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Life at the top: The benefits of height

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ABSTRACT

According to the Gallup-Healthways Well-Being Index daily poll of the US population, taller people live better lives, at least on average. They evaluate their lives more favorably, and they are more likely to report a range of positive emotions such as enjoyment and happiness. They are also less likely to report a range of negative experiences, like sadness, and physical pain, though they are more likely to experience stress and anger, and if they are women, to worry. These findings cannot be attributed to different demographic or ethnic characteristics of taller people, but are almost entirely explained by the positive association between height and both income and education, both of which are positively linked to better lives.

1. Introduction

We use data from the Gallup-Healthways Well-Being Index daily polling to investigate the relationship between height and a range of emotional and evaluative outcomes. The Well-Being Index (WBI) polling was initiated in January 2008, and collects data by telephone survey (including cell phone only households) from around 1000 respondents each day; further information is available at http://www.well-beingindex.com. We use information on 454,065 adults aged 18 or over interviewed from January 2nd 2008 to April 16th 2009. People were asked to report their heights, as well as an evaluation of their lives using the Cantril "self-anchoring striving scale", Cantril (1965). According to this, they are asked to imagine a ladder with steps numbered from zero at the bottom to ten at the top where the top of the ladder represents "the best possible life for you" and the bottom of the ladder represents "the worst possible life for you," and are asked to report on which step of the ladder they stand at the present time. The WBI poll also asks respondents to reply yes or no to questions about whether, in the day before the interview, they experienced a number of feelings "during a lot of the day." The question is asked about enjoyment, physical pain, happiness, worry, sadness, stress, and anger.

Men who are above average height (5 feet 10 in., 177.8 cm) report that they are a little more than one-seventh of a step on the ladder above men who are below average height, average ladder score of 6.55 versus 6.41. For women, the difference is smaller, with women of below average height (5 feet 4 in., 162.6 cm) a little less than one tenth of a step below women of above average height, average ladder score 6.55 versus 6.64. These differences may seem small, but if we compare them to other factors that affect the ladder, they are actually quite substantial. One of the most consistently powerful predictors of life evaluation is income. The WBI poll has a single question about family income, grouped into eleven classes. The regression coefficient of the ladder on the logarithm of family income is 0.54 for women and 0.60 for men (for the

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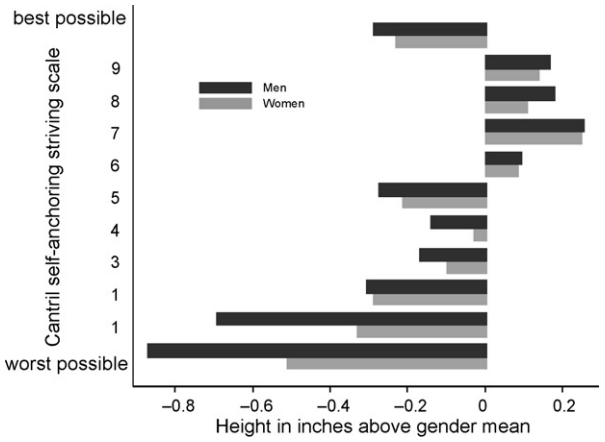

Fig. 1. Height and the evaluation of life.

164,878 women and 178,440 men who provided income data), so that moving from below average to above average height has the same effect as an 18% increase in family income for women, and a 24% increase for men. We can also do this calculation by comparing the effect of an additional inch of height on the ladder (0.020 of a step for women, and 0.026 for men) with the effect of a change in income. According to this comparison, each additional inch of height has the same effect on reported life evaluation as a 3.8% increase in family income for women, and 4.4% increase for men.

Fig. 1 shows the average heights of men and women on different steps of Cantril's self-anchoring striving scale. On average, men who report that their lives are the "worst possible" are more than eight tenths of an inch (2.0 cm) shorter than the average man; women on the bottom step are shorter than the average woman too, but by half an inch (1.3 cm). As we move up the ladder of life, heights increase, at least until the seventh step. Surprisingly, people who say that their lives are the "best possible" are slightly shorter on average than those who are a step or two below; perhaps the 8% of people who think their lives cannot be improved are different in some other respect.

Higher life evaluation is not the only outcome differentially associated with being tall. The WBI poll also asks respondents about enjoyment, physical pain, happiness, worry, sadness, stress, and anger. Table 1 shows, broken down by men and women and by above and below average height, the fraction of respondents who report experiencing each of these "during a lot of the day yesterday." The table also shows the percentage change in reported family income that would give the same change in the probability of reporting the experience as would an additional inch in height. Taller men and women are more likely to report enjoyment and happiness, and less likely to report pain and sadness, with the difference in sadness particularly large. Taller men, although not taller women, also worry less. Stress and anger, however, are *more* likely to be experienced by people of above average height. The final columns in each half of the table show that, in most cases, the effect of height parallels the effect of income, with an additional inch of height improving outcomes by about the same as a 4.5–8.5 percentage increase in family income. Once again, worry (for women), stress and anger break the pattern, most egregiously in the case of stress where higher incomes are associated with *less* stress, so that this is the most marked case in which height does not play an income-like role. As we shall see below, this anomaly vanishes once we adjust for ethnicity.

Why do taller people do better on so many outcomes? Table 2 investigates alternative explanations by including successively more covariates in a series of regressions. The first column shows the effects of height in a regression that contains only height and a gender dummy; this baseline column provides results that are comparable to those in Table 1, albeit with men and women combined. Column 2 adds a set of age dummies, dummies for race and ethnicity (white, black, Asian, Hispanic, other) and for marital status (never married, married, separated, divorced, widowed, and domestic partnership.) For the ladder and most of the reported experiences, the inclusion of these socio-demographic controls does not affect the coefficient on height, so that we cannot attribute the effects of height to the different demographics of taller and shorter people. The exceptions, perhaps not surprisingly, are stress and anger, where the negative effects of heights are reversed once we include the racial and ethnicity dummies. This happens because whites report more stress and anger than do blacks, Asians, or Hispanics, and while blacks are about the same height as whites, Asians and Hispanics are shorter so

Table 1
Experiential correlates of height (%).

	Women			Men		
	Below mean height	Above mean height	Pct income equiv per in.	Below mean height	Above mean height	Pct income equiv per in.
Enjoyment	82.6	83.7	5.0	84.1	85.7	8.5
Happiness	87.3	88.4	5.8	87.2	88.4	6.9
Pain	25.8	24.2	4.5	22.1	20.6	4.6
Sadness	21.5	19.9	5.8	15.4	13.4	8.3
Worry	34.6	34.8	0.2	29.8	28.8	4.8
Stress	40.8	43.8	−22.4	35.6	37.4	−13.9
Anger	13.4	13.6	−0.3	14.1	14.4	0.5

Notes: The first two columns show the percentage of women of below and above average height who report "a lot" of the experience in the previous day. The third column shows the percentage change in reported family income that would produce the same effect on the experience as an additional inch of height. This number is calculated from two linear probability regressions, one of the experience on height in inches and one of the experience on the logarithm of reported family income. The last three columns repeat the calculations for men. *Source*: Authors' calculations using the Gallup-Healthways Well-Being Index polling from January 2nd, 2008 to April 16th, 2009