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*Schooling. Cognitive ability or emotional well being: what drives the individual's perception of health outcomes?**

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INTRODUCTION

Nowadays household surveys collect a broad array of social indicators that measure the well being of the population beyond traditional outcomes such as income or years of education. The more complex and expensive fieldwork activities to accomplish this goal are justified by a common agreement that the well being of the population is more than a simple characterization of economic outcomes. For example, there is a large literature that has shown a strong positive relationship between levels of household income and self reported health status. [Smith and Kington (1997), Case, et al. (2002)].

Nevertheless, uncovering the meaning of complex dimensionality of health measures and their relation with a considerable heterogeneity of social and demographic indicators is not without its pitfalls. Not only, there are problems in disentangling causal effects –directionality– since most of the time there is a two-way interaction between health and economic outcomes,[1] but also because gathering good quality information of social indicators at the population level is not a straightforward task. [T.N. Srinivasan, (1994)]. Collecting health data is not the exception. On one hand, measurement error in health outcomes that is uncorrelated with other social indicators may cause social scientists to dismiss important associations. On the other hand, if measurement error in health outcomes is not random, systemic biases will cause researchers to overestimate or underestimate true interactions between health and other social indicators.

This is the case of self reported measures of health, where people's answer depends on their perception and understanding about their health status.[2] For example, Schultz and Tansel (1997) show that more educated adults are more likely to report themselves being ill. Notwithstanding, finding a negative correlation between ill-health and education is not, by itself, evidence of the lack of systemic bias. The true relationship may be even more negative if people with more education and higher opportunity cost of time are less likely to attend a physician consultation.

The most difficult problem when working with health self assessment information is to unravel the sign and magnitude of the systemic bias. Health indicators are multidimensional and consequently, people's understanding and knowledge about their health status involves complex and uncovered mechanisms. For example, people's level of education may be a fundamental factor when one is to rely on self assessed measures about sophisticated chronic disease information, than if one's goal is to characterize people's unobserved health status through self reported day-to-day basis activities such as ADLs. Good quality chronic disease information –when reported– may heavily rely on people's likelihood of having been diagnosed and their ability to have understood the diagnosis [Baker M., et. al., (2001)]. But even this may turn out not to always be the case if specific indicators of symptoms or indicators of severe

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[1] See Strauss J., Thomas D., (1995) for discussion.

[2] See Kroeger (1985) for discussion.

illness stem people's awareness about their health condition [Hill and Mamdani (1989)].

The probability of phasing systemic error may also depend on whether the inquired true health status corresponds to a stable or to a non-stable health condition. Time less-variant health indicators may ease people's ability to understand their own conditions –i.e., height levels in adulthood–. In contrast, time-variant health conditions, such as a person's body weight may prevent people's ability to provide a proper answer. Moreover, the complex mechanism that makes people perception deviate from the true health parameter, may become even more complicated if for example, life-average stable health outcomes, are for certain population subgroups not so time-invariant. This is the case of a person's height when the measurement error in the self assessed health indicator depends on the age cohort of the population [Strauss, et. al. (1996)].

We have highlighted some of the difficulties associated with analyzing reported health assessments. Where to draw the line in relying on self reports is a matter of empirical analysis that is worth investigating. Unraveling the complex mechanisms that make people's health perception deviate from the truth will help us better understand how to interpret large associations between measures of socioeconomic status and health outcomes. This is especially important since health self assessment data in many socioeconomic and demographic household surveys is the only source of health information available.

This paper investigates the relation of different social indicators with a person's misconception about her true health status when providing a self reported answer in a household survey context. We start our analysis by looking at the sample selection mechanism that characterizes people giving an answer about their health condition. We turn next to unravel the size of the bias and possible mechanisms that exacerbate its magnitude from an statistical inference point of view when people provide a self assessment answer about their health condition. We start analyzing traditional associations and study the correlation of a person's age, gender and years of schooling with the magnitude of providing a true answer about her health status. We then depart from the existing literature and explore the possibility of an individual's (unobserved) cognitive ability in understanding her/his true health condition. We close this paper by providing new evidence on whether conditional on a person's structural parameters, the current emotional well being of an individual further alters her capacity to provide a proper answer about her health condition. To do so, we use information on an array of mental health questions and information about people's past and future health expectations as systemic bias predictors.

