The Importance of Parental Knowledge and Social Norms: Evidence from Weight Report Cards in Mexico*

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Abstract

We study the impact of body weight report cards in Mexico. The report cards increased parental knowledge and this knowledge shifted parental beliefs concerning their child's weight. Nevertheless, we observe no meaningful changes in parental behaviors or children's body mass index. Interestingly, parents of children in the most obese classrooms were less likely to report that their obese child weighed too much relative to parents of children in the least obese classrooms, emphasizing the importance of social norms. As obesity rates trend upward, reference points for appropriate body weights may rise, making it more difficult to lower obesity rates.

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I Introduction

The incidence of childhood obesity has risen dramatically across both developed and developing countries. While the tripling of rates of childhood obesity in the United States over the last 3 decades has garnered much attention (Centers for Disease Control, 2011), the recent trends in developing countries are often more stark. In Mexico, a country with one of the highest obesity rates in the world (El Universal, January 22, 2010) and on a projected trajectory to surpass obesity rates in the United States,[1] rates of childhood obesity doubled in the short period between 1999 and 2006 (Rivera et al., 2001; Olaiz et al., 2006).[2,3,4]

These statistics have triggered widespread concern because childhood obesity is associated with many adverse outcomes. Obese children face short-term consequences such as an elevated risk of hypertension and type 2 diabetes in addition to detrimental psychological consequences of low self-esteem and discrimination (Chomitz et al., 2003; Must et al., 1999; Must and Strauss, 1999). They are also more likely to be obese as adults (Dietz, 1998). As such, the rapid increase in obesity rates at young ages will likely have implications for human capital formation, adult health, labor market opportunities and other socioeconomic outcomes (Cawley, 2004; Daniels, 2006; Taras and Potts-Datema, 2005).

There has been much discussion about what policies may counteract these changes. Across the developing and developed world, popular proposals include removing vending machines from schools, banning food vendors on school property (in the case of Mexico), taxing soda, and increasing physical activity in schools. But these policy initiatives are often expensive, require significant changes in the school environment, or meet political resistance. For instance, in Mexico, regulation of food vendors is often embroiled in debate due to the

[1] This is according to the 2012 OECD study: http://www.oecd.org/dataoecd/1/61/49716427.pdf.

[2] In 1999, 5.3 percent of male children and 5.9 percent of female children were obese and, in 2006, those percentages were 10.8 percent and 9 percent, respectively (Olaiz et al., 2006).

[3] Data on the heights and weights of Mexican school-aged children are only available for more recent years.

[4] Rates in the U.S. were relatively stable rising from 13.9 percent to 15.5 percent during the same period. Statistics come from `http://www.cdc.gov/nchs/data/hestat/obesity_child_07_08/obesity_child_07_08.htm`.

strength of Mexico's snack food industry.[5] Information interventions may be less intrusive but yet powerful alternatives. Certainly, within other domains, information interventions have been effective in changing behavior.[6] In fact, many health and obesity-related policies, such as mandatory posting of calories on menus (Bollinger et al., 2011; Wisdom et al., 2010) and nutritional labeling (Jayachandran and Cawley, 2006), are predicated on the idea that information could affect behavior.

In this paper, we evaluate the effect of a new type of tailored information intervention—the delivery of body weight report cards to parents in Mexico using a randomized-controlled design. We study the impact of weight report cards on parental knowledge, obesity-related attitudes and behaviors, and body mass index (BMI) for 2,746 elementary school students.[7] We use data collected from several sources—surveys of parents, child anthropometric measures, and observed attendance rates at an information session on healthy eating and physical exercise. The fast growing rate of childhood obesity and the low levels of knowledge about their child's weight status (e.g., only 21% of parents of overweight or obese children correctly classified their child as overweight or obese in our sample) make Mexico an interesting and relevant environment for this intervention. Furthermore, relative to the United States, there has been very little work done understanding obesity in Mexico despite the high obesity rates there.

Weight report cards have been used in several states and countries[8] despite the limited empirical evidence on their effectiveness. As Centers for Disease Control (2009) states:

> Little is known about the outcomes of BMI measurement programs, including

[5] See `http://www.nytimes.com/2011/03/14/world/americas/14mexico.html`.

[6] Examples include encouraging students to finish high school (Jensen, 2010), helping low-income families choose schools (Hastings and Weinstein, 2008), and reducing AIDS prevalence (De Walque, 2007; Dupas, 2011a).

[7] BMI is equal to an individual's body weight (in kilograms) divided by the square of his or her height (in meters).

[8] Arkansas, New York City, the United Kingdom, and Malaysia have implemented them (Evans and Sonneville, 2009; Schocker, April 19, 2011). Additional areas have BMI surveillance programs where students are weighed on a regular basis but only aggregate statistics are reported (Nihiser et al., 2009). Some states have added a BMI calculation to their student's academic report card (`http://www.huffingtonpost.com/2011/04/19/bmi-schools_n_850776.html`)

effects on weight-related knowledge, attitudes, and behaviors of youth and their families. As a result, no consensus exists on the utility of BMI screening programs for young people. The U.S. Preventive Services Task Force concluded that insufficient evidence exists to recommend for or against BMI screening programs for youth in clinical settings as a means to prevent adverse health outcomes.

The few but limited studies on weight report cards focus exclusively on developed countries.[9] It is unlikely that these earlier findings are generalizable to Mexico where parents are less knowledgable about the prevalence of childhood obesity, the population is poorer, and cultural beliefs about the appropriate body weight are different (Oria and Sawyer, 2007).

Weight report cards, a type of tailored health information campaign, may be particularly successful for several reasons. First, as we find in our data, parents are poorly informed about their child's health. Second, personalized health campaigns are generally more effective than non-personalized health campaigns (Hawkins et al., 2008). Recent research rationalizes this finding by showing that tailored information interventions (as opposed to more general information interventions) are more likely to activate areas of the brain important for awareness, which later are important for precipitating behavioral change (Chua et al., 2011). While this literature considers the relation between one's own awareness and one's own health, it is reasonable to think that these same principles may apply when thinking about parental awareness and children's health. Third, according to the Health Belief Model (Hochbaum et al., 1952), a highly-cited psychological model which attempts to explain health behaviors, a person must understand vulnerability to disease before any behavioral change can occur.

Within the field experiment studied here, children were randomized into one of four groups: a control group and three treatment groups. Parents of children in the treatment groups received information on the height and weight of their children and their child's weight classification (i.e., underweight, healthy weight, overweight, or obese).[10] Two of the

[9]These include Chomitz et al. (2003); Grimmett et al. (2008); Kalich et al. (2008); Kubik et al. (2006).

[10]We describe these classifications in more detail later but they are based on CDC classifications (i.e., are not specific to Mexico).

treatment groups (referred to as the RISK and COMPARE treatments) received additional information. These two treatments test the effects of different types of information. In particular, the RISK treatment provided the health risks of obesity. Making the consequences of the child's weight status more salient to parents may be important because the costs of healthy behaviors are accrued earlier than the benefits, leading people to procrastinate on engaging in health-improving behaviors (e.g., DellaVigna and Malmendier, 2006; Giné et al., 2010). The COMPARE treatment distributed information on the count of children in each weight classification in the child's class in school.[11] The purpose of this treatment was to test the importance of social norms. In classes where the majority of students are obese, learning that your child is obese may worry parents less because the reference group is obese.

Our analysis proceeds in several steps. In order to see effects of the cards on parental behaviors, it is first necessary that the report cards changed parental knowledge and attitudes concerning the child's weight. Many informational interventions look at behaviors without documenting whether the information is absorbed and retained, making it then difficult to understand why the intervention was ineffective in the case of null results. We do find that the intervention increased parental knowledge of their child's weight reported one to two months after the intervention. At baseline, 33% of parents of overweight children and only 6% of parents of obese children correctly reported their child's weight status. Following the intervention, those percentages rose to 59% and 20% respectively for those receiving report cards. Additionally, this knowledge translated into changes in parents' beliefs concerning their child's weight. The treatment increased the fraction of parents of overweight and obese children reporting that their child weighs too much. Moreover, reference groups and social norms have important effects on these beliefs. In classes where parents of overweight and obese children were told that more than a third of students were overweight or obese, the report cards had no effect on parental beliefs about the child's weight.[12] Such a finding

[11] We tried to keep the information conveyed as simple as possible so we presented counts, which we thought would be easier to understand than percentages.

[12] These findings are reminiscent of those of Ali et al. (2011), who show, using observational data from the National Longitudinal Study of Adolescent Health, that an adolescents' social group affects his/her weight

suggests that as obesity rates rise, parents may be less inclined to believe that their child is obese, and thus, it may be more difficult to induce change. After documenting the effects on parental knowledge and perceptions, we evaluate whether these effects translate to behavioral changes. We observe no changes in behaviors, including child's enrollment in a sports class, seeing a doctor in regard to the child's weight, and encouraging the child to increase physical activity or in intentions for the future to increase child's physical activity or reduce the quantity of food consumed. Finally, we estimate whether there are impacts on children's outcomes such as BMI or weight. We do not find any detectable effects on BMI or weight.

We explore several possible explanations for the lack of parental changes in behavior. First, it is possible that limited resources affected parents' ability to respond to this new information. Some obesity-reducing actions such as signing a child up for a sports class could be costly. If resources are important for reducing obesity, we would expect that the most educated parents would be the most responsive to the report cards. However, there are no differential responses to the report cards by parental education. Also, a lack of resources likely cannot explain the lack of behavioral changes by parents given that when free resources (i.e., help from nutritionist and an information session on healthy eating and physical activity) were provided, few parents took advantage of them. Second, the report cards may not be meaningful to parents if they are not cognizant of ways to reduce obesity. But from the post-intervention survey, it was clear that most parents were aware of the causes of obesity.[13] Lastly, in order to observe meaningful behavioral changes, it may be necessary that parental concerns about obesity change. We do not observe changes in such concerns nor in the ranking of concern about child's weight relative to other concerns, despite the fact that the concern about child's weight is one of the lowest concerns parents have of the concerns we measure. Overall, our results suggest that the provision of weight report cards is simply not enough to induce change despite the positive effects on knowledge and attitudes.

perceptions.

[13]However, being cognizant of the causes does not imply that one knows how to reduce obesity.

