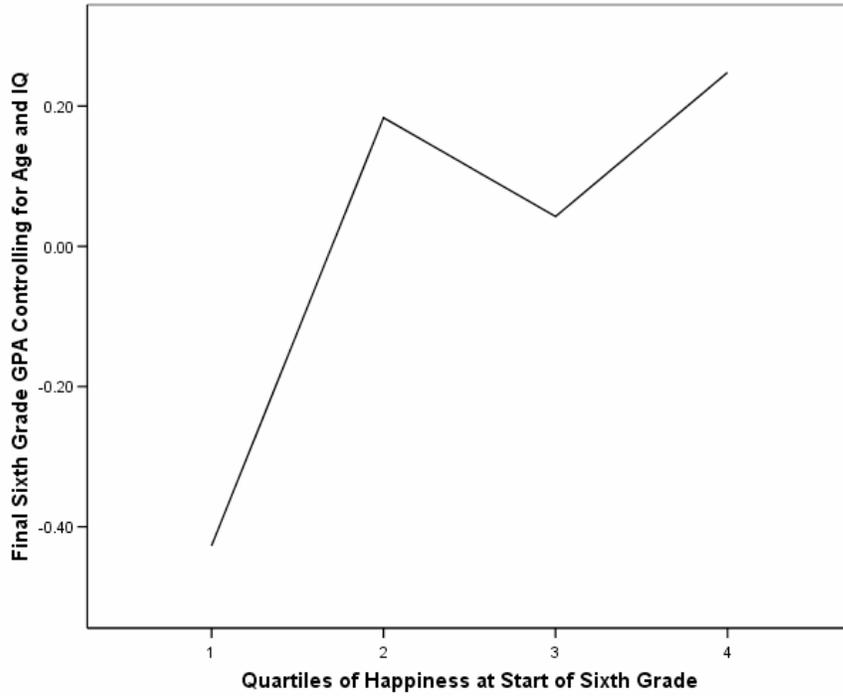
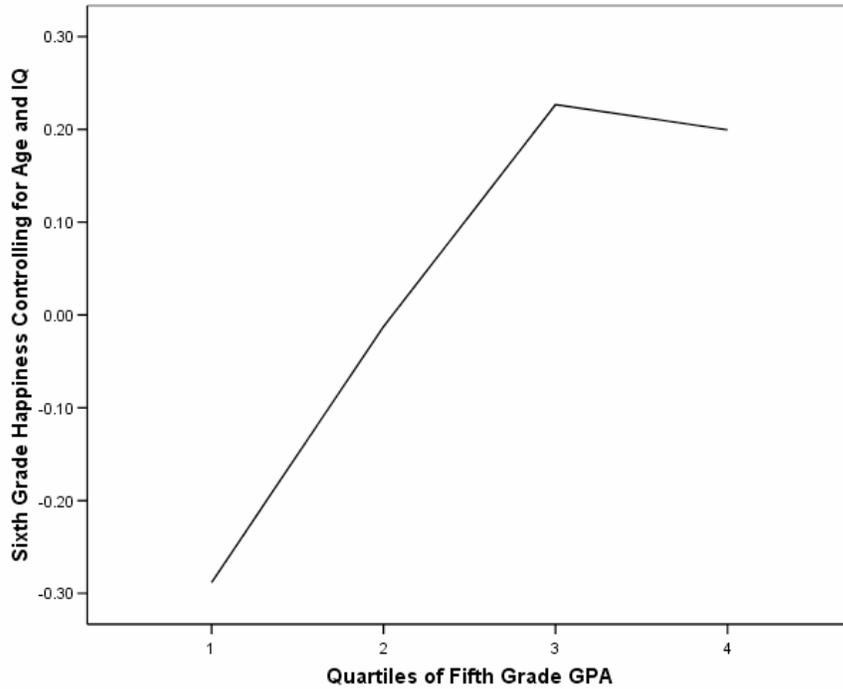


Figure 2. Sixth grade happiness as a function of fifth grade GPA, controlling for age and IQ



## Discussion

Academically successful children are often construed as miserable, made so by their pursuit of achievement. Indeed, popular literature increasingly argues for relaxing academic standards as a means to increased happiness (Robbins, 2006). However, our results, consistent with a 2005 review of the professional success and happiness literature by Lyubomirsky, King, and Diener, suggest that happiness and academic achievement are mutually reinforcing. Children higher in subjective well-being earn higher grades, even when controlling for intelligence and past academic performance. Furthermore, school success predicts subjective well-being when controlling for intelligence and past well-being scores. That is, children who perform well in school may do so in part because they are happy, and performing well academically may make children happier.

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