The above analysis is based on information about a person's objective and self reported height and weight measures. Each anthropometric output provides a different health dimension. Where as height in adulthood corresponds to a relatively stable health outcome, a person's weight does vary in the short run. We exploit these two opposite characteristics to investigate whether predetermined social indicators are better predictors about a person's knowledge when it comes to report long term health conditions, or whether an individual's short term emotional condition matters, when associated with the person's capability of offering a true answer if the health outcome is a time variant condition.

Section two describes the data used for this analysis and section three discusses our findings. Conclusions are found at the end of the paper.

DATA

Our results rely on unique information gathered in the Mexican Family Life Survey (MxFLS). MxFLS is a multipurpose household survey that collects information about many dimensions of the well being of the Mexican population. Special fieldwork protocols provided MxFLS baseline with information about the health status, socioeconomic and demographic condition of every member living in the household via personalized interviews. The baseline is a representative household survey of the Mexican population in both urban and rural regions. Its fieldwork activities concluded in 2002.

To our interest, MxFLS collects height and weight information for every member living in the household. In parallel, individual self assessment on the same anthropometric measures is gathered for household members above 15 years of age and prior to the objective measurement. We use information on 20 mental health questions applied to every adult in the household to characterize the individual's emotional well being over the past four weeks, [Calderón, (1997)].[3] To further characterize the person's "emotional" perception about her health condition we complement our analysis with information on the individual's perception about her current health status relative to his/her condition a year ago from the interview, and with his/her expectations about the evolution of his/her health in the next 12 months.

MxFLS baseline provides usual demographic information about years of schooling, age and gender of every household member. To our advantage, the survey also offers individual cognitive assessment information. MxFLS interviewers asked every child and adult in the household to solve a cognitive test, based on Raven progressive matrices that require no literacy [Raven *et al.*, (1993)]. Controlling for years of schooling we use the cognitive scale achieved by each individual (0 to 12 maximum points) to uncover how much of the misperception of the person's height and weight is explained by her unobserved ability to understand her true health condition, from how much can be attributable to her level of human capital.

Tables 1, 2 and 3 provide preliminary summary statistics of the data. The information for this analysis corresponds to 33 percent of MxFLS baseline. MxFLS process of systematization is scheduled to end in June, 2003, by which results in this paper will be up-dated.

[3] The mental health questionnaire is based on 20 questions that characterize the most frequent depression symptoms for the Mexican socio and cultural environment. The quantification of the symptoms can be affirmative or negative, and in any case the respondent can choose from out of three levels of intensity (little, regular, and high). The instrument scaling permits to characterize a person into four broad depression levels (normal, state of anxiety, median depressive, and highly depressive). The mental health instrument has been validated in the open Mexican population. Its short length, comprehensiveness and simplicity permits the questionnaire to be applied in fieldwork activities by non-specialized psychiatric personnel [Calderón, 1997].

RESULTS

EXTENSIVE MARGIN ANALYSIS

Table 4 shows the selection mechanism of people coming with an answer about their weight and height when they are asked to provide their perception. Uncovering the mechanics of this self selection is not trivial if the decision of people in household surveys to reveal their health condition depends on social indicators that are correlated with health outcomes. For example, if higher educated people are more likely to participate in the interview, and years of schooling enables people to have access to better health conditions, then relying only on self assessment information will cause social scientists not only to overestimate the population's general health level –despite a survey's random sample design—but paradoxically to underestimate the individual's capacity to improve her health status in terms of human capital accumulation. This is the case if the true association between health and education is characterized by decreasing returns to schooling.[4] In our sample, 42 and 34 percent of the interviewed people agreed to provide their weight and height perception, respectively (see Table 1).

Results based on linear probability regressions [columns (1) through (6) of table 4] indicate that males are more willing to disclose their perception about their weight and height despite their age and years of education. On average females are 2.5 percent less likely to accept knowing their weight during the interview. This contrasts with a high 11.4 percent of being less likely to provide their height measure. While the answer "I don't know" in the survey's questionnaire is an option, it does not reveal if it reflects a true "don't know" or an (indirect) refusal answer to a possible uncomfortable question. Big differences between weight and height in gender report, suggests females allocate more resources to investigating about their weight than they do with respect to their height.