II Experimental Design and Data Collection

A Experimental Design and Timeline

The field experiment took place in the city of Puebla, Mexico, the fourth largest city in Mexico (1.5 million people). Puebla is located in Central Mexico. In 2000, average income per capita in the city of Puebla was 9,843 US dollars, more than the national Mexican average of 7,025 US PPP 2005 dollars.[14]

Seven primary public schools were selected to participate.[15] Classes from second through sixth grade were considered. All students within each class in the sample were surveyed. In January 2010, baseline surveys were distributed to students to take home for parents to complete (see the Appendix for a copy of the survey). This survey collected information from the primary caretaker about his/her education, occupation, concern about H1N1, concern about the child's weight, concern about own weight, concern about the child's performance in school, their classification of the child's weight (i.e., underweight, healthy weight, overweight, and obese), and rates of time preference. The baseline survey response rates was 67%. These response rates are higher than some other studies using school-based samples (Angrist et al., 2002; Bettinger and Slonim, 2007). Moreover, the baseline response rates are not related to treatment status since we stratified the randomization based on whether the family responded to the survey. Survey responses could vary by whether the father or the mother was the primary caretaker. Importantly, however, when we estimated these effects separately by whether the father or the mother responded to the survey, we found no differential responses across these two groups. Thus, we pooled them together.

Following the receipt of the baseline survey, nutritionists weighed and measured all students in the participating classes. Each child's weight was categorized using the BMI-for-age weight status categories and corresponding percentiles established by the Centers for Disease

[14]These statistics come from the 2000 Mexican Census. See `http://www.pueblad elosangeles.gob.mx/wb/pue/ingreso_percapita_anual_por_municipio_de_la_zona_m` for the Puebla statistic.

[15]Schools that were neither the poorest or the richest schools in the urban area were considered. Then the sample was restricted further to schools that expressed an interest in participating.

Control (CDC).[16]

After the collection of the weight and height information, the students were randomized into one of four groups: three treatment groups (BASIC, RISK, and COMPARE) and a control group. The randomization was stratified based on the combination of school, weight status, and whether or not the baseline survey was completed. Thus, in our analysis, we include strata fixed effects. As some students have siblings in the same school who were also part of the experiment, children of the same household could be assigned to different treatments. Given the tight timeline dictated by the schools' schedule, there was not enough time between the pre-survey and the treatment assignment to determine which children belonged to the same families. As a robustness check, which we discuss later, we consider families with only one child in the experiment where spillovers may be more minimal and our results are similar.

The treatment groups all received basic information about their child's weight and height but varied in the type of additional information provided (see the Appendix for a copy of the different report cards). For the treatment groups, the weight report cards were sent home in sealed envelopes to parents along with a letter informing parents that the child's weight and height had been measured at school. In addition, parents were provided with the contact information of a nutritionist to contact free of charge if parents had further questions.

The BASIC treatment group received a personalized health report card that detailed the child's height, weight, and weight classification (i.e., underweight, healthy weight, overweight, or obese). To enable parents to understand these weight classifications, the ranges of weights were given for each of these classifications for the child's height, age, and sex. The RISK treatment group received the same information as the BASIC treatment, but in addition, had a script describing the health risks of the weight categorization. For obese or overweight children, the message was, "Obese/overweight children are at higher risk of living shorter

[16] According to the CDC, students are classified underweight if their weight is less than the 5th percentile, healthy weight if their weight is between the 5th percentile and the 85th percentile, overweight if their weight is between the 85th and the 95th percentile, and obese if their weight is equal or greater than the 95th percentile for their age in months, height, and sex.

lives and developing diseases such as diabetes, high blood pressure, heart disease, asthma, and cancer." For underweight children, the relevant text was, "Underweight children run a higher risk of malnourishment, low scholastic achievement, and low resistance to illness." The parents of healthy weight children received information on the health risks for being overweight/obese. The final treatment group (COMPARE) obtained the same information as the BASIC treatment but also received information about the number of children in the child's class in each of the weight categories: underweight, healthy weight, overweight, and obese.

All treatment groups and the control group received an invitation to attend an information session entitled "Practical Tips for Improving Your Child's Eating Habits and Physical Activity." The main motive for this invitation was to obtain an observed (i.e., not self-reported) of parents' reaction to the weight report card; attendance at this session was one of our main outcome variables. Actual behavior (e.g., attendance to the session) and self-reported behavior might be very different. For example, a parent may say that she intends to change her child's habits, but we care mostly about her behaviors rather than her intentions. The information sessions occurred a week after the delivery of the weight report card.

After these sessions, in March 2010, the students were given a post-intervention survey for their parents to complete. The distribution of this post-survey occurred long enough after the mailing of the report cards that a less attentive parent may have forgotten the contents of the card. The post-intervention survey was intended to capture parental response to the report card information. The control group also was asked to complete the survey.[17] This survey contained many of the pre-survey questions but also asked parents whether they had taken particular actions - seen a medical professional in regards to the child's weight, put the child on a diet, engaged in physical activity with the child, discussed the child's weight with him or her, family members, or friends, had the child skip meals or snacks, and/or signed the child up for a sport or exercise class. Questions about these particular

[17]Parents attending the information session were asked to fill out a post-intervention survey at the information session.

actions come from the public health study on body mass index report cards of Kalich et al. (2008). There were also questions inquiring about parental intentions in the future to change the amount of food the child consumed and the amount of exercise he or she engaged in. The post-intervention survey finished with a series of questions about health knowledge and knowledge of their child's weight status. Unlike many previous studies on the effect of information on behaviors, we try to understand the steps by which health information may impact behavior.[18] Documenting these steps is important because in the case of a null effect of information on behavior, as some studies find, it is not clear whether the result is due to the lack of the information being transmitted or a lack of a response to the new information.[19]. We considered the possible adverse effects of the report cards (e.g., the lowering of children's self-esteem) and in discussions with the research team, we heard of no mention of these type of effects. In the second half of May 2010, at the end of the school year, the nutritionists measured the heights and weights of both the treatment and control children again to see if the intervention had had any impact on children's weight or BMI.

It is important to note that the randomization was done at the individual level rather than at the school or grade level. Given this level of randomization, there is the possibility of cross-contamination effects biasing our estimates. Specifically, one might imagine that a parent in the control group may become more concerned about his/her child's weight if the parent talks with a parent who received the RISK treatment report card. Any spillover effects, if they exist, might dampen the differences between the treatments and the control group, leading us to be biased against finding any significant effects of the intervention. The choice to randomize at the individual level was dictated by the fixed sample size; to maximize the power of the experiment, the randomization was performed at the individual level. In an effort to reduce cross-contamination effects, there was an attempt to make the information private by delivering home the report cards in sealed envelopes. Moreover, we performed a

[18]See Dupas (2011b) for a nice review of this literature.

[19]Examples of null effects of information on behavior include Giné et al. (2010); Meredith et al. (2012). Giné et al. (2010) estimate no impact of information on smoking behaviors in the Philippines and Meredith et al. (2012) consider the effect of health risk information on the transmission of hookworm.

series of robustness checks, which we believe point to small spillover effects.

B Sample Characteristics and Balance Check

Table 1 provides the means for key variables across the three treatment groups and the control group in the pre-treatment period. In the last two columns, we present p-values from two tests: one testing the equivalence of the overall treatment group mean (combining the three treatment groups together) and the control group mean (i.e., treatment=control column) and the other testing the equivalence of the means of all four groups (i.e., all equal column). Panel A presents the baseline anthropometric data (not conditional on completion of the baseline survey) and Panel B presents data from the baseline responses collected from the primary caretaker.

The randomization worked well. None of the p-values testing whether the treatment averages are different from control averages dip below 0.05. Only two of the p-values (concern about child's weight and concern about child's school performance) are less than 0.05 in a test of equivalent means across all 4 groups. This is not surprising given the number of means contrasted. These differences, however, are slight and suggest that parents in the control group were slightly more concerned about their children on a number of dimensions.[20]

Panel A shows that 2,746 children participated in our study. The sample is nearly equally divided across the different groups. Obesity rates among these young children hovered just over 10% and overweight rates are just under 20%.[21] Moreover, 33.6% of boys and 26.5% of girls were obese or overweight. These percentages match well with published statistics from the 2008 National Schoolchildren Survey (Levy, 2010).[22]

Panel B indicates that most of the baseline survey responses came from the mother (67%).

[20] We have also run all our regressions controlling for these baseline differences across the groups and we observed no substantial changes in our treatment effect estimates. Results are available upon request.

[21] For comparison, among children of this age in the US, the obesity rate was 19.6 percent. See `http://www.cdc.gov/nchs/data/hestat/obesity_child_07_08/obesity_child_07_08.htm`. The overweight statistic is not provided.

[22] Indeed, this survey shows that, for primary school children within the state of Puebla, 27.6% of boys and 23.9% of girls are classified as obese or overweight.

In the remaining cases, it was primarily the father (30% of total responses). The level of parental education is low: over 30% of primary caretakers had not completed high school.

To gauge how concerned parents were about obesity, we asked parents about their level of concern on several dimensions—parents' own weight, child's weight, H1N1, and child's performance in school. Parental concern about their child's weight was the second lowest of all concerns, only above concern about the caretaker's own weight.

Table 2 presents the analogous table to Table 1 but for the restricted sample of overweight and obese children, the target population for this intervention. The randomization here is also fairly balanced, which is unsurprising given that weight status is one of the stratification variables. Most of the means are similar to those in Table 1 with the exception of concern about child's weight and parental classification of the child's weight (i.e., underweight, healthy weight, overweight and obese). Not surprisingly, parents of obese and overweight children were more likely to characterize their child as overweight or obese than the overall population was and parents of obese and overweight children were also more concerned about their child's weight.

Since we will look at several post-survey outcomes, Appendix Tables 1 and 2 replicate Tables 1 and 2 conditional on completion of the post survey. For the overall sample, the treatment and control groups are still balanced with the exceptions of slight differences in concern about child's weight and concern about child's school performance akin to those observed in Table 1. As for Appendix Table 2, the table equivalent to Appendix Table 1 except for the overweight and obese, across most variables, we are unable to reject the equivalence of means across the groups. However, the primary caretaker characteristics (i.e., education) differ across the treatment and control groups. To deal with this imbalance, we can control for caretaker educational level, and our regression estimates are very similar.

C Parents' Knowledge about Child's Weight Status

As our goal is to evaluate the impact of weight report cards on parental knowledge, attitudes, and behavior, it is important to know how knowledgeable parents are about their child's weight status at baseline. In Table 3, we examine parental misperceptions of their child's weight by looking at parental classification at baseline versus actual classification of weight status. If caretakers can accurately classify their child's weight, the main impact of the report cards would likely be a salience effect. It is clear, however, that there are large misperceptions. 67% of caretakers of overweight children and 94% of caretakers of obese children underestimated their children's weight status. These misclassification percentages are much higher than those found in U.S. samples, which ranged 35 to 50% (Neumark-Sztainer et al., 2008; Warschburger and Kroller, 2009). We also found misclassification rates to be higher among the low educated (analysis not reported). This finding gives credence to the possible scope for report cards to affect behaviors more strongly in developing countries.

In order to understand the prevalence of underweight, overweight, and obese further, we next explore the cross-sectional partial correlations between weight status and parental and child attributes in Table 4. Each column of Table 4 reports the estimates from separate linear regressions of weight status (i.e., underweight, overweight, and obese) on these attributes. We should, of course, take caution in extrapolating too much from these regressions given that they are subject to usual concerns about omitted variables bias. If part of the reason why some children are obese or overweight is due to limited knowledge about the risks of obesity or deficient resources (e.g., limited access to healthy foods), we might expect that rates of obesity/overweight are higher among the less educated. Interestingly, however, we find that parental education is positively correlated with obesity risk, a common finding in developing countries, particularly Mexico (Hernández et al., 2002; Martorell et al., 2000; Ullmann et al., forthcoming). As such, it could be the case that a lack of information or poverty might not be among the most important factors explaining obesity in Mexico. Table 4 also shows that rates of obesity are higher among male children.

Aside from these socioeconomic characteristics, we assess whether a parent's time inconsistency is predictive of his/her child being underweight, overweight or obese.[23] Since many of the contributing obesity factors (e.g., unhealthy eating and physical inactivity) motivate models of self-control, it is natural to think that obesity is related to time-inconsistent preferences.[24] While it is more typical to consider the relation between one's own time preferences and own's obesity risk, here we are thinking about a parent's time preferences and his/her child's obesity risk. Nevertheless, if parents are altruistic, parents with self-control problems may be prone to postpone actions that would help their child become more healthy such as limiting the consumption of unhealthy snack foods and encouraging them to be more physically active. This is because the costs of such actions, which include combating resistance from one's child, are accrued earlier than the benefits (i.e., a healthier child). Overall, time inconsistency shows no relation to any of the outcomes. Whether this finding is due to a lack of a relationship between parental time preferences and child obesity risk or due to the context (i.e., Mexico versus the United States) is unclear.

III Results

A Empirical Strategy

We estimate the effect of the weight report cards in two ways. First, to estimate the effect of the report cards on our outcomes of interest (e.g., parental attitudes, parental behaviors,

[23] Our baseline survey collected answers to standard time preference questions. We use the same wording and setup of the time preference questions used in Ashraf et al. (2006). For exact wording of our questions, see a copy of the surveys in the Appendix. We label individuals as time inconsistent if the money needed to make them wait one month before receiving is larger when considering the tradeoff between today and a month from now compared to the tradeoff between 6 months from now and 7 months from now. Nearly 23% of our sample is classified as time inconsistent. In the Philippines sample of Ashraf et al. (2006), roughly 25% are time inconsistent.

[24] Courtemanche et al. (2011) provide evidence of a relationship between time inconsistency and obesity in the United States.

and child's BMI), we first estimate regressions of the following form:

$$Y_{ig} = \beta_0 + \beta_1 * T_{ig} + \delta_g + \epsilon_{ig} \tag{1}$$

where i indexes the individual, g indexes the stratification group, Y_{ig} is an outcome of interest, T_{ig} is a treatment indicator equal to 1 if the child is assigned to one of the three treatment groups and 0 if the child belongs to the control group, δ_g is the strata fixed effect, and ϵ_{ig} is the error term. We estimate heteroskedastic-consistent standard errors.

Second, to discern how the effect of the report card varies across the type of report card, we estimate the following:

$$Y_{ig} = \beta_0 + \beta_1 * BASIC_{ig} + \beta_2 * RISK_{ig} + \beta_3 * COMPARE_{ig} + \delta_g + \epsilon_{ig} \tag{2}$$

where $BASIC_{ig}$, $RISK_{ig}$, and $COMPARE_{ig}$ are each treatment indicators equal to 1 if the child is assigned to that treatment group respectively and 0 otherwise.

B Base Treatment Results: Effects on Knowledge and Behavior

Table 5 presents our base treatment effect estimates for the overall sample and for the sample of overweight and obese children using equation (1). Each estimate comes from a separate regression. The sample consists of children whose parents filled out the baseline survey.

It is important to first verify that the report cards were delivered home. As reported in columns (1) and (3), parents in the treatment group reported high rates of having received a report card with weight and height information about their child. Roughly 90% of the treatment group reported receiving a card.[25]

[25]Somewhat surprisingly, 40-45% of the control group reported receiving a card. The control group did not receive any weight and height information. The members of the control group, however, received an invitation to attend an information session. Control group parents may have been confused about the survey question, "Did you receive a report of your child's height and weight from his or her school in the last month?" and answered yes because they received an invitation to the information session. Alternatively, we speculated that the parents might be answering in regards to any of their children in the school, but when we drop those students with a sibling in the experiment, the treatment effects for receiving a card are quite

We are next interested in whether the cards affected parental knowledge. At the center of the Health Belief Model (Hochbaum et al., 1952) is the idea that health behavioral change is contingent on understanding vulnerability to disease. To test whether the cards affected parental knowledge, columns (2) and (4) report estimates using whether the parent correctly classified the weight of the child after the intervention as the outcome. For the overall sample, the intervention increased the proportion of parents who correctly classified their child's weight by 13 percentage points (a 21% increase). The effects are stronger when restricting the sample to overweight/obese children; the report cards led to a rise of 17 percentage points (a 63% increase) in the likelihood of correctly classifying the child's weight.

Next, we look at how this new knowledge changed parental perceptions. These effects are easily visualized in Figure 1 which shows, by weight classification, the distribution of parental responses to the question, "How would you characterize your child's weight?" for the treatment and control groups. Across all four weight categorizations, the treatment moved parental responses in the expected direction. The effect of the treatment was particularly remarkable for the obese. Among this group, only 6% of control group parents reported that the child weighed much too much whereas among the treatment group this figure was 28%.

For the remainder of the paper, we focus on the effects of the report cards on parents of obese and overweight children, the target population of this intervention. Table 6 examines the effects of the report card on beliefs about whether the child weighs too much, concern about the child's weight, parental actions,[26] parental attendance at the informational session, child's BMI, and child's weight. In the cross-section, based on estimates from the control group, the first four outcomes are strongly positively related to the child being overweight/obese.

We start by examining whether the report card information changed parental perceptions. Two conditions are likely necessary for behavioral changes to happen: parents need

similar.

[26]These actions include: seen a medical professional in regards to the child's weight, put the child on a diet, had the child skip meals or snacks, engaged in physical activity with the child, discussed the child's weight with him or her, family members, or friends, and/or signed the child up for a sport or exercise class.

to know/learn their child's actual weight classification and this classification needs to shift their beliefs about the appropriateness of their child's weight. If the weight classification is meaningless for parents, it is unlikely that knowledge of the weight classification will cause parents to modify their behaviors. We observe that the report cards increased the fraction of parents reporting that their child weighs too much by 13 percentage points (a 23% effect).

Despite the effects on knowledge and beliefs, there are no statistically significant effects on behaviors or parental concern. The point estimates are small, especially for the number of actions and attendance at the informational session.[27] The 95% confidence intervals rule out effects larger than 0.2 to 0.3 of a standard deviation for the continuous outcomes, and a positive effect exceeding 0.06 percentage points for the attendance outcome.[28]

Lastly, we explore whether the report cards affected children's BMI and weight. These outcomes are more objective and are measured without the possible selection effects of the survey measures but are more downstream outcomes. Given the null results on parents' actions and self-reported behaviors, it is not surprising that the treatment effects on weight and BMI are not statistically different from zero. The confidence intervals of these estimates exclude negative effects larger in magnitude than -0.7% and -2.6% on BMI and weight, respectively. We trimmed the sample to deal with outlier observations; the second round of height and weight measures had some obvious measurement errors.[29] As a robustness

[27]While only 20% of parents of obese/overweight children attended the information session, nearly every caretaker who responded to the post-intervention survey reported an interest in this session.

[28]In Appendix Table 3, we consider the separate effects on the different actions underlying the actions variable in Table 6. The most common actions were the discussion of the child's weight with him/her and the participation in physical activity with the child. None of the treatment effects estimates are statistically significant. However, in most cases, the power to rule out economically significant effects is limited. An exception is the participation in physical activity with the child; the point estimate is negative with an upper bound of a 0.02 percentage effect (3% effect).

[29]To address this issue, we dropped observations with weights exceeding the minimum and maximum weights observed with the pre-intervention measurements (16 kilograms was the minimum and 83 kilograms was the maximum). In the post-intervention period, 16 kilograms corresponds to the 0.16 percentile (i.e., only 3 observations have values below that threshold) and 83 kilograms corresponds to the 99.92 percentile (i.e., only 2 observations have values above that threshold). This will necessarily drop a few possibly valid observations that were near 83 kilograms at the outset but our results are not sensitive to this inclusion or exclusion. We also dropped observations for whom the weight change between the two measurements exceeded 10 kilograms (the 99.2 percentile of the distribution). We performed similar exclusions for observations based on their height measurements. We dropped students (7 in total) with heights below the minimum height observed in the pre-intervention period (111 cm) and one student with a height of 199 cm, which was

check we also use robust regressions, which give less weight to outlier observations but end up providing similar estimates.

To gauge the size of these BMI and weight effects, it is fruitful to compare these changes to the average changes between the pre-intervention and post-intervention period. These were -2.5% and 0.6% for BMI and weight, respectively.[30] Thus, although the gap in time between the two sets of weight and height measurements was only four to five months, students' body compositions were changing sufficiently that we might have expected to observe an effect on BMI and weight if the report card delivery induced behavioral modifications. However, it is possible that the examined time period may have been too short for parents to have had adequate time to alter their actions (e.g., enroll child in a sports class or teach child about unhealthy foods). On the other hand, the effect of the intervention might die down over time as the disseminated information becomes less salient, implying that if there are effects of the cards, their effects would be largest in the short-run.

We postulated that the response to the report card may be larger, the more surprising the report card information. Looking at the overall treatment effect as in Table 6 may overshadow this heterogeneity. In separate analysis (not reported, but available upon request), we look at whether the treatment effect varies with the degree of surprise as measured by the difference between the child's actual weight classification and the parent's weight classification in the pre-intervention period. For the outcome of believing the child weighs too much, we do find that the treatment effect varies positively with the surprise factor. Yet, even for this group, we do not estimate statistically significant effects on parental behaviors or child outcomes.

Overall, the report cards had the intended effect of making parents more aware of their child's weight status. However, this information did not translate into behavioral change. These findings highlight the difficulty in tackling obesity. As there is no widely-accepted and

an outlier by 30 cm. Finally, we dropped observations (34 observations) where the change in height was less than -5cm.