The age of a person seems also to play a role in determining the participation to reveal her weight and height. Older individuals are more

[4] An overestimation of the true relationship between health and education may arise if there are increasing returns to schooling: the more educated a person is, the better shape she is in to improve health condition.

inclined to provide information about their anthropometric measures than young adults. On average, one year of age increases the likelihood of reporting in half percent. However, while the age effect is significant, its role in defining the self selection mechanism is much less important than the gender factor. It is not only small in magnitude but it also does not present a differential effect in terms of weight and height participation.[5]

In contrast, columns (1) and (4) suggest that education is a very important factor determining people's knowledge of weight and height. Relative to non-literate people, individuals with 1 to 6 years of schooling are 10 times more likely to reveal their weight and height. Moreover, for individuals with more than elementary school, the probability of reporting any anthropometric measure increases to 15 percent.

Our results suggest that –among our social indicators– education is the most important factor for making people to reveal their perception about their body measures independently on whether they correspond to a short run or to a time-invariant health condition. However, the positive and significant coefficient of the Raven test score, suggests that not only knowledge plays a role in defining the participation decision, but also the individual's cognitive ability to understand his/her health status reveals itself as an important factor for gathering self reported measures of health in a survey context.

Conditional on demographics and cognitive ability, we next ask the question of whether the individual's current emotional well being affects his/her decision to disclose his/her height and body weight. We use three variables to measure this effect. a) The individual's scoring on the mental health module of the questionnaire, previously standardized for the Mexican context to diagnose the individual's degree of depression; and two categorical variables that tell b) how does the individual compare his health to one year's ago, and c) how does she expect her health to be in the next twelve months as compared to today's. The two categorical variables allow for five mutually excluding levels of health expectations: *very good, good, equal, bad,* and *very bad*. Since there are very few extremes, and in order to gain precision in the analysis we aggregated the two first categories into one (good and very good). In the regressions, "equal" is the omitted category.

In table 4, columns (2) to (3) and (4) to (5) for weight and height respectively show that out of the three variables, which measure the individual's belief about her future health is what matters. Our results suggests that holding schooling and cognitive ability constant, if a person is optimistic about her future health, she is on average 3.3 percent more willing to disclose her height and weight, than if she believed her health status was not going to change. Our results reveal that a person's emotional status at the time of the interview is an additional important factor in determining her choice of self selection when disclosing her health perception, overcoming by 40 percent the gender factor.

Finally, it is worthwhile pointing out that the cognitive ability coefficient is robust to the inclusion of the emotional well being variables. This suggests that the Raven scoring is in fact capturing a cognitive ability and is not contaminated by the individual's capacity to concentrate when solving the cognitive test due to personal stress factors.

INTENSIVE MARGIN ANALYSIS

We next restrict our analysis to those people who felt confident about knowing their height and body weight at the time of the interview, and study how important years of schooling, individual's cognitive ability and her emotional well being are in determining the accuracy to estimate her health condition.

Conditional on cognitive ability, the effect of years of schooling should tell us how, in general, knowledge affects the individual's perception about his health. *Conditional on education*, the cognitive ability score, should give us an additional hint about how important a person's unobserved cognitive ability is in handling information when it comes to calculating his health condition. In parallel, our measures of emotional well being will give us additional clues as to whether stress factors make people's health perception deviate from the truth, over and above their demographics and appreciation of confidence about knowing their health condition.

[5] In order to test the possibility that non-linearities could drive our age results downwards, we tested different regression models where age entered non linearly. The change in the specification did not modify our results.

Analyzing the size of possible systemic biases associated with these factors is important for at least two reasons. First, it will contribute to our understanding about how to interpret the association of health assessment measures with traditional social indicators –such as schooling– when correlated unobservables are difficult to control for. Second, it will tell us how seriously we should consider the presence of an individual's emotional condition when dealing with self assessment information to estimate health outcomes. Understanding the effect of individual unobservables when acquiring health data from self reported measures is of singular importance since these factors are seldom available to social scientists in regular surveys.

Table 2 displays the distribution of the "objective" and self assessment measures. During the survey's interview, health workers asked household members 15 years of age and above to provide their height and weight. This was done prior to taking their anthropometric measures. Body weight was recorded in grams and height in centimeters. On average, individuals in our sample tend to slightly overestimate the measure taken by the health worker, displaying more accuracy in their perception when it comes to report body weight than when describing their height, [66,348 g vs. 66,242 g; and 160.87 cm vs. 157.52 cm, respectively]. Nonetheless, both height and weight outcomes, when told by the individual, display a significant more disperse distribution than when measured by the trained anthropometrist, [12,219 g vs.11,052 g; and 9.52 cm vs. 8.19 cm, respectively].