[30]The trends in weight are skewed; the median change is 0 whereas for BMI, the median is -2.3%.

effective method of reducing obesity, without a plan of action, information policies may not be very effective in decreasing rates of obesity.

C Heterogeneity in the Treatment Effects

i Results by Treatment Type

So far, we have considered the general effect of the report card without regards to the type of report card received. We now look at the effects by treatment type (BASIC, RISK, and COMPARE). Table 7 reports the regression results of estimating equation (2).

Ex ante, we might expect that the RISK treatment would have a stronger effect than the BASIC treatment because relaying the health risks of obesity would make such risks more salient to parents. On the other hand, recent economics and psychology literature argues that people sometimes suffer from limited attention.[31] This phenomenon implies that the provision of additional information could be distracting to people, as people have limited ability to process this extra information. If this limited attention effect dominates, we might observe the BASIC treatment to be more powerful than the RISK treatment.

As for the COMPARE treatment, the effects could go in either direction. If many of the children in the class are overweight or obese, the COMPARE treatment may not impact behavior much because the norm is overweight/obese. In contrast, if few classmates have high BMIs, the report card information may be more prominent to parents. This implies that the effects of this treatment may be predictably heterogenous, a possibility we investigate later. Even more than the RISK treatment, problems of cognitive errors may impact the effects of this treatment because the information conveyed is more complicated (i.e., distributions may be hard to understand).

Looking at the results reported in Table 7, differences in the treatment effects across the different report cards seem small; none of the treatment effects are statistically distinguishable across the three treatment groups. For the outcome of weighing too much, the BASIC

[31] See, for instance, DellaVigna (2009); Lacetera et al. (2011).

treatment effects exceed those of the other two treatments. But the BASIC treatment does not always trump the other treatments if we look across the other outcomes. The possible differential effects are too small to discern with the sample at hand.[32]

ii Effect of Norms

Ex ante, we suspected the impact of the COMPARE treatment to be a decreasing function of the fraction of children who are overweight/obese in the class. A parent of an overweight/obese child may be more concerned when fewer of his/her child's classmates are obese/overweight.

In Table 8, we consider exclusively the control and COMPARE treatment subsamples and we test these predictions by interacting the treatment dummy with a variable indicating whether the fraction of obese/overweight students in the class is more than 36%, between 25 and 36%, and less than 25%. These groupings represent the upper quartile, interquartile range, and lower quartile of the distribution of the classroom fraction of obese/overweight students. Since the fraction of obese/overweight children in each class is not random, any differences we find along that dimension may be attributable to the fraction obese/overweight in the class but also due to other factors that are correlated with this fraction such as parental education. To address this, we include grade by school fixed effects, effectively comparing students across classrooms within the same grade and school.[33]

The results in Table 8 imply that the larger the fraction of obese/overweight in the class, the less likely a parent was to report that his/her overweight/obese child weighed too much. For example, for obese/overweight children in a class with the largest fraction of obese/overweight, the treatment effect on parental beliefs that the child weighed too much is small (i.e., 0.379-0.401=-0.022). On the other hand, the treatment effect on this outcome for classes with the smallest fraction of overweight/obese (<25% overweight/obese) is positive

[32]For example, to distinguish a 0.02 difference across the treatments, we would need a sample roughly 6 times as large for the outcome of a child weighing too much.

[33]Results are similar without adding these controls.

and much larger (0.379). Since this question about parent's beliefs about the child's weight is also in the pre-survey, as a placebo check, we can examine whether we see the same pattern there. We do not, giving credence to the observed treatment effect in Table 8. Interestingly, we do not find such a gradient with respect to the fraction obese/overweight in class when examining whether the parent correctly classified the child's weight status. Not surprisingly given the earlier estimates, effects on parental beliefs about whether the child weighs too much do not translate into observable effects on parental behaviors.[34]

This finding that obesity perceptions are related to the obesity levels of the peer group is consistent with Ali et al. (2011), who use the National Longitudinal Study of Adolescent Health and conclude that the obesity rates of one's peers affect one's own weight perceptions. These results imply that as obesity rates increase, it may become harder to make individuals recognize that obesity is a health issue. Thus, policies relying on individuals to make lifestyle changes may be increasingly difficult as more individuals become obese or overweight because individuals' reference points in regards to the accepted weight may change. On the positive side, interventions that induce some individuals to reduce obesity may have important spillover effects and precipitate change amongst others by altering the reference point.

D Robustness Checks

In this section, we address two issues that may affect the interpretation of our treatment effects: a) potential selection bias due to the fact that several of our outcomes are survey-based and b) possible cross-contamination effects due to randomization at the individual level rather than at the classroom, grade, or school level.

[34] In results not reported, the effects on BMI and weight are also statistically insignificant.

i Selection Effects

Several of the outcomes we consider in our main estimation table (Table 6) come from responses to the post-intervention survey. To test for selection bias in response to this survey, we estimate whether the probability of responding to the post-intervention survey is different for the treatment and control groups. The results are presented in Appendix Table 4 for the overall sample and the overweight and obese sample, separately. The regression results are estimates of equation (1) using the completion of the post-intervention survey as the dependent variable.[35] The overall response rate to our post-intervention survey is 56%; for the overweight/obese, it is 57%. Roughly 75% of overweight/obese parents who completed the post-intervention survey completed the baseline survey.[36] Across both samples, treatment status is not a statistically-significant predictor of post-intervention completion. Both point estimates are negative, suggesting that the treatment group is less likely to respond to the post-intervention survey.

Aside from the difference in response rates, we also compare how the sample of respondents differs across the treatment and control groups. As discussed earlier, Appendix Tables 1 and 2 replicate Tables 1 and 2 for the sample of post-survey respondents. There are few differences in observable characteristics across the treatment and control groups. When we control for any observed differences, the treatment effects are similar to those reported earlier (results not reported).[37]

To gauge the extent of selection bias, we modeled selection based on a selection on

[35] Some of the non-response we observe is due to children moving to another school. Our best guess of the size of the student population following the intervention is the number of students for whom we have post-intervention height and weight measurements. Thus, we limit the sample to those with weight and height measures in the post-intervention period. Results are similar if we do not condition the sample in this way.

[36] 80% of respondents are the same in the baseline and endline survey. Our results are similar if we only consider the sample where the respondent does not change across the two surveys.

[37] One may worry that a comparison of the observable characteristics in Appendix Tables 1 and 2 is also subject to selection bias. In particular, many of these pre-intervention characteristics come from the pre-survey. However, we check whether baseline weight and height are different across the treatment and control groups for the sample of post-survey respondents. We observe no statistically significant differences across these groups for the overall sample and for the sample of overweight and obese.

observables assumption. To do this, we first estimated the probability of completing the post-survey as a function of pre-survey characteristics. Then, we included a third-order polynomial of the predicted probabilities in our treatment effect regressions.[38] The estimates of the treatment are qualitatively similar across the outcomes, easing our worry about selection bias.

ii Possible Cross-Treatment Contamination Effect

The randomization at the child level left open the possibility that there were spillover effects across the different treatments. We measure the extent of cross-contamination effects in two ways.

For the outcomes for which we have baseline and endline measures, we estimate whether there are statistically-significant changes in the outcomes for the control group. If the treatment affects the control group, we might expect to observe "treatment" effects for this group (i.e., significant changes). Such effects would likely dampen the main treatment effects in Table 6. The control group outcomes however, may also change between the two surveys for other reasons besides spillover effects of the treatment. For example, in the presence of strong age effects, changes from the pre-survey to the post-survey may be large. For this reason, we consider the non-weight outcomes.

Appendix Table 5 presents estimates from regressions of the control group change on an intercept for the subsample of the overweight and obese. Any intercept estimates statistically different from zero imply that the control group mean changed during the intervention, possibly indicating the presence of spillover effects. We do not observe any significant differences in responses between the pre-survey and post-survey, when considering the outcomes of correctly classifying the child's weight, parental beliefs about whether the child weighs too much, and parental concern about the child's weight. The magnitudes of the changes are small relative to the main treatment effects reported in Table 6. For instance, the main

[38] See DiNardo et al. (2006) for a discussion of this technique of dealing with attrition bias.

treatment effect for classifying the child's weight correctly is 0.173 whereas the difference for the control group reported in Appendix Table 5 is 0.020. Similarly, for the outcome of weighing too much, the treatment effect is 0.131 whereas the control group difference is 0.041.

As an alternative way to assess the cross-contamination effects, we consider the effect of the treatment on families with only one child in the experiment in Appendix Table 6. One could imagine that spillovers might be larger among families with more than one child in the experiment because for instance, two children in the same family may have received two different treatments. In general, the magnitudes of the estimates are similar across the overall sample and the sample with only one child in the experiment.[39] Both of these robustness checks give us some confidence that cross-contamination effects are not a first-order concern.

E Relation to Previous Work on the Effect of Report Cards

Our work is related to an earlier public health and medical literature on weight report cards (Chomitz et al., 2003; Grimmett et al., 2008; Kalich et al., 2008; Kubik et al., 2006). With the exception of Chomitz et al. (2003), the cited papers use a pre-post research design with often a highly-selected sample.[40] Chomitz et al. (2003) uses a randomized-controlled design but has a telephone survey response rate of 34%. These studies use smaller sample sizes involving fewer schools and examine the effects of a basic report card (i.e., they do not investigate whether effects differ by the content of the information provided). Importantly, the literature focuses exclusively on developed countries, specifically the United Kingdom and the United States. In developing countries, we may believe that the report card intervention holds more promise because parents have lower educational attainment and are less informed about their child's weight.

It is useful to see whether the expected differences in the intervention effectiveness hold

[39]For example, the overall estimate for correctly classifying your child's weight in Table 6 is 0.131 whereas among the sample considered in Appendix Table 6, it is 0.138.

[40]For example, Grimmett et al. (2008) use a sample of volunteer parents who were willing to allow researchers to take weight and height measurements of their children and receive feedback.

by comparing our results to those of the developed world. Fortunately, the earlier U.K. and U.S. studies have similar survey questions to our own. We focus mainly on the contrast with Chomitz et al. (2003) given that it is the only randomized experiment of the studies cited. One clear contrast that emerges is that the degree of misclassification of weight status is more severe in Mexico than in the United States. In Chomitz et al. (2003), using a population of Cambridge, Massachusetts schoolchildren, report that 16% of parents with an obese child classify their child's weight status correctly compared to 6% here.[41] The report cards exhibit a stronger effect on the probability that the parent correctly classifies the child's weight in Mexico than in Cambridge. For this outcome, our treatment effect is a 14 percentage point shift in Mexico whereas it is 9 percentage point change in Cambridge. Educational differences across the two areas are likely part of the explanation. Like our study, Chomitz et al. (2003) show no effect of the cards on parental concern even though 23% of parents report concern about their child's weight in the Cambridge study whereas we find 82% of parents do.