Table 5 shows the results of systemic bias on body weight and height self reports at the intensive margin. The dependent variable is defined as the absolute value of the difference between self reported and measured health outcome.

Columns (1) through (3) suggest that schooling is the most important factor, among our variables, in allowing the individual to declare a good estimate about their weight. The returns are increasing: whereas being just above illiteracy allows the individual to reduce the measurement error by approximately 1.2 kg, a person who has completed more than elementary school is further able to provide a self report with less error of the order of 0.3 kg. We believe that a gain in accuracy of the order of 1.5 kg attributable just to a better general knowledge effect is quiet impressive since we are measuring population averages of ordinary people who described themselves literate about their body weight, during the interview.

The negative and very significant effect of the cognitive test scoring, suggests that better information is not everything despite its relevance. Our results indicate that a person's cognitive ability to understand the information at hand is also important when it comes to calculating his weight. The individual's cognitive ability in reducing the measurement error corresponds on average to a 7 percent magnitude of the schooling effect.

The negative sign of the mental health scoring coefficient [table 5: column (2)] suggests that people with more stress are more aware about their weight condition than individuals of the same age, gender, schooling and cognitive ability, but with less levels of anxiety. The coefficient, however, accounts for only 25 grams (11.3 pounds) of better precision and is only significant at a type I error of 10 percent. Whether it truly shows a mild association between an individual's stress condition and his ability to correctly perceive his health status once we control for observed and unobserved characteristics, or whether we are trapped by preliminary population observations where the vast majority of the individuals in our data, score mental health levels of 28.2 that correspond to a normal situation,[6] is still yet to be resolved. [See table 3].

To learn more about the interrelation between a person's ability to accurately perceive his health condition and some stress related factors, we introduce to the analysis the emotional perception variables we discussed above: a) how does the individual compare his health to a year's ago; and b), how does he expect

[6] Clinical experience suggests that score values in the range of 20 through 35 correspond to a normal person; values in the range of 36 through 45 may capture some degree of anxiety; 46 through 65 suggest medium levels of depression; and individuals scoring levels of 66 through 80 can be characterized as severe. By construction, the test allows a minimum score of 20 and a maximum of 80 points. There are 20 questions which option values are 1 for a "no" perceived symptom answer, 2 for "a little", 3 for "regular", and 4 for "very much or very frequently." See Calderón (1997), for an explanation about the test design and its validity for the Mexican population.

his health condition to be in the next twelve months as compared to today's. Table 5, column (3) shows the results for body weight. Stress associated with the individual's perception about his/her health dramatically worsening over the past 12 months, has an impressive positive effect on the person's ability to accurately report his/her body weight. Relative to a person who perceives no change in his health condition, an individual –who is in a worsening situation– is able to reduce the measurement error in his perception by an astonishing range of 2.4 kg, (5.3 pounds). The large effect suggests the possible presence of omitted variable bias if the individual's perception about the worsening of his health condition is spuriously correlated with greater awareness stemming perhaps from more experience with health care providers during the past 12 months. While we cannot entirely rule out this possibility, it is at all odds that the spurious correlation only operates for individuals whose health has worsen and not for those whose health has improved over the past 12 months, precisely because they have visited a health provider. The positive *but not significant* coefficient that corresponds to the answer "much better than a year's ago", supports this hypothesis. In addition, the fact the coefficient on stress scoring becomes not significant once we control for the individual's perception about his overall health condition, suggests more an interpretation of a positive association between stress factors and health perceptions [Farmer *et al.*, (1997)], and less a problem of spurious correlation.

Column (3) also shows that it is the individual perception about his health worsening dynamics in the past 12 months, and not his (positive) expectations about his health condition in the future that matters when providing a more accurate report about his weight. This result indicates that the mechanism by which an individual decides to report about his weight is different than that determining the accuracy of his report. A person's willingness to describe his weight is associated with a positive emotional state of mind whereas his ability to assess his true weight is only positively correlated with levels of stress or anxiety.

Our results on height perception diverge radically with those described for body weight. [Table 5: columns (4) through (6)]. In the case of height only the individual's cognitive ability seems to matter (in the sense that it is significant and robust to any model specification). This result is in line with height being relatively stable in adults, thus being affected only by one's own ability to report, and insensitive to regular measures that capture the environment and information at hand.