In many cases, the new knowledge translates into behavioral changes. Chomitz et al. (2003) find that among both the overweight/obese and the healthy weight, parents receiving report cards are more likely to engage in weight-modifying behaviors for their children including physical activity and dieting. Similarly, Kalich et al. (2008) find that overweight students are more likely to report the intention of visiting a doctor, eating more fruits and vegetables, and increasing physical activity. Finally, Grimmett et al. (2008) find little change in reported behavior.

It is interesting that the effects of intervention on outcomes are generally larger for these studies than for our own, especially given that our intervention had a larger impact on knowledge. We speculate on the reasons for these differences in the next section.

[41] Rates of misclassification among the obese are lower in the U.K. study of Grimmett et al. (2008). Over 40% of parents correctly report that their child is overweight.

IV Discussion and Conclusion

In this paper, we study how information affects behavior. Specifically, we examine the effect of weight report cards on parental behaviors and children's outcomes in Mexico. Relative to many other childhood obesity policies (e.g., increases in physical activity classes), weight report cards have an advantage in that although they are targeted, they are low-cost and easily scaled up. Despite the rapid growth in obesity in developing countries, and in Mexico in particular, there has been a dearth of obesity research, both looking at the causes of obesity and understanding effective policies to curb these trends. The potential usefulness of these report cards is grounded in the idea that a necessary pre-requisite for behavioral modification is an understanding of the risk of disease (Health Belief Model (Hochbaum et al., 1952)). Thus, childhood obesity policies may only be effective if people are cognizant of the risks of childhood obesity and their child's obesity status. But, if people do not understand or care about their child's susceptibility to obesity and its risks, the many paternalistic obesity policies (e.g., soft drink taxes, the banning of trans-fat foods) may be less successful because of unintended consequences. As an example, Fletcher et al. (2010) conclude that increases in soft drink taxes lead to the consumption of other high calorie beverages, effectively undoing the intended effects of the policy.

Our main results suggest that weight report cards are an effective means of transmitting obesity information to parents. Parents become more informed about their child's weight, and for parents of overweight/obese children, this information changes their beliefs about their child's weight. These perceptions have an important interaction with peer obesity levels. In particular, the more obese/overweight a class is, the less likely a parent is to report an overweight/obese child as weighing too much. Extrapolating these findings, growth in the prevalence of obesity may shift perceptions about healthy body weights. As these social norms changes, parents of obese children may be less inclined to believe that their obese child is obese, making it challenging to encourage parental behavioral change. On a more promising note, interventions may harness the power of the norm if the intervention

precipitates behavioral change amongst some subsample.

The puzzling finding of the paper is why we did not observe any impacts on behaviors, given that parental knowledge increased. There are many possible explanations for these null results—most of which we are not able to rule out. First, parents could believe that childhood obesity has little relevance for adult obesity. However, this explanation is perhaps inconsistent with the observation that the treatment affected parental beliefs about the child weighing too much. Second, the risks of obesity may not yet be particularly salient, especially in a society where obesity is a new health problem and which has traditionally battled problems of underweight. It is possible that once parents become more aware of the risks of obesity, we will see more of them taking pro-active steps to reduce childhood obesity. Fourth, parents may not have either the income or the knowledge about how to decrease the incidence of childhood obesity. A healthy diet is often more expensive (Monsivais et al., 2011). We do not however estimate differential treatment effects by parental education. Also, when provided free resources to help address obesity (i.e., the informational session and assistance from a nutritionist), we see relatively few families taking advantage of such resources.

Information is simply not enough to induce to change in this context. Indeed some of the most successful informational interventions in developing countries couple information with remedies (Dupas, 2011b). Thus, an effective weight report card intervention may also need to be combined with a set of actions helpful for reducing obesity. In some sense, the informational session of this intervention served as this set of actions. But we saw little interest in the session. However, the provision of direct information on how to reduce childhood obesity may have been more fruitful. Future research should test whether the report cards combined with specific suggested actions (e.g., restricting portion sizes) are more effective.

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Figure 1: Distribution of Post-Intervention Parental Attitudes about Child's Weight

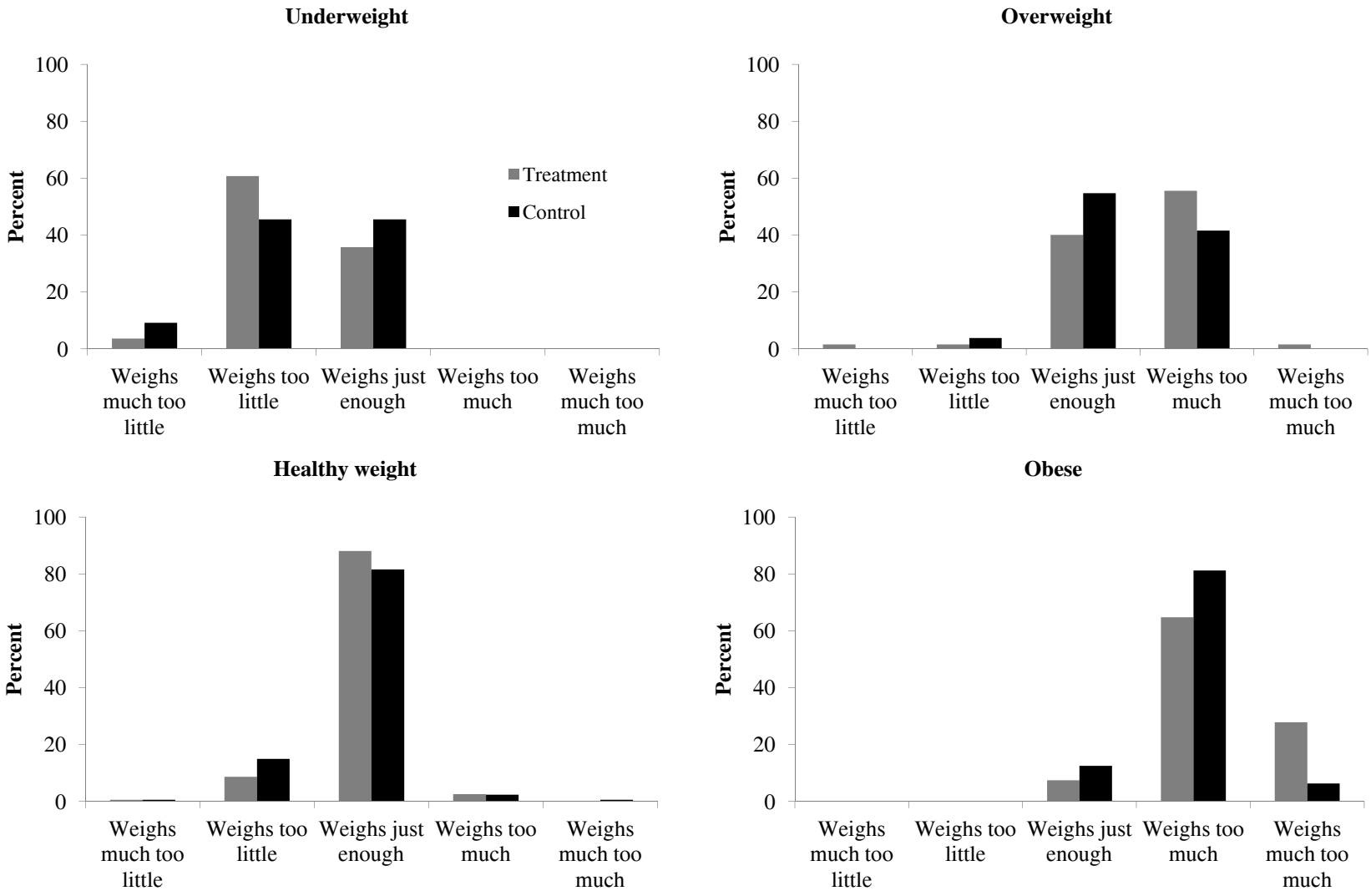

Table 1: Pre-Treatment Characteristics - Overall Sample

	Mean				P-value	
	Control	**Basic**	**Risk**	**Compare**	**Treatment = Control**	**All equal**
Panel A: Child Measurement						
	N=673	*N=702*	*N=680*	*N=691*		
BMI	18.11 [3.44]	18.34 [3.53]	18.36 [3.45]	18.29 [3.35]	0.16	0.06
Fraction Underweight	0.03	0.03	0.03	0.03	NA	NA
Fraction Healthy weight	0.68	0.66	0.67	0.67	NA	NA
Fraction Overweight	0.17	0.18	0.17	0.18	NA	NA
Fraction Obese	0.12	0.13	0.12	0.13	NA	NA
Panel B: Pre-Survey Responses by Primary Caretaker						
	N=499	*N=508*	*N=505*	*N=518*		
Primary Caretaker: Mother	0.67	0.69	0.68	0.65	0.61	0.84
Primary Caretaker: Father	0.30	0.29	0.30	0.32	0.78	0.99
Primary Caretaker: Other	0.03	0.02	0.02	0.03	0.24	0.58
Less than High School	0.34	0.38	0.33	0.31	0.16	0.92
High School	0.42	0.41	0.42	0.45	0.58	0.99
More than High School	0.23	0.21	0.26	0.24	0.45	0.85
Concern about H1N1 [1-4]	3.27 [0.79]	3.22 [0.78]	3.25 [0.81]	3.25 [0.79]	0.76	0.54
Concern about child's weight [1-4]	3.16 [0.95]	3.10 [0.98]	3.01 [1.00]	3.08 [0.98]	0.07	0.04
Concern about own weight [1-4]	3.06 [0.97]	3.03 [0.98]	2.98 [0.99]	3.03 [0.94]	0.59	0.35
Concern about child's school performance [1-4]	3.71 [0.58]	3.67 [0.67]	3.63 [0.67]	3.62 [0.68]	0.06	0.01
Classifies child as underweight	0.02	0.02	0.02	0.03	0.68	0.74
Classifies child as healthy weight	0.55	0.55	0.56	0.57	0.87	0.48
Classifies child as overweight	0.06	0.07	0.05	0.06	0.88	0.81
Does not know weight classification	0.37	0.36	0.37	0.34	0.72	0.53
Child's school performance relative to peers [-2-2]	-0.02 [0.73]	-0.09 [0.74]	-0.06 [0.71]	-0.05 [0.73]	0.69	0.36
Happy with child's school performance [0/1]	0.67	0.68	0.68	0.72	0.29	0.39
Internet access at home [0/1]	0.39	0.35	0.39	0.39	0.42	0.62
Other children in experiment [0/1]	0.30	0.29	0.27	0.28	0.50	0.25
Response rate to baseline survey	0.74	0.72	0.74	0.75	0.24	0.68

Notes: Table presents means and standard deviations in brackets for continuous variables. For child's school performance relative to peers, a response of 0 indicates that the student's performance is average; below 0 is below average and above 0 is above average. P-values are from regressions of these characteristics on a treatment dummy [treatment=control] or the set of treatment dummies [all equal]; these regressions include strata fixed effects. The fraction of parents who classify their child as obese is very close to 0 across all categories and therefore is omitted. All p-values with NA values are not defined since those are variables upon which randomization was stratified and thus, roughly equally distributed across the groups mechanically.

Table 2: Pre-Treatment Characteristics - Overweight and Obese

	Mean				P-value	
	Control	Basic	Risk	Compare	Treatment = Control	All equal
Panel A: Child Measurement						
	N=196	*N=217*	*N=202*	*N=209*		
BMI	22.32	22.55	22.44	22.37	0.76	0.54
	[2.68]	[2.63]	[2.74]	[2.48]		
Fraction Overweight	0.59	0.57	0.58	0.58	NA	NA
Fraction Obese	0.41	0.43	0.42	0.42	NA	NA
Panel B: Pre-Survey Responses by Primary Caretaker						
	N=131	*N=142*	*N=134*	*N=139*		
Primary Caretaker: Mother	0.67	0.67	0.64	0.58	0.33	0.41
Primary Caretaker: Father	0.31	0.30	0.34	0.38	0.48	0.52
Primary Caretaker: Other	0.02	0.02	0.03	0.04	0.86	0.54
Less than High School	0.34	0.28	0.28	0.22	0.13	0.05
High School	0.41	0.45	0.44	0.47	0.91	0.63
More than High School	0.24	0.28	0.28	0.30	0.51	0.16
Concern about H1N1 [1-4]	3.30	3.20	3.27	3.28	0.71	0.59
	[0.84]	[0.79]	[0.85]	[0.83]		
Concern about child's weight [1-4]	3.31	3.29	3.20	3.23	0.51	0.29
	[0.82]	[0.82]	[0.90]	[0.82]		
Concern about own weight [1-4]	3.12	3.08	3.01	3.11	0.77	0.59
	[0.97]	[0.96]	[1.00]	[0.87]		
Concern about child's school performance [1-4]	3.70	3.70	3.66	3.57	0.29	0.24
	[0.57]	[0.69]	[0.64]	[0.76]		
Classifies child as underweight	0.01	0.01	0.01	0.01	0.94	0.77
Classifies child as healthy weight	0.56	0.52	0.56	0.55	0.94	0.80
Classifies child as overweight	0.14	0.13	0.10	0.11	0.75	0.52
Does not know weight classification	0.29	0.32	0.33	0.33	0.88	0.44
Child's school performance relative to peers [-2-2]	-0.01	-0.03	0.01	0.00	0.98	0.94
	[0.78]	[0.73]	[0.69]	[0.75]		
Happy with child's school performance [0/1]	0.62	0.63	0.73	0.76	0.01	0.07
Internet access at home [0/1]	0.39	0.37	0.46	0.41	0.56	0.63
Other children in experiment [0/1]	0.30	0.22	0.24	0.24	0.37	0.09
Response rate to baseline survey	0.67	0.65	0.66	0.67	NA	NA

Notes: Table presents means and standard deviations in brackets for continuous variables. For child's school performance relative to peers, a response of 0 indicates that the student's performance is average; below 0 is below average and above 0 is above average. P-values are from regressions of these characteristics on a treatment dummy [treatment=control] or the set of treatment dummies [all equal]; these regressions include strata fixed effects. The fraction of parents who classify their child as obese is very close to 0 across all categories and therefore is omitted. All p-values with NA values are not defined since those are variables upon which randomization was stratified and thus, roughly equally distributed across the groups mechanically.

Table 3: Parental Classification versus Actual Classification of Weight Status at Baseline

	Parental Classification				
Actual Classification	Underweight	Healthy weight	Overweight	Obese	Don't know
Underweight	27	38	0	1	0
	(41%)	(58%)	(0%)	(2%)	(0%)
Healthy weight	205	1,090	32	0	7
	(15%)	(82%)	(2%)	(0%)	(1%)
Overweight	2	240	113	1	6
	(<1%)	(66%)	(33%)	(<1%)	(2%)
Obese	0	52	189	14	2
	0%	(20%)	(74%)	(5%)	(1%)

Notes: Table shows the count in each category. Classifications along both dimensions are based on pre-treatment classifications. Percentages in parentheses represent percentages for each row (i.e., each row percentages add to 100%).

Table 4: Cross-Sectional Correlations Between Weight Status and Other Variables

	Weight Status at Baseline		
	Underweight	**Overweight**	**Obese**
	(1)	(2)	(3)
Caretaker education: less than high school	0.005	-0.052	-0.061
	(0.011)	(0.029)	(0.026)*
Caretaker education: high school	0.004	-0.022	-0.018
	(0.010)	(0.027)	(0.025)
Male child	-0.016	0.013	0.076
	(0.009)	(0.020)	(0.017)**
Internet access at home	-0.006	-0.040	0.037
	(0.009)	(0.022)	(0.020)
Mother filled out the survey	0.032	0.004	-0.076
	(0.007)**	(0.057)	(0.057)
Father filled out the survey	0.034	0.021	-0.056
	(0.010)**	(0.059)	(0.058)
Caretaker time inconsistent	0.004	-0.003	-0.034
	(0.011)	(0.023)	(0.018)
Child in grade 2	0.037	-0.051	0.073
	(0.028)	(0.040)	(0.033)*
Child in grade 3	-0.014	-0.014	0.067
	(0.017)	(0.035)	(0.024)**
Child in grade 4	-0.014	0.025	0.123
	(0.017)	(0.035)	(0.025)**
Child in grade 5	-0.017	0.051	0.056
	(0.017)	(0.036)	(0.023)*
Observations	1,550	1,551	1,551
Dep. Var. Mean	0.03	0.18	0.12

Notes: Robust standard errors are presented in parentheses. * denotes statistical significance at the 5% level and ** at the 1% level. The omitted categories are caretaker education greater than high school, other than mother or father filled out the survey, female child, and child in grade 6.

Table 5: Overall Effects of Treatment on Behavior

	Weight Status at Baseline			
	Overall		Overweight and Obese	
	Received card?	Classify child's weight correctly	Received card?	Classify child's weight correctly
	(1)	(2)	(3)	(4)
Treatment	0.446	0.132	0.491	0.173
	(0.027)**	(0.024)**	(0.048)**	(0.046)**
Observations	1504	1480	463	459
Dep. Var. Mean	0.45	0.62	0.40	0.27

Notes: Robust standard errors are presented in parentheses. * and ** denote statistical significance at the 5% and 1% level, respectively. The dependent variable mean is the mean for the control group.

Table 6: Effects of Treatment on Behaviors/Outcomes among Overweight and Obese

	Child weighs too much?	Concern about child's weight	Number of actions taken	Whether attended information class	BMI	Weight (Kg)
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	0.131	0.048	-0.001	-0.004	0.255	0.369
	(0.049)**	(0.090)	(0.160)	(0.033)	(0.211)	(0.761)
Observations	450	471	465	824	755	755
Dep. Var. Mean	0.58	3.39	2.20	0.20	21.38	43.35

Notes: Robust standard errors are presented in parentheses. * and ** denote statistical significance at the 5% and 1% level, respectively. The possible actions undertaken by parents are: discussed weight with family/friends, discussed child's weight with him/her, seen doctor in regards to child's weight, put child on a diet, had child skip meals, engaged in physical activity with child, and signed child up for sport/exercise class.

Table 7: Effects by Treatment Type on Behavior among Overweight and Obese

	Child weighs too much?	Concern about child's weight	Number of actions taken	Whether attended information class
	(1)	(2)	(3)	(4)
BASIC Treatment	0.146	-0.009	0.002	-0.014
	(0.057)*	(0.108)	(0.192)	(0.039)
RISK Treatment	0.127	0.008	0.003	0.013
	(0.058)*	(0.111)	(0.197)	(0.04)
COMPARE Treatment	0.127	0.008	0.003	-0.013
	(0.058)*	(0.111)	(0.197)	(0.04)
Observations	450	471	465	824
Dep. Var. Mean	0.58	3.39	2.20	0.20

Notes: Robust standard errors are presented in parentheses. * and ** denote statistical significance at the 5% and 1% level, respectively. The possible actions undertaken by parents are: discussed weight with family/friends, discussed child's weight with him/her, seen doctor in regards to child's weight, put child on a diet, had child skip meals, engaged in physical activity with child, and signed child up for sport/exercise class.

Table 8: Heterogeneous Treatment Effects of COMPARE Treatment among Overweight and Obese

	Child weighs too much?	Concern about child's weight	Number of actions taken	Whether attended information class
	(1)	(2)	(3)	(4)
Treatment	0.379	0.206	0.029	0.017
	(0.142)**	(0.221)	(0.431)	(0.104)
Treatment*Fraction Obese and	-0.254	0.009	-0.048	-0.031
Overweight in Class Between 25-36%	(0.169)	(0.267)	(0.512)	(0.126)
Treatment*Fraction Obese and	-0.401	-0.310	0.155	-0.008
Overweight in Class More than 36%	(0.193)*	(0.298)	(0.575)	(0.129)
Observations	232	245	243	405
Dep Var Mean	0.58	3.39	2.20	0.20

Notes: Robust standard errors are presented in parentheses. * and ** denote statistical significance at the 5% and 1% level, respectively. The possible actions undertaken by parents are: discussed weight with family/friends, discussed child's weight with him/her, seen doctor in regards to weight, put child on a diet, had child skip meals, engaged in physical activity with child, and signed child up for sport/exercise class. Sample includes only the control and the compare treatment group.