CONCLUSIONS

There is a large literature that has shown a strong relationship between self reported health outcomes and traditional social indicators such as schooling or an individual's emotional well being. Nonetheless, uncovering the meaning of these true associations is not always straightforward in the presence of systemic measurement error related to the people's perception about their health condition.

This paper provides new evidence about the complex, but seldom known, mechanism that makes an individual deviate from her true health condition when providing a self report. In particular, we analyze how an individual's general knowledge affects her perception about her true health, and how much this awareness is attributable to the presence of unobservables –such as her cognitive ability to processing information, and hidden stress factors. We provide evidence for two important health measures: body weight and height; and investigate differences in people's accuracy to report depending on health indicators that can be classified as long vs. short term. Although we rely on preliminary evidence, our results sink one more nail in learning how to collect reliable data on social indicators and in better understanding how to interpret health outcomes when relying exclusively on self reports in household surveys.

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Table 1
Descriptive Statistics

	All Sample	Restricted Sample
Probability of self reporting (%)		
Weight	42.21 (49.39)	…
Height	33.94 (47.35)	…
Demographics		
Male	0.47 (0.49)	0.43 (0.49)
Age	37.56 (17.35)	38.61 (16.20)
Years of education		
0 years	0.11 (0.40)	0.09 (0.29)
1 to 6 years	0.40 (0.49)	0.40 (0.48)
7 years or more	0.48 (0.50)	0.51 (0.50)
Raven	5.97 (3.01)	6.24 (2.98)
Observations	6,661	2,010

Notes: Restricted sample corresponds to individuals who self reported their weight or height during the interview. Preliminary statistics based on 33% of MxFLS' sample.

Table 2
Health Measures

BODY WEIGHT (in g)

Measured			
Smallest	36,800	Mean	66,292
25th percentile	58,000	Standard deviation	11,082
Median	66,400		
75th percentile	74,800		
Largest	87,800		

Self Reported			
Smallest	30,000	Mean	66,348
25th percentile	58,000	Standard deviation	12,219
Median	66,000		
75th percentile	65,000		
Largest	184,000		

BODY HEIGHT (in cm)

Measured			
Smallest	130.3	Mean	157.58
25th percentile	152	Standard deviation	8.19
Median	157.45		
75th percentile	163.8		
Largest	173.5		

Self Reported			
Smallest	100	Mean	160.87
25th percentile	155	Standard deviation	9.52
Median	161		
75th percentile	168		
Largest	199		

Preliminary statistics based on 33% of MxFLS' sample.

Table 3
Mental Health Scoring

	All Sample	Restricted Sample
Health Perception & Health Expectations		
How is your health compared to the way *it was one year's ago?*		
Very good/Good	0.258 (0.438)	0.258 (0.437)
Equal	0.625 (0.484)	0.622 (0.485)
Bad	0.112 (0.316)	0.117 (0.321)
Very bad	0.003 (0.060)	0.003 (0.055)
How do you expect your health will be compared with today's?		
Very good/Good	0.376 (0.484)	0.413 (0.492)
Equal	0.559 (0.496)	0.524 (0.499)
Bad	0.061 (0.241)	0.061 (0.239)
Very bad	0.002 (0.486)	0.002 (0.043)

Mental Health scoring (scale 20 to 80 points)*			
Smallest	20	Mean	28.20
25th percentile	23	Standard deviation	7.28
Median	26		
75th percentile	32		
Largest	80		

Notes: * See footnotes number 3 and 6 for Mental Health scale interpretation. Preliminary statistics based on 33% of MxFLS' sample.