Appendix Table 1: Pre-Treatment Characteristics - Overall Sample, Conditional on Filling Out Post-Survey

	Mean				P-value	
	Control	Basic	Risk	Compare	Treatment = Control	All equal
Panel A: Child Measurement						
	N=394	*N=355*	*N=405*	*N=381*		
BMI	18.13	18.25	18.23	18.42	0.30	0.08
	[3.41]	[3.61]	[3.47]	[3.43]		
Fraction Underweight	0.03	0.03	0.04	0.03	NA	NA
Fraction Healthy weight	0.65	0.65	0.68	0.65	NA	NA
Fraction Overweight	0.19	0.19	0.16	0.17	NA	NA
Fraction Obese	0.12	0.13	0.13	0.15	NA	NA
Panel B: Pre-Survey Responses by Primary Caretaker						
	N=290	*N=268*	*N=305*	*N=277*		
Primary Caretaker: Mother	0.67	0.69	0.68	0.63	0.48	0.99
Primary Caretaker: Father	0.30	0.30	0.30	0.33	0.72	0.75
Primary Caretaker: Other	0.03	0.02	0.02	0.03	0.37	0.35
Less than High School	0.34	0.39	0.32	0.31	0.15	0.68
High School	0.43	0.41	0.43	0.45	0.69	0.77
More than High School	0.23	0.20	0.25	0.24	0.55	0.82
Concern about H1N1 [1-4]	3.33	3.21	3.26	3.29	0.29	0.21
	[0.78]	[0.78]	[0.79]	[0.75]		
Concern about child's weight [1-4]	3.19	3.09	3.00	3.13	0.08	0.04
	[0.92]	[1.01]	[1.00]	[0.95]		
Concern about own weight [1-4]	3.08	2.99	2.98	3.05	0.52	0.26
	[0.93]	[1.04]	[1.00]	[0.90]		
Concern about child's school performance [1-4]	3.76	3.65	3.64	3.64	0.05	0.00
	[0.55]	[0.70]	[0.69]	[0.65]		
Classifies child as underweight	0.03	0.02	0.01	0.03	0.47	0.6
Classifies child as healthy weight	0.54	0.57	0.56	0.57	0.36	0.41
Classifies child as overweight	0.06	0.06	0.05	0.06	0.71	0.29
Does not know weight classification	0.38	0.34	0.37	0.33	0.96	0.93
Child's school performance relative to peers [-2-2]	-0.03	-0.04	-0.03	-0.05	NA	0.88
	[0.76]	[0.77]	[0.69]	[0.71]		
Happy with child's school performance [0/1]	0.67	0.70	0.68	0.73	0.28	0.33
Internet access at home [0/1]	0.38	0.34	0.38	0.37	0.79	0.60
Other children in experiment [0/1]	0.31	0.29	0.25	0.26	0.12	0.06
Response rate to baseline survey	0.74	0.75	0.76	0.73	0.20	0.26

Notes: Table presents means and standard deviations in brackets for continuous variables. For child's school performance relative to peers, a response of 0 indicates that the student is average; below 0 is below average and above 0 is above average. P-values are from regressions of these characteristics on a treatment dummy [treatment=control] or the set of treatment dummies [all equal]; these regressions include strata fixed effects. The fraction of parents who classify their child as obese is very close to 0 across all categories and therefore is omitted. All p-values with NA values are not defined since those are variables upon which randomization was stratified and thus, roughly equally distributed across the groups mechanically.

Appendix Table 2: Pre-Treatment Characteristics - Overweight and Obese, Conditional on Filling Out Post-Survey

	Mean				P-value	
	Control	**Basic**	**Risk**	**Compare**	**Treatment = Control**	**All equal**
Panel A: Child Measurement						
	N=124	*N=112*	*N=115*	*N=121*		
BMI	22.10	22.44	22.48	22.46	0.69	0.40
	[2.54]	[2.90]	[2.69]	[2.46]		
Fraction Overweight	0.61	0.59	0.55	0.53	NA	NA
Fraction Obese	0.39	0.41	0.45	0.47	NA	NA
Panel B: Pre-Survey Responses by Primary Caretaker						
	N=91	*N=85*	*N=85*	*N=85*		
Primary Caretaker: Mother	0.72	0.68	0.63	0.55	0.11	0.09
Primary Caretaker: Father	0.25	0.32	0.35	0.42	0.12	0.04
Primary Caretaker: Other	0.03	0.00	0.02	0.03	0.07	0.44
Less than High School	0.34	0.28	0.29	0.17	0.00	0.02
High School	0.40	0.44	0.42	0.47	0.72	0.44
More than High School	0.26	0.29	0.29	0.36	0.25	0.16
Concern about H1N1 [1-4]	3.32	3.16	3.37	3.36	0.18	0.92
	[0.85]	[0.75]	[0.78]	[0.80]		
Concern about child's weight [1-4]	3.26	3.29	3.28	3.29	0.99	0.97
	[0.86]	[0.87]	[0.88]	[0.83]		
Concern about own weight [1-4]	3.05	3.09	3.09	3.15	0.87	0.66
	[0.98]	[1.02]	[0.98]	[0.86]		
Concern about child's school performance [1-4]	3.75	3.71	3.68	3.62	0.44	0.21
	[0.51]	[0.70]	[0.62]	[0.70]		
Classifies child as underweight	0.02	0.02	0.01	0.01	0.92	0.85
Classifies child as healthy weight	0.57	0.54	0.54	0.59	0.85	0.85
Classifies child as overweight	0.11	0.15	0.09	0.13	0.77	0.82
Does not know weight classification	0.30	0.29	0.36	0.27	0.59	0.92
Child's school performance relative to peers [-2-2]	-0.04	0.02	0.05	0.03	0.61	0.23
	[0.79]	[0.77]	[0.61]	[0.71]		
Happy with child's school performance [0/1]	0.64	0.67	0.78	0.75	0.07	0.09
Internet access at home [0/1]	0.39	0.40	0.44	0.43	0.92	0.54
Other children in experiment [0/1]	0.27	0.21	0.26	0.21	0.70	0.27
Response rate to baseline survey	0.73	0.76	0.74	0.70	NA	NA

Notes: Table presents means and standard deviations in brackets for continuous variables. For child's school performance relative to peers, a response of 0 indicates that the student is average; below 0 is below average and above 0 is above average. P-values are from regressions of these characteristics on a treatment dummy [treatment=control] or the set of treatment dummies [all equal]; these regressions include strata fixed effects. The fraction of parents who classify their child as obese is very close to 0 across all categories and therefore is omitted. All p-values with NA values are not defined since those are variables upon which randomization was stratified and thus, roughly equally distributed across the groups mechanically.

Appendix Table 3: Effects of Treatment on Behavior and BMI among Overweight and Obese

	Discussed weight with family/friends	Discussed child's weight with him/her	Seen doctor in regards to weight	Put child on a diet	Had child skip meals	Engaged in physical activity with child	Signed child up for sport/exercise class
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Treatment	0.026	0.089	0.065	-0.035	-0.066	-0.082	0.002
	(0.054)	(0.053)	(0.039)	(0.033)	(0.038)	(0.052)	(0.042)
Observations	465	465	465	465	465	465	465
Dep. Var. Mean	0.40	0.54	0.14	0.11	0.17	0.65	0.19

Notes: Robust standard errors are presented in parentheses. * and ** denote statistical significance at the 5% and 1% level, respectively. The dependent variable mean is the mean for the control group.

Appendix Table 4: Post-Intervention Survey Response Rates as a Function of Treatment

Sample:	All	Overweight and Obese
	(1)	(3)
Treatment	-0.034	-0.061
	(0.022)	(0.041)
Observations	2466	755
Dep. Var. Mean	0.59	0.63

Notes: Robust standard errors are presented in parentheses. Sample includes those who have post-intervention weight/height measurements.

Appendix Table 5: Post-Survey-Pre-Survey Differences for Overweight and Obese in Control Group

	Classify child's weight correctly	Child weighs too much?	Concern about child's weight
	(1)	(2)	(3)
Difference	0.020	0.041	0.152
	(0.028)	(0.043)	(0.081)
Observations	102	98	105

Notes: Robust standard errors are presented in parentheses. Estimates come from the regression of the difference in post-intervention and pre-intervention survey measures on a constant. The reported coefficient estimate is the intercept.

Appendix Table 6: Overall Effects of Treatment on Behavior and BMI for Sample of Lone Overweight and Obese Children

	Received card?	Classify child's weight correctly	Child weighs too much?	Concern about child's weight	Number of actions taken	Whether attended information class	BMI	Weight
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Treatment	0.594	0.138	0.108	-0.035	0.136	0.023	0.379	0.543
	(0.056)**	(0.060)*	(0.061)	(0.109)	(0.196)	(0.046)	(0.251)	(0.89)
Observations	292	291	287	298	294	464	429	429
Dep. Var. Mean	0.33	0.28	0.55	3.44	2.12	0.22	21.13	42.73

Notes: Robust standard errors are presented in parentheses. * and ** denote statistical significance at the 5% and 1% level, respectively. The possible actions undertaken by parents are: discussed weight with family/friends, discussed child's weight with him/her, seen doctor in regards to child's weight, put child on a diet, had child skip meals, engaged in physical activity with child, and signed child up for sport/exercise class.

Baseline Survey

***Primary School*_____*Grade* |____| *Class* |____|**

Survey

This survey seeks to collect information from parents about their children. It will enable us to carry out a study, the results from which we will share afterwards.

We ask that the primary caretaker of this child fill out the survey and return it to school with your child before <u>January 19, 2010.</u>

1. **Please write YOUR first name and last names in CAPITAL LETTERS.**

   First Name:_____ Last Names:_____ _____

2. **Please write the name of your CHILD in CAPITAL LETTERS. All of the questions in this survey that refer to "your child," should be answered with respect to THIS child.**

   First Name:_____ Last Names:_____ _____

3. **What is your relationship to this child?**

   ___Father ___Grandfather ___Brother
   ___Mother ___Grandmother ___Sister ___Other:_____

4. **Are you the primary caretaker of this child?**

   ___Yes ___No

5. **What is the highest level of education YOU have reached? Please DRAW A CIRCLE around the highest level achieved.**

School Level	Grade
Primary	**1 2 3 4 5 6**
Secondary	**1 2 3**
High School	**1 2 3**
Technical Career	•
Bachelors Degree	•
Masters/Doctorate/Professional	•
Other	**Which:**
Without Studies	•

6. **What is your profession?**

   ___Agricultural laborer ___Work in the home
   ___Non-agricultural laborer ___Union worker
   ___Self-employed worker ___Unemployed
   ___Supervisor ___Other

Please continue on to the next page

We are now going to ask you a few questions about your concerns related to certain issues.

7. How would you rate your concern about <u>the H1N1 flu</u>?

___Not concerned
___Somewhat concerned
___Moderately concerned
___Very concerned

8. How would you rate your concern about <u>your child's weight</u>?

___Not concerned
___Somewhat concerned
___Moderately concerned
___Very concerned

9. How would you rate your concern about <u>your own weight</u>?

___Not concerned
___Somewhat concerned
___Moderately concerned
___Very concerned

10. How would you rate your concern about <u>your child's performance in school</u>?

___Not concerned
___Somewhat concerned
___Moderately concerned
___Very concerned

We are now going to ask you a few questions about your child.