Table 4
Extensive Margin Analysis

Probability of self reporting weight or height

		WEIGHT			HEIGHT	
	(1)	(2)	(3)	(4)	(5)	(6)
Male	2.3917 [1.1579]**	2.595 [1.2040]**	2.5559 [1.2040]**	11.3408 [1.0908]**	11.0614 [1.1318]**	11.0052 [1.1313]**
Age	0.6498 [0.0483]**	0.6643 [0.0487]**	0.6491 [0.0498]**	1.0908 [0.5265]**	0.5335 [0.0454]**	0.5242 [0.0463]**
Years of education						
1 to 6 years	10.0531 [2.0967]**	10.2012 [2.1176]**	10.1056 [2.1194]**	11.6202 [1.6511]**	11.5098 [1.6697]**	11.5324 [1.6694]**
7 and more	14.6103 [2.3960]**	15.0007 [2.4202]**	14.7461 [2.4276]**	23.6144 [2.0413]**	23.297 [2.0656]**	23.1226 [2.0683]**
Cognitive test score	1.2946 [0.2231]**	1.2789 [0.2258]**	1.2734 [0.2258]**	1.9414 [0.2094]**	1.9387 [0.2124]**	1.9348 [0.2126]**
Mental health score	…	-0.0379 [0.0834]	-0.0513 [0.0880]	…	-0.1436 [0.0743]*	-0.1434 [0.0786]*
How is your health compared to one year's ago?						
Very good/Good	…	…	-0.2275 [1.3558]	…	…	0.1454 [1.2631]
Bad			0.5809 [2.1072]	…	…	-1.04 [1.9027]
Very Bad	…	…	-1.2667 [10.9357]	…	…	-1.5725 [9.3255]
How do you expect your health will be in the next twelve months as compared to today's?						
Very good/Good	…	…	3.2995 [1.2650]**	…	…	3.5801 [1.1816]**
Bad	…	…	2.4183 [2.7149]	…	…	3.5014 [2.4117]
Very bad	…	…	-1.0077 [13.4549]	…	…	-10.6762 [9.2429]
Observations	6,808	6,661	6,661	6,812	6,664	6,664
R-squared	0.1315	0.1316	0.1325	0.1936	0.192	0.1935
F (all covariates)	42.44 [0.0000]	36.56 [0.0000]	18.78 [0.0000]	96.84 [0.0000]	80.34 [0.0000]	41.57 [0.0000]

Notes: Linear probability regressions. Dependent variables multiplied by 100. All models include community fixed effects to control for locality health and school related infrastructure. Robust to household clustering and heteroscedasticity standard errors. Standard errors in brackets below coefficients, p-values below hypothesis tests. ** Significant at • 0.05; * significant at • 0.10.

Table 5
Intensive Margin Analysis

Dependent variable:
Absolute Difference between self reported and measured weight and height

		WEIGHT			HEIGHT	
	(1)	(2)	(3)	(4)	(5)	(6)
Male	540.886 [194.7635]**	474.3184 [199.3113]**	480.2646 [199.0631]**	-0.4445 [0.2616]*	-0.4523 [0.2757]	-0.4198 [0.2759]
Age	-1.9984 [8.2520]	-2.4376 [8.3995]	0.0222 [8.5076]	0.0068 [0.0101]	0.0067 [0.0103]	0.0075 [0.0107]
Years of education						
1 to 6 years	-1,231.46 [648.2279]*	-1319.56 [636.6658]**	-1309.47 [632.4851]**	-0.3882 [0.7653]	-0.3088 [0.7780]	-0.2007 [-0.7407]
7 and more	-1424.37 [670.9362]**	-1555.99 [660.2482]**	-1558.32 [661.7705]**	-0.6122 [0.7636]	-0.5025 [0.7739]	-0.3815 [0.7334]
Cognitive test score	-97.8392 [35.9378]**	-108.5464 [36.1874]**	-106.1697 [35.9297]**	-0.1173 [0.0416]**	-0.1171 [0.0427]**	-0.1182 [0.0432]**
Mental health score	…	-25.0688 [14.9051]*	-20.9701 [16.3522]	…	-0.0018 [0.0195]	-0.0096 [0.0209]
How is your health compared to one year's ago?						
Very good/Good	…	…	275.5854 [252.9378]	…	…	0.3386 [0.3264]
Bad	…	…	-297.9212 [333.1089]	…	…	-0.0688 [0.6482]
Very Bad	…	…	-2406.67 [786.4449]**	…	…	-0.4083 [2.1242]
How do you expect your health will be in the next twelve months as compared to today's?						
Very good/Good	…	…	-93.6661 [207.6075]	…	…	-0.0111 [0.2630]
Bad	…	…	40.4054 [547.3454]	…	…	1.1401 [1.0012]
Very bad	…	…	-569.98 [823.4151]	…	…	0.0001 [0.0002]
Observations	2,655	2,611	2,611	2,056	2,010	2,010
R-squared	0.0422	0.0443	0.0458	0.0555	0.0577	0.0577
F (all covariates)	6.07 [0.0000]	6.67 [0.0000]	4.35 [0.0000]	3.24 [0.0064]	2.47 [0.0223]	1.42 [0.1550]

Notes: See notes Table 4. OLS regressions. Weight measured in g, height in cm.