11. How would you classify your child's weight?

___Underweight
___Healthy weight
___Overweight
___Obese
___Don't know

12. How would you characterize your child's weight?

___Weighs much too little
___Weighs too little
___Weighs just enough
___Weighs too much
___Weighs much too much
___Don't know

Please continue on to the next page

13. How would you classify the weight of most of the children in your child's class?

___Underweight
___Healthy weight
___Overweight
___Obese
___Don't know

14. In terms of school performance, how would rate your child's performance relative to his/her peers?

___Much below average
___Somewhat below average
___Average
___Moderately above average
___Much above average

15. Are you happy with your child's performance in school?

___Yes ___No

16. Do you have a computer with internet at home?

___Yes ___No

17. Do you have any OTHER children enrolled in this school?

___Yes ___No

18. If yes, please write the grade, class number and the children's first name and last names.

Grade: ___ Class:___ First Name: _____ Last Names:_____
Grade: ___ Class:___ First Name: _____ Last Names:_____
Grade: ___ Class:___ First Name: _____ Last Names:_____

Please continue on to the next page

The next set of questions ask you how you would react to some imaginary situations. You will be asked to pick the option you would prefer. Please react as if the situations were real. It is very important that you try to give accurate and honest answers to these questions. Your answers will help us understanding how people make decisions.

Suppose you win the lottery today. The lottery administrator gives you options for how you would like to accept your cash prize.

Option 1: Accept a cash prize today
Option 2: Accept a larger cash prize but with a one month delay.

19. Do you prefer a 500 peso prize guaranteed today or a 625 peso prize guaranteed 1 month from now?

___500 pesos today
___625 pesos in 1 month

20. If the prize money changed, do you prefer a 500 peso prize guaranteed today or a 750 peso prize guaranteed 1 month from now?

___500 pesos today
___750 pesos in 1 month

21. If you answered 500 pesos for both questions 19 & 20, how much would the prize have to be for you to choose to wait?

_____

Now imagine that the option would be to accept the lottery cash prize six months from now, or to accept a larger cash prize seven months from now. Please make your decisions based on how you expect you would answer if the choice were actual and not hypothetical.

22. Do you prefer 500 peso prize guaranteed 6 months from now, or a 625 peso prize guaranteed 7 months from now?

___500 pesos in 6 months
___625 pesos in 7 months

23. If the prize money changed, do you prefer a 500 peso prize guaranteed 6 months from now, or a 750 peso prize guaranteed 7 months from now?

___500 pesos in 6 months
___750 pesos in 7 months

24. If you answered 500 pesos for both questions 22 & 23, how much would the prize have to be for you to choose to wait?

_____

MANY THANKS!

Parent Signature:_____ Date:_____

Endline Survey

***Primary School*_____*Grade* |____| *Class* |____|**

Follow-up Survey

About a month ago, you or another member of your household received a survey collecting information from families about their children. The survey below is a further survey.

It would be greatly appreciated if the same person who answered the first survey could answer this new survey as well. If your household never received the first survey, it would be greatly appreciated if the primary caretaker could complete this survey.

The information collected will be used to carry out a study, the results of which will be shared afterwards.

1. **Please write YOUR first name and last names in CAPITAL LETTERS.**

   First Name:_____ Last Names:_____ _____

2. **Please write the name of your CHILD in CAPITAL LETTERS. All of the questions in this survey that refer to "your child," should be answered with respect to THIS child.**

   First Name:_____ Last Names:_____ _____

3. **What is your relationship to this child?**

   ___Father ___Grandfather ___Brother
   ___Mother ___Grandmother ___Sister ___Other:_____

4. **Are you the primary caretaker of this child?**

   ___Yes ___No

We are now going to ask you a few questions about your concerns related to certain issues.

5. **How would you rate your concern about <u>the H1N1 flu</u>?**

   ___Not concerned
   ___Somewhat concerned
   ___Moderately concerned
   ___Very concerned

6. **How would you rate your concern about <u>your child's weight</u>?**

   ___Not concerned
   ___Somewhat concerned
   ___Moderately concerned
   ___Very concerned

Please continue on to the next page

7. How would you rate your concern about <u>your own weight</u>?

___Not concerned
___Somewhat concerned
___Moderately concerned
___Very concerned

8. How would you rate your concern about <u>your child's performance in school</u>?

___Not concerned
___Somewhat concerned
___Moderately concerned
___Very concerned

We are now going to ask you a few questions about your child.

9. How would you classify your child's weight?

___Underweight
___Healthy weight
___Overweight
___Obese
___Don't know

10. How would you characterize your child's weight?

___Weighs much too little
___Weighs too little
___Weighs just enough
___Weights too much
___Weighs much too much
___Don't know

11. How would you classify the weight of most of the children in your child's class?

___Underweight
___Healthy weight
___Overweight
___Obese
___Don't know

12. In terms of school performance, how would you rate your child's performance relative to his/her peers?

___Much below average
___Somewhat below average
___Average
___Moderately above average
___Much above average

Please continue on to the next page

13. During the last month, have you done any of the following activities? Mark all that apply.

___Discussed your child's weight with family members or friends
___Seen a doctor, a nurse, or nutritionist in regards to your child's weight
___Put your child on a diet
___Had your child skip meals or snacks
___Encouraged your child to increase physical activity
___Engaged in physical activity with your child
___Signed your child up for a sport or exercise class
___Discussed your child's weight with him or her

14. What are your intentions related to your child's physical activity in the near future?

___I intend to have him or her get less physical activity.
___I intend to have him or her get more physical activity.
___I intend to have him or her not change his or her amount of physical activity.

15. What are your intentions related to the amount of food your child eats in the near future?

___I intend to have him or her eat less.
___I intend to have him or her eat more.
___I intend to have him or her not change his or her amount of food he or she eats.

16. An obese person is

___a person who does not exercise
___a person who exercises
___a person who likes fatty foods
___a person who does not like fatty foods
___a person who weighs less than the healthy level
___a person who weighs more than the healthy level
___I do not know.

17. Being overweight or obese increases one's risk of cancer.

___Yes
___No
___I do not know.

18. Being overweight or obese increases one's risk of the H1N1 flu.

___Yes
___No
___I do not know.

19. Being overweight or obese increases one's risk of asthma.

___Yes
___No
___I do not know.

Please continue on to the next page

20. Which of the following is a cause of obesity?

___Bad joints
___Eating fruits and vegetables
___Eating too little
___Lack of exercise

21. What is the recommended amount of physical activity for children according to The Institución Nacional de Salud Pública?
If you do not know the correct answer, select the one that seems most reasonable to you.

___10 minutes per day
___30 minutes per day
___45 minutes per day
___60 minutes per day
___90 minutes per day

22. Would a session on practical tips for improving your child's eating habits and physical activity be of value to you and your child?

___Yes
___No

23. Did you receive a report of your child's height and weight from his or her school in the last month?

___Yes
___No

24. If you have any comments or suggestions, please let us know here. Thanks.

MANY THANKS!

Parent Signature:_____ Date:_____

SEP
SECRETARÍA DE EDUCACIÓN PÚBLICA
2005-2011

CETE
CENTRO DE TECNOLOGIA EDUCATIVA DEL ESTADO DE PUEBLA

Unidad de Proyectos con Tecnología

February 8, 2010

Dear Parents or Guardians:

Recently, your child's height and weight were measured at school. Together, height, weight, age and gender can be used to determine whether a child is underweight, healthy weight, overweight, or obese. Some children in Puebla have health problems caused by their weight, so it is important to know your child's weight. As you review the results, remember:

- These results are for screening purposes only. Check with your pediatrician for a full evaluation and referral.

- Please do not put your child on a weight loss/gain diet. Work with a doctor to find the right strategies for your family.

If you have any questions, you can contact nutritionist Georgina Salgado Ramírez free of charge, at phone number 2221 40 52 37 (Mondays and Wednesdays from 1 to 7 in the afternoon, and Tuesdays, Thursdays and Fridays between 10 in the morning and 4 in the afternoon). At the same number, you can leave a message with your name and number, and she will return your call. Alternatively, you can send her an email at: geosalram11@gmail.com.

Sincerely,

Lic. Arturo Malpica Padierna

Responsable de Proyectos con Tecnología

Centro de Tecnología Educativa del Estado de Puebla

Basic Report Card

Recently, (child's name) height and weight were measured at school.

Height: _____ cm

Weight: _____ kg

According to this information, your child is (**weight classification**).

		Condition	Weight
		Underweight	A-AA
Your child is here	➡	Healthy weight	B-BB
		Overweight	C-CC
		Obese	D-DD

You are invited to a class, "Practical Tips for Improving Your Child's Eating Habits and Physical Activity."

The class is free. Choose the date and time that works best for you.

Wednesday, (date) at 8:15 am at (the school)

Friday, (date) at 8:15 am at (the school)

Risk Report Card

Recently, (child's name) height and weight were measured at school.

Height: _____ cm

Weight: _____ kg

According to this information, your child is (**weight classification**).

Obese/overweight [EITHER OBESE OR OVERWEIGHT SHOWS BUT NOT BOTH] children are at higher risk of living shorter lives and developing diseases such as diabetes, high blood pressure, heart disease, asthma, and cancer.

		Condition	Weight
		Underweight	A-AA
Your child is here	➡	Healthy weight	B-BB
		Overweight	C-CC
		Obese	D-DD

You are invited to a class, "Practical Tips for Improving Your Child's Eating Habits and Physical Activity."

The class is free. Choose the date and time that works best for you.

Wednesday, (date) at 8:15 am at (the school)

Friday, (date) at 8:15 am at (the school)

Compare Report Card

Recently, (child's name) height and weight were measured at school.

Height: _____ cm

Weight: _____ kg

According to this information, your child is (**weight classification**).

In your child's class, out of () children,
- () children are **underweight.**
- () children are **healthy weight.**
- () children are **overweight.**
- () children are **obese.**

Your child is here 

Condition	Weight
Underweight	A-AA
Healthy weight	B-BB
Overweight	C-CC
Obese	D-DD

You are invited to a class, "Practical Tips for Improving Your Child's Eating Habits and Physical Activity."

The class is free. Choose the date and time that works best for you.

Wednesday, (date) at 8:15 am at (the school)

Friday, (date) at 8:15 am at (the school)

Control

You are invited to a class, “Practical Tips for Improving Your Child’s Eating Habits and Physical Activity.”

The class is free. Choose the date and time that works best for you.

Wednesday, (date) at 8:15 am at (the school)

Friday, (date) at 8:15 am at (the school)